Dear Colleagues,

We are excited to officially welcome you to Los Angeles and the 2016 AAAAI Annual Meeting. If you have a smartphone or tablet, remember to download the official 2016 Annual Meeting app. This year’s app has an improved look and navigation and also features: tools to search by speaker or session type, organize your schedule, evaluate speakers and sessions, stay current with push notifications and navigate the Los Angeles Convention Center with floor plans and exhibitor information. Download the app from the App Store or Play Store on your device. We encourage everyone to use the app for evaluating sessions, as this allows us to design the best programming for future meetings.

You are also encouraged to follow the 2016 Annual Meeting on Twitter. Simply use #AAAAI16 when you tweet to participate in onsite conversations and share what you’re learning with your colleagues.

**More Concise Meeting and New Programming Theme**

The AAAAI has been working to make the Annual Meeting a more concise educational experience. To this end, the meeting has been shortened by a day, meaning less time away from the office or university while still allowing you to earn a similar number of continuing medical education (CME) credits. You can earn up to 40.00 AMA PRA Category 1 Credits™ during the four days of the meeting. By attending three consecutive days you can earn up to 25.00 CME credits, meeting the MOC Part II requirement of 25 CME credits per year.

The 2016 meeting is the first to have an overall programming theme, which is “Allergic and Immunologic Diseases: Prevention or Disease Modification.” The theme represents about 20% of the meeting, while the remaining 80% continues to be developed from member submissions. We have also continued the practice of having clinical, translational and basic science session tracks throughout the meeting. Look for the labels and key inside this program.

**Presidential Plenary and Keynote Spotlight Asthma**

New for 2016, our popular plenary sessions will begin Friday rather than Saturday. The Presidential Plenary, titled “The Origins of Childhood Asthma,” takes place Friday, March 4 at 2:00 pm. You can expect to hear about the contribution of respiratory pathogens and allergic sensitization to asthma inception, the microbial environment and its influence on allergy and asthma in early life, and gene by environment interactions.

The focus on asthma continues with our Saturday Keynote, “The Past, Present and Future of Asthma,” presented by Stephen T. Holgate, MD DSc FAAAAI. Especially intriguing will be Steve’s look at how the digitalization of biology and the convergence of the physical and biological sciences will create a new precision and personalized approach to chronic diseases such as asthma.

**Celebrate the New AAAAI Foundation and Support Our Specialty's Future**

Fresh off its new name and refocused mission, the AAAAI Foundation is eagerly anticipating its two Annual Meeting events. TheAAAIF Foundation Benefit, A/I: The Future Frontier, promises to be a thrilling event under the Space Shuttle Endeavour in the Samuel Oschin Pavilion at the California Science Center. Of course, everyone is looking forward to our Fourth Annual AAAAI Foundation 5K Run/Walk. Both events will support the AAAAI Foundation’s mission: funding research that leads to the prevention and cure of asthma and allergic and immunologic disease.

We hope you enjoy your time in Los Angeles and return home inspired by the new knowledge, ideas and experiences gained here.

Sincerely,

Robert F. Lemanske, Jr., MD FAAAAI
AAAAI President

Paul V. Williams, MD FAAAAI
Chair, Annual Meeting Program Subcommittee

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The AAAAI Annual Meeting is not a public event. Programs presented at the Annual Meeting are for the education of attendees and purchasers of recorded presentations as authorized by the AAAAI. Any use of program content, the name of a speaker and/or program title, or the name of the AAAAI without the written consent of the AAAAI is prohibited. The “program content” includes, but is not limited to, oral presentations, audio visual materials used by the speakers and program handouts. This rule applies before, during and/or after the meeting.

The AAAAI endorses only those activities described in this printed program. Any other events occurring in the city of Los Angeles during the AAAAI Annual Meeting are not sanctioned by the AAAAI.
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Stokes Peebles, Jr., MD FAAAI
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Christine M. Seroogy, MD FAAAI

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Désirée E.S. Larenas Linnemann, MD FAAAI
Anna H. Nowak-Wegrzyn, MD FAAAI
Rebecca Scherzer, MD FAAAI

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Ivan Chinn, MD
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Stacie M. Jones, MD

Follow the AAAAI Annual Meeting on Twitter

American Academy of Allergy Asthma & Immunology

While you’re in Los Angeles, use #AAAAI16 when you tweet to participate in onsite conversations and share what you’re learning with your colleagues.
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Eric M. Macy, MD FAAAAI
Dee Mallam, RN AE-C
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Jonathan Matz, MD FAAAAI
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Jennifer S. Kim, MD FAAAAA
 Hirohita Kita, MD
Maleeewan Kitcharoeninsakul, MD
Jorge R. Kleine-Tebbe, MD FAAAAI
**Volunteer Abstract Reviewers (continued)**

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<th>Name</th>
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<td>Rajesh Kumar, MD FAAAAI</td>
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<td>Susan M. Tarlo, MBBS FAAAAI</td>
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<td>Arveen K. Thethi, MD</td>
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<td>James M. Tracy, DO FAAAAI</td>
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<td>Harissios Vliagoftis, MD</td>
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<td>Becky M. Vonakis, PhD FAAAAI</td>
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<td>Andrew G. Weinstein, MD FAAAAI</td>
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<td>Eveline Y. Wu, MD</td>
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Abstracts
Abstracts programmed at the 2016 Annual Meeting were published as an online supplement to *The Journal of Allergy and Clinical Immunology* (JACI) and can be accessed on the JACI website, jacionline.org.

Admission to Sessions
Admission to AAAAI educational sessions is reserved for meeting registrants and registered members of the press only. Guests and exhibitors will not be admitted to educational sessions. Ushers will monitor the name badges of all meeting attendees to control access to educational sessions.

Some sessions require tickets for entry, which are indicated in this program with a ticket icon. Ticketed sessions have limited attendance and may have an additional fee associated with them. The listing of educational sessions by day includes additional fees, if applicable. To register for ticketed sessions please visit the registration desk. In consideration of state fire codes and as a courtesy to others, those without tickets will not be allowed access into ticketed sessions.

Associates to the AAAAI
*See Hospitality Suite.*

ATMs
ATMs can be found in the Convention Center on Level 1. There is one next to the Compass Café and another at the Business Service Center. There is also an ATM in the lobby of the JW Marriott.

Business Center
The onsite Business Service Center is located on Level 1 of the Convention Center just inside the Concourse Hall. The Business Service Center offers both FedEx and UPS shipping services, as well as full-service digital printing, copying, coat check and baggage check services, and is open during regular meeting hours. The JW Marriott also offers a full-service business center on the third floor next to the Georgia I meeting room.

Children and Guests
The AAAAI asks delegates to refrain from taking children, spouses or guests to any educational session offered at the 2016 Annual Meeting. Registered guests are welcome to relax in the Hospitality Suite or visit the Exhibit Hall; however, an adult must accompany children under the age of 18 at all times. Most Los Angeles hotels can provide their guests with a list of independent babysitters and babysitting agencies frequently used by visitors. For more information, please contact the concierge at the appropriate hotel.

Emergency/First Aid
*Convention Center, Ground Level, South Lobby Corridor*
*Convention Center, Level One, West Petree Hall*

In the event of an emergency, please use one of the white courtesy telephones available at the Convention Center and dial 3000 or 711 from any JW Marriott phone.

Evaluations
Delegates will be able to provide feedback on their experiences at the Annual Meeting in two ways:

Participants will be asked to provide input on the educational program of the 2016 Annual Meeting through the online CME Claim System when claiming credit for participation.

Delegates can provide feedback on Annual Meeting faculty members and the sessions they attend by using the Annual Meeting app.

Exhibits
*Convention Center, Level One, South Hall JK*

The exhibiting companies and organizations will provide you with the latest information on products and services available to physicians, researchers and allied health professionals in the field of allergy/immunology. The directory on page 171 will provide you with the information you need to take full advantage of the opportunities offered by the exhibitors.

Please allow adequate time in your daily schedule to visit the exhibits located in the Exhibit Hall in the Convention Center. Take time to speak with representatives of companies that provide services or market products directly to your professional interests.

Exhibit Hours
- Saturday, March 5  9:45 am to 3:15 pm
- Sunday, March 6  9:45 am to 3:15 pm
- Monday, March 7  9:45 am to 3:15 pm

Food Outlets
There are various coffee, food and beverage vendors located in the convention center on Level 1 (South Hall K, Compass Café, and Galaxy Court). There are also several restaurants within walking distance.

Handouts
Handouts at the 2016 Annual Meeting will be available in two formats:

- **Online Handouts**
  - The most up-to-date versions of the 2016 Annual Meeting handouts are available to meeting delegates online at annualmeeting.aaaai.org during and after the Annual Meeting. Delegates are able to view, download and print available session handouts. Handouts can be searched by session number, session title or a speaker’s last name. Login and password are case-sensitive.

  - **Login:** ALLERGY
  - **Password:** handouts

- **Handout Station Locations**
  - *Convention Center, Level One, South Hall H*
  - *Convention Center, Level Two, 400 Meeting Room Concourse*
  - *Convention Center, Level Two, 500 Meeting Room Hall (at top of escalator)*
  - *JW Marriott, Platinum Level (between escalators)*
Hospitality Suite
JW Marriott, Third Floor, Georgia I
Attendees with guest badges are welcome to relax in the Hospitality Suite. Stop in for information on local attractions and shopping, or just relax and enjoy some friendly conversation. (For guest attendees only.)

Hospitality Suite Hours
- Friday, March 4  8:00 am to 12:00 pm
- Saturday, March 5  8:00 am to 12:00 pm
- Sunday, March 6  8:00 am to 12:00 pm
- Monday, March 7  8:00 am to 12:00 pm

JACI Journals
Key representatives from *The Journal of Allergy and Clinical Immunology* (JACI), the most-cited allergy/immunology journal, and sister journal *JACI: In Practice* will once again be on-hand within the Member Resource Center to answer your questions regarding your subscriptions and submissions.

Jaywalking
Jaywalking in the city of Los Angeles is strictly prohibited and enforced. Fines for jaywalking can cost up to $250 if caught. Please mind all crosswalk lights.

Lost and Found
In the event that you have lost or found a personal belonging, please see the AAAAI registration desk in the convention center South Lobby to either turn in or report a lost item. Please be prepared to provide a detailed description of your missing article.

Member Resource Center
Convention Center, Ground Level, South Lobby
Visit the AAAAI Member Resource Center to:
- Take advantage of Annual Meeting discounts on all public education products.
- View open positions at the AAAAI Job Opportunities boards.
- Obtain guidance about office operations, coding and promoting your practice.
- Pay your dues, update your membership information or learn how to become a member.
- Pick up your tickets for the AAAAI Foundation Benefit.
- Pick up your materials or register on-site for the AAAAI Foundation 5K Run/Walk - “Light Up The Night”
- Speak with representatives from *The Journal of Allergy and Clinical Immunology* (JACI) and *The Journal of Allergy and Clinical Immunology: In Practice* about your subscription or submissions.

Member Resource Center Hours
- Thursday, March 3  4:00 to 8:00 pm
- Friday, March 4  6:15 am to 5:30 pm
- Saturday, March 5  6:45 am to 5:30 pm
- Sunday, March 6  6:45 am to 5:30 pm
- Monday, March 7  6:45 am to 5:30 pm

Mobile Annual Meeting App
*Sponsored by Teva Respiratory.*
The AAAAI has a mobile app dedicated to the 2016 Annual Meeting. This app features tools to search by speaker or session type, organize your schedule, evaluate speakers and sessions, stay current with changes as they occur during the meeting and navigate the convention center with floor plans and exhibitor information. Download the 2016 Annual Meeting app from the App Store or Google Play Store on your mobile device.

Name Badges
All registered attendees at the 2016 Annual Meeting will receive a name badge as part of their onsite registration package. These badges have a barcode on the back that is embedded with the attendee’s name, mailing address, fax number and email address. Delegates may scan their badges in the Exhibit Hall and give their contact information to specific exhibitors.

Please note: When you allow an exhibitor to scan your badge, you are authorizing them to contact you and send you materials via postal mail, fax and/or email. The AAAAI cannot be responsible for the use of your contact information once you have given it to an exhibitor.

Networking & Recharging Lounge
Conference Center, Ground Level, South Lobby

Nursing/Lactation Rooms
There are dedicated rooms for nursing mothers in the Convention Center located at each first aid station on the Ground Level and Level 1.

Photography
Due to the distraction to the speakers, personal photography is not permitted within any educational sessions or in the Poster Hall. Delegates are welcome to take photographs at all other AAAAI functions and activities.

Poster Hall
Convention Center, Level One, South Hall H
The poster sessions, featuring presentations of abstracts in thematic groupings, are open Saturday through Monday. Authors will be present with their posters from 9:45 to 10:45 am daily.

Poster Hall Hours
- Saturday, March 5  7:00 am to 6:00 pm
- Sunday, March 6  7:00 am to 6:00 pm
- Monday, March 7  7:00 am to 6:00 pm

e-Poster Stations
*Sponsored by Genentech.*
Electronic poster stations will be located throughout the convention center. ePosters are searchable by author or topic.
Press Room

Convention Center, Level Two, Room 401

Members of the press representing print, broadcast and electronic consumer media and healthcare trade media are invited to attend the 2016 AAAAI Annual Meeting if they have pre-registered through the AAAAI website. To claim a press pass onsite, journalists must provide media identification or a business card issued by their news organization. Freelance writers must provide a letter of assignment on a news organization letterhead or bylined articles from a recognized news organization. Press passes will only be issued to journalists representing the editorial staff of print, broadcast or Internet media. Journalists must display their press passes at all times while attending the meeting or covering meeting-sponsored events.

The AAAAI does not issue press passes to: a publication’s advertising, marketing, public relations or sales representatives; publishers, editors or reporters from manufacturers’ house organs or promotional publications, public relations staff of exhibitors or educational institutions; writers creating analyses or reports sold as a commodity to customers; or other individuals who are not actually reporting on the meeting or on behalf of a specific media outlet. Exhibitors may not register as press.

Quiet Reflection Room

Convention Center, Level Two, Room 302

This room has been designated for prayer and meditation and is available for use at the Annual Meeting during regular hours of operation.

Recording of Sessions

Many of the scientific sessions will be recorded as part of the Virtual Annual Meeting and will be available for purchase on site at the registration booths and after the meeting at the AAAAI Continuing Education Center (education.aaaai.org). Individual recording of educational sessions is not permitted.

Registration Desk

Convention Center, Ground Level, South Lobby

Visit the registration desk to pick up your name badge, tickets and registration bag. You can also purchase tickets, register onsite and receive your CME/CE or Attendance Certificates.

Registration Desk Hours

<table>
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<th>Day</th>
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<td>Thursday, March 3</td>
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<td>Monday, March 7</td>
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Ribbons

Ribbons are available at a kiosk located in the South Lobby near registration.

Ticket Exchange

Tickets to available sessions will be sold at the onsite registration desk. Please check the session monitor for available sessions. To exchange or cancel a session ticket, please bring the ticket to the onsite registration desk no less than 30 minutes prior to the start of the session. Refunds for returned tickets will be mailed from the AAAAI executive office after the meeting.

Smoking

Smoking is prohibited at all 2016 Annual Meeting sessions and events.

Speaker Disclosures

Copies of all speakers’ disclosure information are available online at the AAAAI Annual Meeting website and in the Speaker Resource Room.

Speaker Resource Room

Convention Center, Ground Level, South Lobby

All speakers are asked to report to the Speaker Resource Room immediately upon arrival in Los Angeles to upload their presentation materials. Computers and technical support are available for speakers to use in this room. Individuals will receive their speaker ribbons in the Speaker Resource Room.

Speaker Resource Room Hours

<table>
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<td>Monday, March 7</td>
<td>6:45 am to 4:00 pm</td>
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Special Dietary Requirements

If items on the daily, pre-arranged menu do not meet your special dietary requirements (e.g., allergies, kosher) an alternative option can be made available. Please notify an AAAAI staff member at the registration desk to ensure arrangements are made. Special arrangements require at least 24 hours advance notice. If you are a vegetarian, please inform the server assigned to the room at the beginning of the session that you would like a vegetarian selection.
Meeting Information

Training Stations
Saturday, March 5, 10:00 am to 12:00 pm
Convention Center, Level One, South Hall H
Training Stations provide annual meeting delegates the opportunity to get hands-on practice with allergy/immunology devices and procedures and instruction from peers with appropriate expertise. Participation is on a first-come, first-served basis and is open to any registered delegate. The 2016 stations will feature three options:

**Epinephrine Auto-Injector Training**
The Anaphylaxis Education Subcommittee will offer training in the use of epinephrine auto-injectors at the Annual Meeting. Participants receive a free trainer and sample anaphylaxis wallet card and action plan (while supplies last).

**Subcutaneous IgG Administration Training**
The Primary Immunodeficiency Committee will provide training on the use of infusion pumps and the administration of subcutaneous immunoglobulin.

**Oral Food Challenge Preparation**
The Adverse Reactions to Foods Committee will demonstrate techniques necessary for preparing and administering oral food challenges in the allergy/immunology practice.

Transportation
See page 194 for LA Transportation metro and bus line map.
Metro stations are available near every AAAAI hotel. Please take the Blue or Expo Line to the Pico Station, directly across the street from the Los Angeles Convention Center. Metro rail fares are $1.50 for a one-way ticket.
DASH is a quick way to get around L.A. for only 50 cents. Six routes serve the Downtown area with bus stops at major tourist and business locations.

Virtual Annual Meeting Recordings
Purchase the 2016 Virtual Annual Meeting at any of the registration booths located in the convention center on the Ground Level in the South Lobby. The Virtual Annual Meeting will be available online via streaming and MP4 file downloads. MP4 downloads will allow you to download the content and access it without being connected to the internet. The recordings include presentation slides along with video and audio for the Plenary and Keynote sessions, and presentation slides synchronized with the audio recordings for select courses, symposia, Interest Section Forums, workshops, pro/con debates and allied health sessions. Sessions included in the Virtual Annual Meeting are indicated with a ▼ icon in this program.

Wi-Fi
Sponsored by Teva Respiratory.
Complimentary Wi-Fi access is available at the convention center in the South Lobby, South Hall G and all meeting rooms and in all meeting spaces throughout the JW Marriott.
Connect to the Teva2016 wireless network.
Username: ProAir
Password: RespiClick
Username and password are case sensitive.

Your Annual Meeting Program in the palm of your hand.
Download the 2016 Annual Meeting app from the App Store or Play Store on your mobile device.

- New design and navigation.
- Easily access session handouts, abstracts and evaluations. (Note: this will be the ONLY place to access session evaluations.)
- Search by speakers and add their sessions to your calendar.
- Learn about last minute program changes.
- Navigate with interactive maps.
- Explore Los Angeles using the improved City Guide.

Sponsored by Teva Respiratory.
Business and Committee Meetings

**AAAIA Annual Business Meeting**
Monday, March 7, 12:30 to 1:30 pm  
**Convention Center, Level One, Concourse Hall, Room 152**
All AAAAI Fellows and members should attend the annual Business Meeting. Box lunches will be provided. No fee. No pre-registration required.

**Interest Section Forums**
Sunday, March 6, 3:30 to 4:30 pm  
AAAIA Fellows and members, as well as other delegates, are invited to attend an Interest Section Forum. Each interest section of the AAAAI will host a separate forum. Fellows and members may designate their interest section affiliation, while non-members may inquire about AAAAI membership opportunities. Continuing education credits are available for these activities. See page 67 for more information.

**International Reception**
Friday, March 4, 5:00 to 6:00 pm  
**Convention Center, Level One, Concourse Hall, Room 153B**
The AAAAI invites all international members and delegates to attend this reception. No fee. No pre-registration required.

**New Allergist/Immunologist Assembly Business Meeting and Reception**
Saturday, March 5, 4:45 to 6:15 pm  
**Convention Center, Level Two, Room 407**

**Program Directors Assembly Business Meeting**
Friday, March 4, 12-1:45 pm  
**JW Marriott, Platinum Ballroom Level, Salon C**

**2016 RSLAAIS Assembly Forum and Business Meeting**
Friday, March 4, 4:45 to 6:30 pm  
**Convention Center, Level Two, Room 515B**

**Assembly/Board/Division Committee Meetings**
If you are a current member of an assembly, Board or division committee, please plan to attend your committee meeting. Committee meetings are open to current AAAAI members only. All members of these committees must be named by the AAAAI President-Elect. If you are an AAAAI member and you are interested in becoming a member of any of these committees, please contact the AAAAI executive office at (414) 272-6071 or info@aaaai.org.

- **A/I Division Directors Committee**
  Saturday, March 5, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Plaza 1**

- **Advocacy Committee**
  Sunday, March 6, 12:30 to 1:30 pm  
  **Convention Center, Level Two, Room 303A**

- **Allied Health Education Committee**
  Sunday, March 6, 2:00 to 3:00 PM  
  **JW Marriott, Third Floor, Atrium 2**

- **Allied Health Professionals Assembly Leadership Meeting**
  Monday, March 7, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Atrium 2**

- **Annual Meeting Awards Committee**
  Friday, March 4, 5:15 to 6:15 pm  
  **JW Marriott, Third Floor, Atrium 2**

- **Annual Meeting Program Subcommittee**
  Monday, March 7, 10 am to 12 pm  
  **Convention Center, Level Two, Room 309**

- **Core Curriculum, Education & Residency Review Subcommittee**
  Saturday, March 5, 12:30 to 1:30 pm  
  **Convention Center, Level Two, Room 308B**

- **Credentials Committee**
  Friday, March 4, 12 to 1 pm  
  **Convention Center, Level Two, Room 303A**

- **Federation of RSLAAIS Board of Governors Meeting**
  Saturday, March 5, 2:00 to 3:15 pm  
  **Convention Center, Level One, Concourse Hall, Room 150C**

- **Fellows-In-Training Committee**
  Saturday, March 5, 6:45 to 7:45 am  
  **Convention Center, Level One, Concourse Hall, Room 150C**

- **Grant Review Committee**
  Monday, March 7, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Plaza 3**

- **Interest Section Coordinating Committee**
  Saturday, March 5, 12:30 to 1:30 pm  
  **Convention Center, Level Two, Room 303A**

- **Needs Assessment and Outcomes Subcommittee**
  Monday, March 7, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Olympic 1**

- **New Allergist/Immunologist Assembly Leadership Meeting**
  Sunday, March 6, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Plaza 3**

- **Occupational Diseases Committee**
  Saturday, March 5, 12:30 to 1:30 am  
  **JW Marriott, Third Floor, Atrium 2**

- **Practice Improvement and Education Committee (PIEC)**
  Monday, March 7, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Plaza 1**

- **Practice Improvement Subcommittee**
  Saturday, March 5, 5 to 6pm  
  **JW Marriott, Third Floor, Atrium 2**

- **Practice Management Committee**
  Sunday, March 6, 12:30 to 1:30 pm  
  **Convention Center, Level One, Concourse Hall, Room 153B**

- **Program Directors Assembly Executive Committee**
  Monday, March 7, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Olympic 1**

- **Veterans Health Administration Allergists Committee**
  Monday, March 7, 6:45 to 7:45 am  
  **JW Marriott, Third Floor, Olympic 3**
Interest Section Committee Meetings

Committee meetings are held during the Annual Meeting for the purpose of conducting AAAAI related business. If you are a current member of an interest section committee, please plan to attend your committee meeting. If you are an AAAAI member and you are interested in joining an interest section committee, please attend the meeting and notify the chair that you are interested in joining. For more information on AAAAI committees, please contact the AAAAI executive office at (414) 272-6071 or info@aaaai.org.

Adverse Reactions to Drugs, Biologics and Latex Committee
Saturday, March 5, 12:00 to 1:30 pm
Convention Center, Level One, Concourse Hall, Room 150A

Adverse Reactions to Foods Committee
Saturday, March 5, 6:30 to 8:00 am
Convention Center, Level Two, Room 309

Aerobiology Committee
Sunday, March 6, 6:45 to 7:45 am
JW Marriott, Third Floor, Plaza 1

Allergic Fungal Respiratory Diseases Committee
Saturday, March 5, 12:30 to 1:30 pm
Convention Center, Level One, Concourse Hall, Room 153A

Allergic Skin Diseases Committee
Monday, March 7, 6:45 to 7:45 am
Convention Center, Level One, Concourse Hall, Room 153B

Altered Immune Response Committee
Sunday, March 6, 12:30 to 1:30 pm
Convention Center, Level Two, Room 308A

Anaphylaxis Committee
Sunday, March 6, 6:45 to 7:45 am
JW Marriott, Platinum Ballroom Level, Salon C

Asthma & Allergic Diseases in the Elderly Committee
Saturday, March 5, 12:30 to 1:30 pm
Convention Center, Level Two, Room 301A

Asthma, Cough, Diagnosis and Treatment Committee
Sunday, March 6, 12:30 to 1:30 pm
Convention Center, Level Two, Room 304A

Cells and Mediators of Allergic Inflammation Committee
Sunday, March 6, 12:30 to 1:30 pm
Convention Center, Level Two, Room 309

Committee on the Underserved
Saturday, March 5, 1:45 to 2:45 pm
Convention Center, Level One, Concourse Hall, Room 153C

Complementary and Alternative Practices in Allergy Committee
Saturday, March 5, 11:00 am to 12:30 pm
Convention Center, Level One, Concourse Hall, Room 153B

Environmental Exposure and Respiratory Health Committee
Sunday, March 6, 12:30 to 1:30 pm
Convention Center, Level Two, Room 301A

Eosinophilic Gastrointestinal Disorders Committee
Sunday, March 6, 6:45 to 7:45 am
Convention Center, Level One, Concourse Hall, Room 150A

Genetics, Molecular Biology & Epidemiology Committee
Saturday, March 5, 12:30 to 1:30 pm
Convention Center, Level Two, Room 306B

Health Informatics, Technology & Education Committee
Saturday, March 5, 12:30 to 1:30 pm
Convention Center, Level One, Concourse Hall, Room 150B

Immunotherapy, Allergen Standardization & Allergy Diagnostics Committee
Saturday, March 5, 6:30 to 8:00am
Convention Center, Level One, Concourse Hall, Room 150B

Mast Cells Disorders Committee
Sunday, March 6, 6:45 to 7:45 am
Convention Center, Level One, Concourse Hall, Room 153C

Microbes in Allergy and Asthma Committee
Monday, March 7, 6:45 to 7:45 am
JW Marriott, Third Floor, Atrium 3

Office of Practice Management
Saturday, March 5, 12:30 to 1:30 pm
Convention Center, Level Two, Room 304A

Practice, Diagnostics and Therapeutics Committee
Sunday, March 6, 6:45 to 7:45 am
JW Marriott, Third Floor, Olympic 3

Primary Immunodeficiency Diseases Committee
Friday, March 4, 5:15 to 6:30 pm
JW Marriott, Diamond Ballroom Level, Salons 1 & 2

Quality, Adherence and Outcomes Committee
Monday, March 7, 6:45 to 7:45 am
JW Marriott, Third Floor, Plaza 2

Rhinitis, Rhinosinusitis and Ocular Allergy Committee
Monday, March 7, 6:45 to 7:45 am
Convention Center, Level Two, Room 501A

Sports, Exercise and Fitness Committee
Saturday, March 5, 6:45 to 7:45 am
JW Marriott, Third Floor, Olympic 1

Vaccines and Biological Threats Committee
Friday, March 4, 5:15 to 6:15 pm
JW Marriott, Third Floor, Plaza 1
Other AAAAI Meetings

**AAAAI Tweetup**
Friday, March 4, 2:00 to 3:00 pm
Convention Center, Level Two, Room 306A

**Allied Health Wine and Cheese Reception**
Friday, March 4, 5:15 to 6:15 pm
Convention Center, Level Two, Room 515A

**FIT Reception**
Friday, March 4, 5:00 to 6:00 pm
JW Marriott, Diamond Ballroom Level, Salons 6 & 7
Sponsored by Teva Respiratory.
Private reception open to current allergy/immunology Fellows-in-Training only.

**JACI Associate Editors Meeting**
Monday, March 7, 6:45 to 8:00 am
Convention Center, Level One, Concourse Hall, Room 150B

**JACI Editorial Board Meeting**
Saturday, March 5, 6:30 to 7:45 am
Convention Center, Level One, Concourse Hall, Room 153AB

**JACI: In Practice Editorial Board Meeting**
Sunday, March 6, 12:30 to 1:30 pm
Convention Center, Level One, Concourse Hall, Room 150BC

**JACI International Advisory Board**
Sunday, March 6, 6:30 to 7:30 am
JW Marriott, Third Floor, Olympic 1

**JACI Journals’ Reviewers Forum and Reception**
Sunday, March 6, 4:45 to 6:30 pm
JW Marriott, Diamond Ballroom Level, Salons 1 & 2

**National Allergy Bureau (NAB) Counters Meeting**
Friday, March 4, 5:15 to 6:15 pm
JW Marriott, Diamond Ballroom Level, Salon 3

**Dessert Reception**
This program is not sponsored or programmed by the AAAAI.
Applying Science with a Single Breath: Utilizing FeNO as a Biomarker in Asthma Management
Sunday, March 6, 4:45 to 6:30 pm
JW Marriott, Diamond Ballroom Level, Salons 1 & 2
Sponsored by Circassia.
The American Thoracic Society (ATS) has developed guidelines that strongly recommend the use of FeNO as a biomarker for monitoring airway inflammation in asthma patients. At this session, learn how you can reduce asthma exacerbations by utilizing FeNO measurements obtained with the NIOX VERO® device as a biomarker in Asthma Management. An expert will review case studies of how FeNO measurements help inform assessment and treatment of asthma patients. Live performance of the NIOX VERO® will be demonstrated at this session.

**Coding Questions?**
Just ask us at:
Coding@aaaai.org
The Office of Practice Management offers you this valuable AAAAI benefit!

**Practice Matters!**
Non-CME Educational Programs

Thursday

This program is not sponsored or programmed by the AAAAI.

**Taking a Broader View: Enhancing Evaluation and Care for Patients with Primary Immunodeficiency**

Thursday, March 3, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon ABC
Sponsored by Baxalta US Inc.

This non-CME educational dinner program brings together experts who have played key roles in updating treatment guidelines for primary immunodeficiencies (Pis) and expanding assessment of disease impact and treatment benefits to include patient-reported outcomes (PROs). Prominent clinicians will discuss updated practice parameters for the management of patients with Pis; present results concerned with perceived health in Pi patients; and review PI CONNECT, an initiative aimed at integrating patient- and physician-reported outcomes. The program will provide participants with up-to-date information about evaluating and managing the “whole patient” and personal insights about incorporating a broader approach to patient evaluation into clinical practice.

Friday

These programs are not sponsored or programmed by the AAAAI.

**Peanut Allergy Oral Immunotherapy: The Past, Present and a Look Into the Future**

Friday, March 4, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon FGHIJ
Sponsored by Aimmune Therapeutics.

Presenters:
Kirsten Beyer, MD
A. Wesley Burks, MD, FAAAAI
George Du Toit, MD, FAAAAI
Anna H. Nowak-Wegrzyn, MD, FAAAAI
Wayne Shreffler, MD, PhD

• Every day, more than 5 million people with peanut allergy in the US and Europe are at risk of severe reactions from accidental exposures to peanuts. Recent data indicate AR101, delivered through CODIT™, is an emerging treatment option for peanut allergy.

• This symposium will review the mechanisms of food allergy and desensitization; evaluate results; and highlight key learnings from academic clinical trials in peanut oral immunotherapy (OIT); and provide safety and efficacy results from Aimmune’s phase 2 clinical trials of AR101.

• A subsequent faculty panel discussion will answer questions and provide clinicians with insights and perspectives on OIT.

**Two Sides to Every Story: Expert Insights and a Patient Perspective on a Subcutaneous Immune Globulin Infusion for Adult Patients with Primary Immunodeficiency**

Friday, March 4, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon ABC
Sponsored by Baxalta US Inc.

Presenters:
Richard L. Wasserman, MD PhD FAAAAI
Raffi Tachdjian, MD MPH
Vicki Ybanez, Patient Ambassador

At this complimentary dinner program, our featured panel of thought leaders and a Patient Ambassador will provide an interactive discussion on a subcutaneous immune globulin (IG) infusion treatment for adult patients with primary immunodeficiency (Pi).

Objectives:
• Product clinical efficacy and safety profile
• Individualizing treatment to optimize patients’ infusion experience
• Address both HCPs’ and patients’ commonly asked questions regarding mechanism of action, dosing, and management of the infusion process.

The session will also include the personal story of an adult patient ambassador with Pi and her experiences receiving the product. Submit your questions for our panel in advance at http://avanthc-nroll.com/AAAAI2016.

**The Role of Eosinophils in the Management of Severe Asthma**

Friday, March 4, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon D
Sponsored by GlaxoSmithKline.

Presenters:
Mark S. Forshag, MD, MHA
Peter Howarth, MD

This complimentary dinner program will provide an overview of the pathogenesis of and unmet need in severe asthma. Information regarding the role of eosinophils and the changing landscape in the management of severe asthma will be reviewed.

**New Frontiers and Treatment Advances for Atopic Dermatitis, Asthma, and Related Immune-Related Conditions**

Friday, March 4, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon E
Sponsored by Sanofi and Regeneron Pharmaceuticals.

This program will improve the scientific and medical knowledge of emerging targets and therapies for moderate-to-severe atopic dermatitis (AD) and asthma; review guideline adherence strategies for managing patients with AD or asthma; illuminate new and evolving, immune-based therapeutic strategies that have the potential for improving clinical remissions; address the clinical burden of AD with a focus on duration of treatment, quality-of-life issues, disease, co-morbidities, and the evolution of AD from the pediatric years to adulthood; and review best practice benchmarks among specialists caring for patients at high risk for resistant disease, severe disease, and/or treatment failures.
Other Meetings and Events

Non-CME Educational Programs (continued)

Friday (continued)

Joint Presentation on Seasonal Allergic Rhinitis and Maintenance Treatment of Asthma
Friday, March 4, 8:30 to 10:30 pm
JW Marriott, Diamond Ballroom Level, Salon 5

Sponsored by Meda Pharmaceuticals.

Presenters:
Warner Carr, MD
Eugene Choo, MD
Bradley Chipp, MD
Linda S. Cox, MD
Ellen Sher, MD
William Storms, MD
Dana V. Wallace, MD

Meda Pharmaceuticals will host a joint presentation on Seasonal Allergic Rhinitis and maintenance treatment of Asthma. A donation of $100 will be made ($75 to The AAAAI Foundation and $25 to The Allergy & Asthma Network-AAN) for each registered AAAAI attendee attending this Non-CME Educational Program.

Saturday

Targeting Exacerbations in Moderate to Severe Persistent Allergic Asthma
Saturday, March 5, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon E

Sponsored by Genentech USA, Inc. and Novartis Pharmaceuticals Corporation.

Presenter:
Thomas Murphy, MD

Genentech USA, Inc. and Novartis Pharmaceuticals Corporation will be hosting a non-CME product theater program on Saturday, March 5th in Salon E (Platinum Ballroom Level). This program will be presented by Dr. Thomas Murphy and will feature a presentation on “Targeting Exacerbations in Moderate to Severe Persistent Allergic Asthma”.

Evidence Of Severity: Patients at Risk
Saturday, March 5, 6:30 to 8:30 pm
JW Marriott, Platinum Ballroom Level, Salon D

Sponsored by Teva Respiratory.

This presentation will review the scientific evidence that supports the use of asthma phenotyping and biomarkers in asthma patients. The risks associated with and practical considerations of managing patients with the active eosinophilic airway inflammation phenotype will be discussed. This is a preregistration-only event.

Sunday, March 6, 2016

OUTSIDE SOUTH LOBBY

Onsite Registration & Music: 4:30 pm
Warm-Up: 5:15 pm
Race & Entertainment: 5:30 pm

To register visit the AAAAI Foundation booth at the Member Resource Center.

Only $45!
Non-CME Educational Programs (continued)

Sunday

These programs are not sponsored or programmed by the AAAAI.

**Epicutaneous Immunotherapy: A Novel Pathway in Development for the Treatment of Food Allergies**
Sunday, March 6, 6:30 to 8:30 pm  
JW Marriott, Diamond Ballroom Level, Salon 4

*Sponsored by DBV Technologies.*

*Presenters:*  
Pierre-Henri Benhamou, MD, CEO of DBV Technologies  
Drew Bird, MD  
Kari Nadeau, MD, PhD  
Jonathan Spergel, MD, PhD  
Hugh Sampson, MD, CSO of DBV Technologies & Director of the Jaffe Food Allergy Institute at the Icahn School of Medicine at Mount Sinai (Moderator)

Epicutaneous immunotherapy (EPIT) is an innovative treatment approach for food-allergic patients. Clinical trial data support treatment efficacy, favorable safety profile, and strong patient compliance. This symposium will explore the scientific foundations, body of clinical evidence, and potential implications for food- and pediatric-allergic patients. Emerging data in peanut and milk allergy will be presented as well as its broader application in the field of food allergy, including eosinophilic esophagitis. This new class of self-administered and non-invasive products candidates is dedicated to safely transforming the care of food-allergic patients. Dinner will be provided.

**A Voyage Through the Lungs: Cytokines, Effector Cells, and Clinical Markers of Inflammation in Asthma**
Sunday, March 6, 6:30 to 8:30 pm  
JW Marriott, Platinum Ballroom Level, Salon D

*Sponsored by Genentech, Inc.*

The educational presentation is an interactive exploration of the pathophysiology of moderate to severe asthma. There will be discussions on the origins of hallmark signs such as airway hyperreactivity and mucus overproduction, the role of cytokines IL-13, IL-5, and IL-4, and how markers of asthma inflammation can reflect the activity of these cytokines.

**RUCONEST® (C1 Esterase Inhibitor [recombinant]) A Recombinant C1INH Treatment Option**
Sunday, March 6, 6:30 to 8:30 pm  
JW Marriott, Platinum Ballroom Level, Salon E

*Sponsored by Salix Pharmaceuticals.*

*Presenter:*  
Marc Riedl, MD  
Professor of Medicine  
Clinical Director – US HAEA Angioedema Center  
Division of Rheumatology, Allergy and Immunology  
University of California  
San Diego, California

**Clinical Relevance Of Tree Nut Allergen Component sIgE Testing**
Sunday, March 6, 6:30 to 8:30 pm  
JW Marriott, Diamond Ballroom Level, Salon 5

*Sponsored by Thermo Fisher Scientific.*

Thermo Fisher Scientific Inc. (NYSE: TMO) is the world leader in serving science, with revenues of $17 billion and approximately 50,000 employees in 50 countries. Our mission is to enable our customers to make the world healthier, cleaner and safer. We help our customers accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics and increase laboratory productivity. Through our premier brands – Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific and Unity Lab Services – we offer an unmatched combination of innovative technologies, purchasing convenience and comprehensive support. For more information, please visit www.thermofisher.com.
You are invited to attend a weekend meeting that will expose you to the clinical spectrum of asthma throughout life. An initiative of AAAAI President Robert F. Lemanske, Jr., MD, FAAAAI, this unique educational program is built around four themes:

- Asthma inception and progression
- Reducing and/or eliminating asthma exacerbations
- Preventing and treating severe asthma
- Asthma and COPD Overlap Syndrome (ACOS)

Each theme will have its own plenary, a series of symposia and case discussion workshops.

Registration and abstract submission now open at aaaaai.org.
2016 AAAAI FOUNDATION BENEFIT
(formerly the ARTrust Benefit)

A/I: THE FUTURE FRONTIER

Celebrate under the Space Shuttle Endeavour

PROCEEDS SUPPORT OUR MISSION:
Funding research that leads to the prevention and cure of asthma and allergic and immunologic disease

Saturday, March 5, 2016
7:00 pm - 10:00 pm
California Science Center: Samuel Oschin Endeavour Pavilion
Los Angeles, California

For more information or to purchase tickets, please visit the AAAAI Foundation booth in the Member Resource Center.
Celebrate under the Space Shuttle Endeavour

PROCEEDS SUPPORT OUR MISSION:
Funding research that leads to the prevention and cure of asthma and allergic and immunologic disease

Saturday, March 5, 2016
7:00 pm - 10:00 pm
California Science Center: Samuel Oschin Endeavour Pavilion
Los Angeles, California

For more information or to purchase tickets, please visit the AAAAI Foundation booth in the Member Resource Center.
Associates (Spouses & Friends) to the AAAAI
Since 1982, the Associates (Spouses & Friends) to the AAAAI have provided social events and networking opportunities for the spouses and friends of the AAAAI.

Full membership in the Associates to the AAAAI is included in each spouse/guest registration fee. Membership includes volunteer opportunities, newsletters, a chance to participate in future programming for the Associates and a networking membership directory on the AAAAI website.

Associates Breakfast and Business Meeting
Saturday, March 5, 9:00 to 11:00 am
JW Marriott, Gold Ballroom Level, Salon 4
Pre-registration and ticket required.

The Board of Directors of the Associates would like to invite you to begin your Annual Meeting experience by joining us for the celebration of the Associates at the JW Marriott Los Angeles. This breakfast event is open to registered guests only. For guests interested in bringing a child under the age of 17, pre-registration and ticket is required; children under the age of 6 are complimentary.

Hospitality Suite
JW Marriott, Third Floor, Georgia 1
Make sure you visit the Hospitality Suite, which is open Friday, March 4 to Monday, March 7 from 8:00 am to 12:00 pm. A host will be onhand to assist with restaurant and activity recommendations and to make reservations. Stop by, have a cup of coffee and learn how you can get involved!

Friends of the President

Your donation of $100 or more in support of the Friends of the President Fund entitles you to wear a Friend of the President Ribbon at the 2016 Annual Meeting.

This ribbon symbolizes your contribution to help support our mission: funding research that leads to the prevention and cure of asthma and allergic and immunologic disease and honors AAAAI President Robert F. Lemanske, Jr., MD, FAAAAI.

Purchase or pick up your ribbon at the AAAAI Foundation booth at the Member Resource Center.
Lectureships

Annual Meeting Lectureships
For nearly five decades, members of the American Academy of Allergy, Asthma & Immunology have honored outstanding individuals who have contributed to this field as leaders and teachers by the establishment of Annual Meeting lectureships. The Annual Meeting Program Committee is pleased to announce the lectureships and lectureship speakers for the 2016 AAAAI Annual Meeting. Biographies and photographs are available at annualmeeting.aaaai.org.

The Rebecca Buckley Lectureship: 5th year
Lecturer: Mark Ballow, MD FAAAAI
Award presentation at Symposium Session 1805: Secondary Immune Deficiencies (Non-HIV) on Friday, March 4, 4:00 to 5:15 pm

The Robert A. Cooke Memorial Lectureship: 54th year
Lecturer: Thomas A.E. Platts-Mills, MD PhD FAAAAI
Award presentation at Plenary Session 2101: Immunoglobulin E: The First 50 Years and Beyond on Saturday, March 5, 8:15 to 9:45 am

The Jerry Dolovich Memorial Lectureship: 18th year
Lecturer: Hannah J. Gould, PhD
Award presentation at Plenary Session 2101: Immunoglobulin E: The First 50 Years and Beyond on Saturday, March 5, 8:15 to 9:45 am

The Elliot F. Ellis Memorial Lectureship: 18th year
Lecturer: Robert F. Lemanske, Jr., MD FAAAAI
Award presentation at Presidential Plenary Session 1601: The Origins of Childhood Asthma on Friday, March 4, 2:00 to 3:30 pm

The Elliott Middleton Memorial Lectureship: 15th year
Lecturer: Kathleen E. Sullivan, MD PhD FAAAAI
Award presentation at Symposium Session 2101: Immunoglobulin E: The First 50 Years and Beyond on Saturday, March 5, 8:15 to 9:45 am

The Harold S. Nelson Lectureship: 16th year
Lecturer: Thomas B. Casale, MD FAAAAI
Award presentation at Plenary Session 2101: Immunoglobulin E: The First 50 Years and Beyond on Saturday, March 5, 8:15 to 9:45 am

The John E. Salvaggio Memorial Lectureship: 15th year
Lecturer: Carole Ober, PhD
Award presentation at Presidential Plenary Session 1601: The Origins of Childhood Asthma on Friday, March 4, 2:00 to 3:30 pm

The Hugh A. Sampson Lectureship in Food Allergy: Inaugural year
Lecturer: Gideon Lack, MD
Award presentation at Plenary Session 3101: Clinical Insights Into the Prevention and Modification of Atopic Disease on Sunday, March 6, 8:15 to 9:45 am

The Gail G. Shapiro Memorial Lectureship: 10th year
Lecturer: Kathleen Nowak-Wegrzyn, MD FAAAAI
Award presentation at Symposium Session 1806: Non-IgE-Mediated Gastrointestinal Food Allergies in Children and Adults on Friday, March 4, 4:00 to 5:15 pm

The Robert G. Townley Lectureship: 2nd year
Lecturer: William W. Busse, MD FAAAAI
Award presentation at Plenary Session 3101: Clinical Insights Into the Prevention and Modification of Atopic Disease on Sunday, March 6, 8:15 to 9:45 am

The Burton Zweiman Memorial Lectureship: 16th year
Lecturer: Andrea Apter, MD MA MSc FAAAAI
Award presentation at Symposium Session 1801: What Can Implementation Research Teach Us About the Management of Asthma? on Friday, March 4, 4:00 to 5:15 pm

AAAAI Foundation: Investing Together in Our Future
The AAAAI Foundation: Investing Together in Our Future lectureships are established to recognize substantial contributions of at least $100,000 to the AAAAI Foundation through collaborative contributions of others or individual contributions honoring an individual or entity. The AAAAI Foundation leadership is proud to announce the lectureships and lectureship speakers for the 2016 AAAAI Annual Meeting. Biographies and photographs are available at annualmeeting.aaaai.org.

AAAAI Foundation and Dr. William and Judith H. Busse Lectureship: Investing Together in Our Future: 3rd year
Lecturer: Stephen T. Holgate, MD DSc FAAAAI
Award presentation at Keynote Session 2701: The Past, Present and Future of Asthma on Saturday, March 5, 10:45 am to 12:00 pm

AAAAI Foundation and Donald Y. M. Leung, MD PhD FAAAAI-JACI Lecture: Investing Together in Our Future: 4th year
Lecturer: Wayne G. Shreffler, MD PhD FAAAAI
Award presentation at Symposium Session 4303: State-of-the-Art: Update from the AADCRC Food Allergy Research Centers on Monday, March 7, 10:45 am to 12:00 pm

AAAAI Foundation and Phil and Barbara Lieberman and Friends Lecture: Investing Together in Our Future: 2nd year
Lecturer: David B.K. Golden, MD FAAAAI
Award presentation at Symposium Session 2306: Managing Stinging Insect Allergy in the 21st Century on Saturday, March 5, 10:45 am to 12:00 pm

AAAAI Foundation and Stephen D. Lockey, Jr., MD Lecture: Investing Together in Our Future: 4th year
Lecturer: Hugh A. Sampson, MD FAAAAI
Award presentation at Symposium Session 2301: World Allergy Forum:
Lectureships

Role of Intolerance in Food Allergy on Saturday, March 5, 10:45 am to 12:00 pm

AAAAI Foundation and Anjuli Seth Nayak, MD FAAAAI Lecture: Investing Together in Our Future: 4th year

Lecturer: Seema Sharma Aceves, MD PhD FAAAAI
Award presentation at Plenary Session 4101: The Exposome: The Dynamic Role of the Environment in Shaping Risk for Disease on Monday, March 7, 8:15 to 9:45 am

AAAAI Foundation and William T. Shearer and Lynn Des Prez Lecture: Investing Together in Our Future: 2nd year

Lecturer: Jordan Orange, MD PhD FAAAAI
Award presentation at Symposium Session 2554: Imaging Immunity in Health and Disease on Saturday, March 5, 12:30 to 1:30 pm

The AAAAI Foundation announces two new Named Lectureships for 2016, each based on donations of $100,000 or more.

These inaugural Lectures will be delivered at our 2017 Annual Meeting in Atlanta.

AAAAI Foundation and I. Leonard Bernstein, MD FAAAAI Memorial Lecture

AAAAI Foundation and Louis M. Mendelson, MD FAAAAI Lecture: Investing Together in Our Future

Thank you to the families, colleagues and grateful patients of Dr. Bernstein and Dr. Mendelson for their support of these Lectureships and the AAAAI Foundation.
Awards

AAAAI Allied Health $750 Travel Award Recipients
Nicole Pleskovic, BS
Allegheny Singer Research Institute, Pittsburgh, PA
Beth D. Strong, RN CCRC
Icahn School of Medicine at Mount Sinai
New York, NY
Zara Atal
Icahn School of Medicine at Mount Sinai
New York, NY
Kim Mudd, RN MSN CCRP
Johns Hopkins University School of Medicine
Baltimore, MD
Claudia Guglielmo, MPS AE-C
Asthma Coalition of Queens/American Lung Association of the Northeast
Hauppauge, NY

AAA/AFED Best Oral Abstract on EGIDs Award
Ashmi M. Doshi, MD
“Group 2 Innate Lymphoid Cells and IL-9 Receptor Are Increased in Active Eosinophilic Esophagitis”
University of California San Diego

2016 Bernard B. Siegel Memorial Abstract Award
Yuval Tal, MD PhD
Hadassah Hebrew University Medical Center, Israel

American Academy of Pediatrics (AAP) Section on Allergy and Immunology Outstanding Pediatric Abstract Award Recipients
FIT Award Recipients - $750
Marissa Hauptman, MD MPH
Boston Children’s Hospital
David A. Hill, MD PhD
The Children’s Hospital of Philadelphia
Margie Louisias, MD
Brigham and Women’s Hospital

2016 Allied Health Professionals Assembly Travel Scholarship Recipients
Olivia Rae Ackerman, MSN APRN PPCNP-BC
Children’s National Medical Center
Washington, DC
Alexia Beauregard, MS RD CSP LD
Children’s Healthcare of Atlanta
Atlanta, GA
Scott Aron Tarver, PharmD BCPS
Parkland Health and Hospital System
Dallas, TX
Joshua Chaim Lipszyc, BA MSc Candidate
University of Toronto
Thornhill, ON
Canada
Stephani Ann Pineda, BSPH
Central California Asthma Collaborative
Fresno, GA
Jon Allan Ramsey, RN
Allergy & Asthma Clinics of Ga.
Albany, GA
Sabrina Jalleh Smith, RN
Nationwide Childrens Hospital
Columbus, OH
Darshna Yagnik, MS PhD
Middlesex University
London, United Kingdom

The AAAAI Foundation & Phil and Barbara Lieberman
Faculty Development Award, Presented to:
Kimberly G. Blumenthal, MD
Massachusetts General Hospital
“New Approaches to Beta-Lactam Allergy Research”

The AAAAI Foundation & Dr. Donald Y. M. Leung/JACI Editors
Faculty Development Award, Presented to:
Andrew Warren Lindsley, MD PhD
Cincinnati Children's Hospital Medical Center
“ORMDL3 Enhances Macrophage Function in Asthma Pathogenesis”

Each award provides $240,000 in total funding, paid out over three years. Congratulations to the awardees!
Awards

2016 International Travel Scholarship Recipients
The following international in-training members have been awarded International Travel Scholarships to attend the Annual Meeting. The 2016 International Travel Scholarships are funded by the AAAAI and selected by an ad hoc panel of International Fellows.

Africa
Maria Karsas, MD
Steve Biko Academic Hospital

East Asia
Yu Kuwabara, MD
Allergy Center and Institute for Clinical Research, Mie National Hospital

Europe
Mehtap Haktanir Abul, MD
Karadeniz Teknik University
Esther Steveling, MD
University Hospital Basel
Ru-Xin Melanie Foong, MD
Institute of Child Health, University of London
Sandra Wieser, MD
Medical University of Vienna
Marijn Warners, MD
Academic Medical Center
Lukas Einhorn, MSc
Medical University Vienna
Paula Lopez, MD
Ramon y Cajal University Hospital
Davide Campagna, MD
University of Catania

EAACI Reps
Peter Valentin Tomazic, MD
Medical University of Graz
Olympia Tsilochristou, MD
Charlote University Hospital
Juana Fernandez de Cordova Aguirre, MD
Hospital General de Mexico

South Asia
Suvanee Charoenlap, MD
Chulalongkorn University
Suda Punrin, MD
Chulalongkorn University
Buntita Bamrungchaowkasem, MD
Mahidol University
Bharti Arora, MD
CSIR, Institute of Genomics and Integrative Biology
Yiwa Sukawat, MD
Mahidol University
Natcha Siripattarasopan, MD
Mahidol University
Sinjira Somanunt, MD
Mahidol University

South America
Sandra Coronado, MD
University of Cartagena
Juliana Sella, MD
Ribeirao Preto School of Medicine
University of Sao Paulo
Estefania Martinez, MD
Hospital Cordoba
Adriana Barbosa, MD
University of Sao Paulo

AAAII Interest-Section Fellow-in-Training (FIT) Abstract Award Recipients

Asthma Diagnosis and Treatment Interest Section
Jennifer McCracken, MD
UTMB
“Abrogation of Glucocorticoid Signaling By Exhaled Breath Condensate (EBC) from Mild Persistent Asthmatics”

Basic and Clinical Immunology Interest Section
Suvanee Charoenlap, MD
Chulalongkorn University, Thailand
“Use of Rabies Virus Vaccine As a Neotenant to Evaluate Humoral Immune Function in Patients with Primary Immunodeficiency Disorders Receiving Immunoglobulin Replacement Therapy”

Environmental and Occupational Respiratory Diseases Interest Section
Jamee R. Castillo, MD
University of Wisconsin School of Medicine and Public Health
“Farm Exposure Is Associated with Reduced Rates of Viral Respiratory Illnesses in Early Life”

Food Allergy, Anaphylaxis, Dermatology and Drug Allergy Interest Section
Justin R. Chen, MD
University of Texas Southwestern Medical Center
“Beneficial Outcomes of an Inpatient Penicillin Allergy Testing Protocol”

Health Outcomes, Education, Delivery and Quality Interest Section
Jaclyn Bjelac, MD
Cleveland Clinic
“On-Line Monitoring Tool for Recommended Data Collection of Angioedema Attacks in Patients with Hereditary Angioedema”

Immunotherapy, Rhinitis, Sinusitis and Ocular Diseases Interest Section
Kathleen M. Buchheit, MD
Brigham and Women’s Hospital
“Thymic Stromal Lymphopoetin Controls Prostaglandin D2 Generation in Aspirin-Exacerbated Respiratory Disease”

Mechanisms of Allergy and Allergic Inflammation Interest Section
Jenna R. Bergerson, MD MPH
Ann & Robert H. Lurie Children’s Hospital of Chicago
“Identification of Tr1 Cells in a Pediatric Population”
2016 FIT Travel Scholarships

The FIT Travel Scholarships for Fellows-In-Training in the United States and Canada allow FIT attendees to supplement their training by attending the Annual Meeting.

Funded by the AAAAI and in part through an educational grant from Genentech, Inc. and a sponsorship from Teva Respiratory.

$1,100 Awardees

Eyas Abla, MD
Julie Abraham, MD
Juan Adams, MD
Elias Ak, MD
Kwei Akuento, MD
Sultan Alandjani, MD
Sohalb Aleem, MD
Aishah Ali, MD
Halie Anderson, MD
Schweta Arakali, MD
Samuel Ash, MD
Evan Atkinson, MD
Diana Balekian, MD
Lori Banka, DO
Maria Barcena, MD
Jeannie Bay, DO
Sara Benede, PhD
Jenna Bergerson, MD
Alalia Berry, MD
Sheila Bina, MD
Ashvini Biswas, MD
Jaclyn Bjelac, MD
Sunit Bose, MD
Moira Breslin, MD
Kari Brown, MD
Kathleen Buchheit, MD
Adeeb Bulkhi, MD
Vanessa Bundy, MD
Allison Burbank, MD
Suzanne Burke-McGovern, MD
Adam Byrne, MD
Sonia Cajigal, MD
Charles Calais, DO
Carrie Caruthers, MD
Jamee Castillo, MD
Angela Chang, MD
Jianjun Chen, MD
Justin Chen, MD
Yifeng Chen, MD
Sergio Chiarella, MD
Amaziah Coleman, MD
Kevin Cook, MD
Andrew Cooke, MD
Gina Coscia, MD
Christopher Couch, MD
Leslie Cristiano, MD
Miranda Curtiss, MD
Roula Daher, MD
Jennifer Dantzer, MD
Rahul Datta, MD
Kristen Dazy, MD
Sarah De Schryver, MD
Shilpa Desai, MD
Meredith Dilley, MD
Danh Do, PhD
Svetlana Dolovcak, MD
Steve Dorman, MD
Ashmi Doshi, MD
Anar Dossumbekova, MD
Steven Draikiwicz, MD
Jacqueline Eastman, MD
Maureen Egan, MD
Hannah Laure Eiffassy, MD
Stephanie Eng, MD
Rehan Faridi, PhD
Elizabeth Feuille, MD
Charles Filion, MD
Claire Galand, PhD
Joel Gallagher, MD
Yael Gernez, MD
Maya Gharfeh, MD
Debajyoti Ghosh, PhD
Megan Goebel, MD
Hillary Gordon, MD
Torie Grant, MD
Joseph Grillo, MD
Magdalena Grynberg, MD
Miren Guenechea, MD
Malika Gupta, MD
Ratika Gupta, MD
Hani Hadi, MD
Yasmin Hamzavi Abedi, MD
Jill Hanson, MD
Heather Hartman, MD
Nicholas Hartog, MD
Marissa Hauptman, MD
Jonathan Hemler, MD
Sarah Henrickson, MD
Camellia Hernandez, MD
Alice Hoyt, MD
Melissa Iammatteo, MD
Muhammad Imran, MD
Onyinye Iammatteo, MD
Vipul Jain, MD
Jay Jin, MD
Ara Jo, PhD
Andrea Jones, MD
Samata Kamireddy, MD
Venkatkiran Kanchustambham, MD
Jennifer Kannan, MD
Irina Katajeva, MD
Theodore Kelbel, MD
John Kelley, MD
Jamie Kiehm, MD
Dae Woo Kim, PhD
Julie Kim-Chang, MD
Aaron Kobernick, MD
Parul Kothari, MD
Atosha Kouros, MD
Fei Li Kuang, MD
Bharat Kumar, MD
Susanne LaBarba, DO
Jennifer Lan, MD
Juhee Lee, MD
Kathleen Lee-Sarwar, MD
Evan Li, MD
Adora Lin, MD
Samantha Lin, MD
Changda Liu, PhD
Margie Louisias, MD
Cathryn Luria, MD
Bethany Lussier, MD
Vaishaali Manga, MD
Ashish Mathur, MD
Jennifer McCracken, MD
Neha Mehrrotra Dunn, MD
Rushita Mehta, MD
Jin Young Min, MD
Meaghan Misiasz, MD
Mahta Mortezavi, MD
Megan Motsoue, MD
Manali Mukherjee, PhD
Naveen Nannapaneni, MD
Ogechukwu Ndum, MD
Huyen-Tran Nguyen, MD
Ashleigh Olson, MD
Iris Otani, MD
Pooja Oza, MD
Thamiris Palacios, DO
Erica Palmisano, MD
Dingxin Pan, PhD
Andrew Parker, MD
Anil Patel, MD
Bhavisha Patel, MD
Neha Patel, MD
Shreya Patel, MD
Simia Patel, DO
Barry Pelz, MD
Tammy Peng, MD
Leilanie Perez Ramírez, MD
Daniel Petroni, MD PhD
Andrew Pham, MD
Awards

$1,100 Awardees (continued)
Ami Philipp, MD
Deena Pourang, MD
Chandrashekar Puthanapura Mahadevappa, PhD
Lipeng Qiu, PhD
Lahari Rampur, MD
Monica Reddy, MD
Margaret Redmond, MD
Nasim Reedy, DO
Jennifer Regan, MD
Erin Reigh, MD
Peter Ricketti, DO
Jonathan Rodrigues, MD
Stacy Rosenberg, MD
Tamar Rubin, MD
Melanie Ruffner, MD
S. Claire Brabec, MD
Marc Braunstein, MD
Barbara Brunet, MD
Caroline Caperton, MD MSPH
Jason Casselman, DO
Amy Castilano, MD
Johana Castro-Wagner, MD
Melanie Chong, MD
Elisabeth Clayton, MD
Cathleen Collins, MD PhD
Kara Crosby, DO
Chongwei Cui, MD
Kathleen Dass, MD
Ottavia Maria Delmonte, MD
Michael Derrick, MD
Neetu Dhawan, DO
Dimana Dimitrova, DO
Stephen Dinetz, MD
Brittany Esty, MD
Michael Fein, MD
Scott Feldman, MD PhD
Jeffery Franklin, MD
James Fulton, MD
Martin Gaudinski, MD
Matthew Giannetti, MD
Karina Gobin, MD
Francois Graham, MD
Ahmad Hamad, MD
Syeda Hamadani, MD
Aasha Harish, MD
Jennifer Hill, MD
Karina Gobin, MD
Martine Hoffaker, MD
Ghislaine Isabwe, MD
Parvez Islam, MD
Divya Jayaraman, MD
Akkah Jefferson, MD
Rekha Jhamnani, MD
Ilynn Jones, MD
Nikhil Joshi, MD
Anjeli Kalra, MD
Amrita Khokhar, MD
Julie Kim, MD
Yoon Kim, DO
Sara Kleinman, MD
Renee Kleris, MD
Christina Kwong, MD
Roxane Labrosse, MD
Godfrey Lam, MD

$800 Awardees
Hanan Ahmed, MD
Jomana Alsuailman, MD
Wei An, MD
Inessa Bachove, DO
Jennifer Barnas, MD
Catrin Biggs, MD
S. Claire Brabec, MD
Marc Braunstein, MD
Barbara Brunet, MD
Caroline Caperton, MD MSPH
Jason Casselman, DO
Amy Castilano, MD
Johana Castro-Wagner, MD
Melanie Chong, MD
Elisabeth Clayton, MD
Cathleen Collins, MD PhD
Kara Crosby, DO
Chongwei Cui, MD
Kathleen Dass, MD
Ottavia Maria Delmonte, MD
Michael Derrick, MD
Neetu Dhawan, DO
Dimana Dimitrova, DO
Stephen Dinetz, MD
Brittany Esty, MD
Michael Fein, MD
Scott Feldman, MD PhD
Jeffery Franklin, MD
James Fulton, MD
Martin Gaudinski, MD
Matthew Giannetti, MD
Karina Gobin, MD
Francois Graham, MD
Ahmad Hamad, MD
Syeda Hamadani, MD
Aasha Harish, MD
Jennifer Hill, MD
Nicole Hoffaker, MD
Ghislaine Isabwe, MD
Parvez Islam, MD
Divya Jayaraman, MD
Akkah Jefferson, MD
Rekha Jhamnani, MD
Ilynn Jones, MD
Nikhil Joshi, MD
Anjeli Kalra, MD
Amrita Khokhar, MD
Julie Kim, MD
Yoon Kim, DO
Sara Kleinman, MD
Renee Kleris, MD
Christina Kwong, MD
Roxane Labrosse, MD
Godfrey Lam, MD

$650 Awardees
Ashely Altman, DO
Adam DeZure, MD
David Hagen, MD
Jamie Rosa, MD PhD
Jared Silver, MD
Maria Luz Lara-Morales, MD
Jake Lening, MD
Zhenhong Li, MD
Chen Hsing Lin, MD
Lachara Livingston, MD
Sydney Long, MD
Anu Mallapaty, DO
Shari Montandon, DO
Lindsey Moore, DO
Blake Olmstead, MD
Vathani Packianathan, MD
Hetu Parekh, MD
Adesh Patel, MD
Snehal Patel, DO
Tanvi Patel, MD
Persia Pourshahnaazari, MD
Niha Qamar, MD
Arjun Rash, MD
Andrew Rorie, MD
Lana Rosenfield, MD
Tamar Rubin, MD
Ali Saad, DO
Melissa Skupin, MD
Toru Takahashi, MD
Jiah Shin Teh, MD
Aaron Ver Heul, MD
Eileen Wang, MD
Michael Weinreich, MD
Elizabeth Wisner, MD
Shijun Xi, MD
Elizabeth Yoobah, MD
Eric Yen, MD

$500 Awardees
Ashley Altmann, DO
Adam DeZure, MD
David Hagen, MD
Jamie Rosa, MD PhD
Jared Silver, MD
Maria Luz Lara-Morales, MD
Jake Lening, MD
Zhenhong Li, MD
Chen Hsing Lin, MD
Lachara Livingston, MD
Sydney Long, MD
Anu Mallapaty, DO
Shari Montandon, DO
Lindsey Moore, DO
Blake Olmstead, MD
Vathani Packianathan, MD
Hetu Parekh, MD
Adesh Patel, MD
Snehal Patel, DO
Tanvi Patel, MD
Persia Pourshahnaazari, MD
Niha Qamar, MD
Arjun Rash, MD
Andrew Rorie, MD
Lana Rosenfield, MD
Tamar Rubin, MD
Ali Saad, DO
Melissa Skupin, MD
Toru Takahashi, MD
Jiah Shin Teh, MD
Aaron Ver Heul, MD
Eileen Wang, MD
Michael Weinreich, MD
Elizabeth Wisner, MD
Shijun Xi, MD
Elizabeth Yoobah, MD
Eric Yen, MD
The AAAAI QCDR: Your Registry Reporting Tool for PQRS 2016

The AAAAI Allergy, Asthma & Immunology Quality Clinical Data Registry (QCDR) is a quality improvement registry intended to assist allergy/immunology physicians with the Physician Quality Reporting System (PQRS). With this tool, you can foster performance improvement and better outcomes in the care of patients with allergies and asthma.

With the registry, you can:

- **Review Your Performance**
  Regularly review your performance, identify your quality gaps and compare yourself to your peers

- **Identify Patient Outliers**
  Identify patients who require additional interventions to improve outcomes

- **Access Improvement Tools**
  Access quality improvement resources and proven interventions from leading quality improvement organizations

- **Fulfill Maintenance of Certification (MOC)**
  Connect to ABAI MOC Communication Modules and reuse registry data in the form of board-ready reports

- **Avoid costly PQRS penalties**
  Satisfy PQRS reporting requirements and avoid a 2% reduction on your Medicare Part B Physician FFS reimbursements

- **Report on Specialty Developed Measures**
  Includes measures for asthma, allergen immunotherapy, sinusitis and general care.

A CMS-approved registry for the Physician Quality Reporting System (PQRS)

Sign up today!

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AAAAIQIR

$150 Discount available to AAAAI members

aaaai.org/practicematters
Continuing Education & Accreditation

Two types of continuing education credit will be available at the 2016 Annual Meeting: AMA PRA Category 1 CME Credits for physicians and Continuing Education (CE) contact hours for nurses. Not all Annual Meeting sessions offer credit, and of those that do, not all may offer both CME and CE. The types and amount of credit offered for each session are indicated in the session descriptions beginning on page 28. Attendance certificates are available to all delegates.

Professional delegates are encouraged to complete the self-report form to receive their CME/CE or participation certificates. Visit the registration desk, complete the self-report form and print your certificate before your departure.

If you do not have time to visit the registration desk before you leave, the self-report form will be available online beginning March 21, 2016 and will be accessible until December 31, 2016 on the AAAAI website, annualmeeting.aaaai.org.

Physicians – Continuing Medical Education (CME) Credits

Accreditation Statement
The American Academy of Allergy, Asthma & Immunology (AAAAI) is accredited by the Accreditation Council for Continuing Medical Education (ACCMCE) to provide continuing medical education for physicians.

Credit Designation
The AAAAI designates this live activity for a maximum of 40.00 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The American Medical Association has determined that physicians not licensed in the U.S. who participate in this CME activity are eligible for AMA PRA Category 1 Credits™.

Target Audience
The Annual Meeting is designed for clinicians, researchers, trainees/students and allied health professionals involved and/or interested in the study of allergy, asthma and immunology.

Program Objective
Upon completion of the Annual Meeting, participants should be able to discuss the latest advances in the research, diagnosis and treatment of allergic and immunologic disease. Please refer to the individual session descriptions in this program for session-specific learning objectives.

ABAI – Continuing Medical Education (CME) Credits

In 2007 the American Board of Allergy and Immunology (ABAI) transitioned from a recertification process to a Maintenance of Certification (MOC) program, which requires board certified physicians to complete a minimum of 25 continuing medical education credits in allergy/immunology each year. AAAAI reports all CME credits it issues to physician learners to the ABAI on a quarterly basis to be posted in learners’ diplomate portals. For more information about Maintenance of Certification visit the ABAI website at www.abai.org.

Allied Health – Continuing Education (CE) Credits

Nurses – Continuing Education (CE) Contact Hours
The American Academy of Allergy, Asthma & Immunology (AAAAI) is a Provider, approved by the California Board of Registered Nursing, Provider #10704, for up to 40.00 Contact Hours.

Medical Administrators
Practice administrators who attend the Annual Meeting may apply for credit through the American College of Medical Practice Executives (ACMPE). For additional information, please contact the Medical Group Management Association at www.mgma.com.

Advanced Practitioners
The AAPA, ANCC and AANP accept reports from advanced practitioners of participation in activities offering AMA PRA Category 1 Credits™ for continuing education and credentialing purposes. For more information, please contact the appropriate organization.

Pharmacists
Pharmacists are encouraged to contact their state boards of pharmacy to determine if reports of participation in the AAAAI Annual Meeting are accepted for re-licensure.

Target Audience
Health care professionals who assist with and provide care to persons with asthma, allergy and immunologic disease, specifically: RNs, LPNs, nurse practitioners, physician assistants, respiratory therapists, medical technologists, medical assistants, clinical research coordinators, and practice managers/administrators.

Learning Objectives
Upon completion of the Annual Meeting, participants should be able to discuss and expand upon the latest advances in medications, equipment and procedures necessary to promote health for their patients; describe and discuss new therapies, information, patient care and education in the field of allergy, asthma and immunology; identify new approaches to clinical research which will improve efficiency and effectiveness; discuss coding and other administrative aspects of a medical practice. Please refer to the individual session descriptions in this program for session-specific learning objectives.
Introduction to Session Tracks

Session listings are labelled to designate which track the session is part of – Basic Science, Clinical, or Translational. These tracks describe the primary focus of the session’s content and can be used to help you identify sessions that will best meet your learning needs.

To identify a session’s track, look at the color in which the title is highlighted:

**Blue = Basic Science**

**Gray = Clinical**

**Gold = Translational**

NEW FOR 2016: Sessions that are related to the meeting’s clinical theme – Prevention and Modification of Allergic Disease – will be highlighted in Purple.

Large sessions, such as plenaries and keynotes, will include all three types of content and are not labelled. Sessions that are included in a program track may include other types of content but will focus on content relevant to that category.

All delegates are welcome to attend sessions from any track regardless of their member type (tickets are required for any ticketed session). Use these tracks to shape your annual meeting agenda to best meet your individual needs.

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**VAMPSS — Vaccines and Medications in Pregnancy Surveillance System**

*Helping asthmatic women deliver healthy babies*

VAMPSS is a ground-breaking system designed to study the safety of medications and vaccines in pregnancy, currently focusing on the safety of select asthma medications and flu vaccines. Don’t miss this exciting workshop exploring the ramifications of changes to the FDA pregnancy drug labeling rule.

**The Safety of Asthma and Allergy Medications During Pregnancy: New Horizons**

Friday, March 4
12:30 – 1:45 pm; Convention Center, Level 2, Room 409AB

**Moderator:** Michael Schatz, MD, MS, FAAAAI

**Speakers:** Jennifer Namazy, MD, FAAAAI; Tamara Johnson, MD, MS; Christina Chambers, PhD, MPH

**VAMPSS partners:**

AAAAI
Organization of Teratology Information Specialists (OTIS) Research Center at the University of California San Diego
Slone Epidemiology Center (SEC) at Boston University
Harvard T.H. Chan School of Public Health and Brigham and Women’s Hospital

Visit the AAAAI Member Resource Center to find out more about VAMPSS.

[www.aaaai.org/VAMPSS](http://www.aaaai.org/VAMPSS)
Thursday, March 3, 2016

Chrysalis Project Registration

6:00 to 7:00 pm
JW Marriott, Gold Ballroom Level, Salon 4
Registration restricted to selected participants of award program.

Friday, March 4, 2016

Course

1050  Chrysalis Project Program (Invite Only)  
7:30 am to 1:45 pm
JW Marriott, Diamond Ballroom Level, Salon 4
Pre-registration and ticket required. Attendance restricted to selected participants of award program. No fee. Continental breakfast and box lunch included.
Credit: No CME/CE

7:30  Breakfast
8:00  Welcome from Chrysalis Chairs
A. Wesley Burks, MD FAAAAI
Kimberly A. Risma, MD PhD FAAAAI
8:05  Welcome from the AAAAI President-Elect
Thomas A. Fleisher, MD FAAAAI
8:15  Food Allergy
A. Wesley Burks, MD FAAAAI
8:45  Eosinophilic Disorders
Patricia C. Fulkerson, MD PhD
9:15  Immunodeficiency
Thomas A. Fleisher, MD FAAAAI
9:45  Break
10:00  Asthma
Rohit Katial, MD FAAAAI
10:30  Atopic Dermatitis
Donald Y. M. Leung, MD PhD FAAAAI
11:00  Academic Career Paths
Kimberly A. Risma, MD PhD FAAAAI
11:20  Industry Career Paths
Dale T. Umetsu, MD PhD FAAAAI
11:40  Private Practice Career Paths
John Ramey, MD FAAAAI
12:00  Chrysalis Project Program Luncheon with FIT Mentors, Chrysalis Faculty and Chrysalis Workgroup Members

Saturday, March 5, 2016

Chrysalis Project Reception

6:00 to 7:00 pm
JW Marriott, Gold Ballroom Level, Salon 4
Private reception open to current Chrysalis participants, Chrysalis mentors, Chrysalis faculty, Chrysalis Workgroup members and the Program Directors Assembly. Prior RSVP required.

For your practice.
For your patients.
For you.

Practice Matters is a monthly email from the AAAAI that will keep you up to date on issues important to allergists in practice. It is emailed to all AAAAI members on the third Thursday of every month.

For more information, or to submit news tips, please email practicematters@aaaai.org.
Friday, March 4, 2016

1012  FIT Symposium  
7:00 am to 1:45 pm  
JW Marriott, Diamond Ballroom Level, Salon 5  
Pre-registration and ticket required. Attendance restricted to current allergy/immunology Fellows-in-Training only. No fee. Continental breakfast and box lunch included.  
Credit: No CME/CE  
Moderator: Becky J. Buelow, MD  
**This Session Will Use Audience Response System Technology.**  
7:00  Networking Breakfast  
7:40  Introductions  
Becky J. Buelow, MD  
Mariana C. Castells, MD PhD FAAAAI  
7:50  Networking Organizations  
8:00  American Board of Allergy and Immunology  
Stephen I. Wasserman, MD FAAAAI  
8:10  Mechanisms in the Cause of Asthma: Roundtable Discussion of the Experts  
**Microbial Agents**  
Mitchell H. Grayson, MD FAAAAI  
**Air Quality/Pollution**  
David B. Peden, MD MS FAAAAI  
**Exercise and Asthma**  
Thomas A.E. Platts-Mills, MD PhD FAAAAI FRS  
**Microbiome**  
Susan V. Lynch, PhD  
**Genetics of Asthma**  
Kathleen C. Barnes, PhD FAAAAI  
9:20  Break  
9:35  AAAAI President Welcome  
Robert F. Lemanske Jr., MD FAAAAI  
9:45  Advances in the Treatment of Childhood Asthma  
Robert F. Lemanske Jr., MD FAAAAI  
10:15  Table Discussion: Treatment of Childhood Asthma  
10:45  Current and Emerging Biologic Treatments for Asthma  
Elliot Israel, MD FAAAAI  
11:15  Define Asthma Phenotypes and Their Use in Clinical Medicine  
Sally E. Wenzel, MD FAAAAI  
11:45  Table Discussion: Using Biologics in the Treatment of Asthma/ Difficult Cases  
12:15  Networking Lunch  

Upon completion of this session, participants should be able to: Discuss the mechanisms of asthma; Describe the advances of treatment in childhood asthma; Discuss the biologic treatments of asthma and how these relate to different asthma phenotypes.

**FIT Reception**  
5:00 to 6:00 pm  
JW Marriott, Diamond Ballroom Level, Salon 6 & 7  
**Sponsored by Teva Respiratory.**  
Private reception open to current allergy/immunology Fellows-in-Training only.

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Saturday, March 5, 2016

2816  FIT Workshop: Interesting Cases Part 1  
4:45 to 6:00 pm  
JW Marriott, Platinum Ballroom Level, Salon C  
Credit 1.25 CME/CE  
Moderators: T. Prescott Atkinson, MD PhD FAAAAI  
Katherine Gundling, MD  
4:45  Unanticipated Immune Complications from Tumor Immunotherapy  
Bharat Kumar, MD  
5:00  CNS Histoplasmosis in an Adult with Idiopathic CD4+ T-Lymphocytopenia (ICL)  
Anar Dossumbekova, MD  
5:15  Warts and Small Stature – Indications of Considering Underlying Immunodeficiency  
Jacqueline Eastman, MD  
5:30  An infant with absent T-cells, fevers and proliferation of oligoclonal “rogue” T cell population  
Eric Schaubberger, DO PhD  
5:45  Abnormal new born screening in a patient with CHARGE syndrome  
Britta Sundquist, MD  

Upon completion of this session, participants should be able to: Evaluate the management of challenging patient cases by trainees in allergy/immunology; Compare and contrast management strategies for challenging patient cases with peers.

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Sunday, March 6, 2016

3555  FIT Workshop: Interesting Cases Part 2  
12:30 to 1:45 pm  
Convention Center, Level Two, Room 403A  
Credit 1.25 CME/CE  
Moderators: Kelly D. Stone, MD PhD FAAAAI  
Paul J. Dowling, MD FAAAAI  
12:30  Schnitzer Syndrome  
Sultan Alandijani, MD  
12:45  Orofacial granulomatosis masquerading as “angioedema”  
Chen Hsing Lin, MD  
1:00  All that is red and bumpy is not eczema  
Schweta Arakali, MD  
1:15  Hemotherax Associated with Status Asthmaticus  
Peter A. Ricketti, DO  
1:30  Recurrent Anaphylaxis to Cat, or is it?  
Jay Jin, MD PhD  

Upon completion of this session, participants should be able to: Evaluate the management of challenging patient cases by trainees in allergy/immunology; Compare and contrast management strategies for challenging patient cases with peers.
Thursday Scientific Program

Military Allergy Program

0001 30th Annual Harold S. Nelson Military Allergy/Immunology Symposium  7:20 am to 5:00 pm
JW Marriott, Gold Ballroom Level, Salon 2
Pre-registration and ticket required. Continental breakfast and box lunch included.
Credit: 8.25 CME/CE
Moderator: Karla L. Davis, MD FAAAAI

7:20 Registration and Breakfast
7:50 Welcome and Introduction
Karla L. Davis, MD FAAAAI

8:00 Morning Address: GeneChips to Corn Flakes: Making Sense of Eosinophilic GI Disease
Calman Prussin, MD FAAAAI

9:00 Break

Fellow Original Research

Sarah W. Spriet, DO

9:35 Clinical Impact of the Live Attenuated Vs. Trivalent Inactivated Seasonal Influenza Vaccine on the Efficacy of the Pandemic H1N1 Vaccine
Rachel U. Lee, MD FAAAAI

9:55 Synchronous Telehealth for Outpatient Allergy Consultations: A 2-Year Regional Experience
Kirk H. Waibel, MD FAAAAI

Fellow Case Reports

10:15 Incongruent Phenotypic Expression of Autosomal Dominant Hyper IgE Syndrome (AD-HIES) in a Mother and Son
Charles J. Calais, DO

10:35 Averting Danger: A Case of Anaphylaxis to Rabavert®
Sarah W. Spriet, DO

10:55 Adult-Diagnosed Chronic Granulomatous Disease
Derek M. Smith, MD

11:15 A Case of Concurrent Hypogammaglobulinemia, Cancer and Cardiomyopathy: A Beta-Catenin Connection?
Camellia Hernandez, MD

11:35 A Case of Neuropathic Pain in Monoclonal Mast Cell Activation Syndrome
Jeannie L. Bay, DO

11:55 Lunch and Bruton Lecture: Aspirin Exacerbated Respiratory Disease
Andrew A. White, MD FAAAAI

Fellow Case Reports Continued

1:15 Candida Meningitis in a Patient with Complete Myeloperoxidase Deficiency: Beware the “False Positive” DHR
Ki Lee Milligan, MD

1:35 The Atypical Itch That Rashes--- Disseminated and Recurrent Infundibulofolliculitis (Atopic African American Male)
Katherine S. Tille, MD

Resident Case Report

1:55 Elderly Gentleman with Hypereosinophilic Syndrome (HES) Successfully Treated with Mepolizumab
Heung R. Noh, MD

2:15 Armed Forces Immunization Healthcare Center Update
Limone C. Collins, MD

2:45 Military Aeroallergen Extract Laboratory Updates
Susan E. Kosisky, BS MHA

Consultants to the Surgeons General Updates

3:15 VHA Allergy Committee
Joseph S. Yusin, MD FAAAAI

3:30 Air Force
Christopher A. Coop, MD

3:45 Army
Kirk H. Waibel, MD FAAAAI

4:00 Navy
Michael R. Kaplan, DO FAAAAI

4:15 Panel Discussion: Service-Unique Strategies for Evaluation and Management of Hymenoptera Hypersensitivity
Christopher A. Coop, MD
Michael R. Kaplan, DO FAAAAI
Kirk H. Waibel, MD FAAAAI
Joseph S. Yusin, MD FAAAAI

4:55 Business Meeting and Award Presentations

Upon completion of this session, participants should be able to: Discuss the approach to identifying and evaluating a patient with eosinophilic esophagitis; Identify and discuss therapies for patients with eosinophilic esophagitis; Discuss the approach to identifying and evaluating a patient with aspirin exacerbated respiratory disease.
Thursday Scientific Program

Course

0101 CEGIR/TIGERS EGID Symposium

8:00 am to 5:00 pm
JW Marriott, Platinum Ballroom Level, Salon DE
Pre-registration and ticket required.
Credit: 7.25 CME/CE

8:00 Welcome
Seema Sharma Aceves, MD PhD FAAAAI
Marc E. Rothenberg, MD PhD FAAAAI
Jonathan M. Spergel, MD PhD FAAAAI

8:15 Introduction to CEGIR
Glenn Furuta, MD

8:35 Consensus Guidelines for EoE
Chris A. Liacouras, MD

9:15 Consensus Guidelines for Non-EoE EGID
Nirmala Gonsalves, MD

9:35 Guidelines for Diagnosis of EGID
Margaret H. Collins, MD

9:55 Question & Answer

10:05 Break

10:20 Pathogenesis of Disease
Marc E. Rothenberg, MD PhD FAAAAI

10:40 New Modalities for Surveying the Esophagus
David A. Katzka, MD

11:00 Lymphocyte Involvement in EoE
Wayne Shreffler, MD PhD FAAAAI

11:20 Mast Cells and Basophils in EoE
Joshua B. Wechsler, MD

11:40 Role of Environmental in EoE
Jonathan M. Spergel, MD PhD FAAAAI

12:00 Lunch and Break-Out Sessions: Key Clinical Questions: Problem-Based Learning for Clinical Groups based on Key Clinical Questions (Attendees can choose one of the course breakouts. Separate registration and ticketing required.)

1:30 Cutting-Edge Research Abstracts

1:40 Genetics and Risk Factors Associated with EGID
Leah Claire Kottyan, PhD

2:20 Epidemiology of EGID
Evan S. Dellon, MD MPH

3:40 Relationships with Connective Tissue Disorders and Other Syndromes
Pamela A. Guerrero, MD PhD

4:00 Treating Complications of EoE-Fibrosis
Ikko Hirano, MD

4:15 Emerging Biological Therapy for EoE
Seema Sharma Aceves, MD PhD FAAAAI

4:30 PPI Responsive EoE
Ting Wen, PhD

4:45 Topical Glucocorticoid vs. Diet Therapy
Sandeep K. Gupta, MD

Upon completion of this session, participants should be able to: Describe the diagnostic criteria for EoE, eosinophilic gastritis/gastroenteritis/colitis and the controversies in diagnosis; Review the successful current therapeutic options for EoE and review the current triggers for EGIDs; Discuss the pathogenesis as it relates to specific cellular subtypes such as mast cells, eosinophils and T cells.

Course Breakouts

0101A Diagnostic Tools I Can Use: What is the best for EoE and How to Best Monitor Remission?

12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon A
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE

0101B The Difficult EoE Patient: Bring Your Own Patient

12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon B
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE

0101C The Pipeline of Future EoE Therapy

12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon C
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE

0101D The Ins and Outs of Managing Dietary Therapy

12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon F
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE

0101E Which Skin Testing in EoE?

12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon G
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE

0101F Safety of Topical Glucocorticoids for EoE

12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon H
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE
Thursday Scientific Program

Course Breakouts (continued)

0101G Role of Ig in EoE
12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon I
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE
Kathryn Peterson, MD
Thomas A.E. Platts-Mills, MD FAAAAI FRSA

0101H The Role of PPIs in Treating Esophageal Eosinophilia
12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon J
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE
Vincent A. Mukkada, MD

0101I How Do I Choose What Treatment to Use? Diet vs. Steroids: Pros and Cons
12:15 to 1:15 pm
JW Marriott, Third Floor, Atrium 3
Pre-registration and ticket required. Fee: $40. Box lunch included.
Credit: 1.00 CME/CE
Carla M. Davis, MD FAAAAI
Jonathan M. Spergel, MD PhD FAAAAI

0101J Ask the Experts: EoE Open Mic
12:15 to 1:15 pm
JW Marriott, Platinum Ballroom Level, Salon DE
Pre-registration and ticket required.
Credit: 1.00 CME/CE
Moderator: Marc E. Rothenberg, MD PhD FAAAAI
Adult GI Panelist
David A. Katzka, MD
Pediatric GI Panelist
Chris A. Liacouras, MD
Dietician Panelist
Marion E. Groetch, MS RD
Allergist Panelist
Javed Sheikh, MD FAAAAI

Courses

0201 Advanced Course in Pollen Identification
9:00 am to 12:00 pm
JW Marriott, Gold Ballroom Level, Salon 3
Pre-registration and ticket required. Fee: $125.
Credit: 3.00 CME/CE
Moderator: Estelle Levetin, PhD FAAAAI
9:00 Triporate Pollen
Richard W. Weber, MD FAAAAI
9:30 Hands-On Instruction; Question & Answer
10:00 Tricolporate Pollen
Estelle Levetin, PhD FAAAAI
10:30 Hands-On Instruction; Question & Answer
11:00 Asteraceae Pollen
Peter K. Van de Water, PhD
11:30 Hands-On Instruction; Question & Answer
Upon completion of this session, participants should be able to: Differentiate pollen in the birch family and related triporate pollen types; Discuss difficult to identify tricolporate pollen types; Differentiate Asteraceae pollen, other than ragweed.

0601 Advanced Course in Fungal Spore Identification
2:00 to 5:00 pm
JW Marriott, Gold Ballroom Level, Salon 3
Pre-registration and ticket required. Fee: $125.
Credit: 3.00 CME/CE
Moderator: Estelle Levetin, PhD FAAAAI
2:00 Basidiospore Identification
Estelle Levetin, PhD FAAAAI
2:30 Hands-On Instruction; Question & Answer
3:00 Ascospore Identification
W. Elliott Horner, PhD LEED AP FAAAAI
3:30 Hands-On Instruction; Question & Answer
4:00 Challenging Spore Types
James A. Scott, PhD
4:30 Hands-On Instruction; Question & Answer
Upon completion of this session, participants should be able to: Differentiate common basidiospores; Differentiate common ascospores; Differentiate Fusarium, Penicillium/Aspergillus and other difficult spore types.
# Friday Scientific Program

## Courses

### 1001 Allergen Immunotherapy, Today and Tomorrow: Session I. Inhalant Allergens for Allergic Rhinitis and Asthma

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 7:00  | T Cell Epitope Changes During Allergen Immunotherapy and Allergen Exposure  
Alessandro Sette, Dr. Biol. Sci.                                    |
| 7:25  | A Unique T Cell Subset (TH2A) in Allergen Immunotherapy               
Erik R. Wambre, PhD MBE                                           |
| 7:50  | Peptide Immunotherapy in Allergic Rhinoconjunctivitis and Asthma       
Mark Larché, PhD                                                   |
| 8:15  | Sublingual vs. Subcutaneous Immunotherapy: Which is More Potent?: The GRASS Trial 
Stephen R. Durham, MA MD FRCP                                       |
| 8:55  | How Can the Risk of Systemic Reactions to Subcutaneous Allergen Immunotherapy be Mitigated? 
Tolly Epstein, MD MS FAAAAI                                         |
| 9:10  | General Discussion                                                    |

Upon completion of this session, participants should be able to: Discuss current and future approaches to allergen immunotherapy for asthma and allergic rhinitis; Discuss the potential mechanisms by which immunotherapy modulates the immune response to allergens; Discuss the durability of immune unresponsiveness induced by allergen immunotherapy.

### 1002 Difficult Cases

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 7:00  | ABPA/ Hypersensitivity Pneumonitis                                    
Paul A. Greenberger, MD FAAAAI                                       
Ashwini P. Reddy, MD                                                |
| 7:30  | Question & Answer                                                     |
| 7:45  | Non-IgE Allergic GI Disorders                                         
Mirna Chehade, MD MPH                                               |
| 8:20  | Question & Answer                                                     |
| 8:30  | Break                                                                 |
| 8:45  | Difficult to Manage Atopic Dermatitis                                 
Luz S. Fonacier, MD FAAAAI                                          |
| 9:20  | Question & Answer                                                     |

**This Session Will Use Audience Response System Technology.**

### 1003 Is it Possible to Reprogram a Broken Immune System? How Translational Research is Shifting the Treatment Paradigm from Symptom Management to Cure

<table>
<thead>
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</table>
| 7:00  | Natural Tolerance: How Most of Us Can Eat, Breath and Not Use Steroids  
Natalija Novak, MD                                               |
| 7:20  | Question & Answer                                                     |
| 7:25  | Immunotherapy: The Future of the Oldest Treatment of Allergic Diseases 
Rudolf Valenta, MD                                              |
| 7:45  | Question & Answer                                                     |
| 7:50  | Microbiome Manipulation: Can We Use Our Ecosystem to Our Advantage? 
Nicholas W. Lukacs, PhD                                          |
| 8:10  | Question & Answer                                                     |
| 8:15  | Cellular Manipulation: How Can We Effectively Educate T Regs? 
Rosa Bacchetta, MD                                               |
| 8:30  | Question & Answer                                                     |
| 8:40  | Gene Therapy: What Have We Learned from Single Gene Defects? 
Jennifer M. Puck, MD                                           |
| 9:00  | Question & Answer                                                     |
| 9:05  | Is Genetic Manipulation of Complex Disease Possible? 
Daniel G. Anderson, PhD                                         |
| 9:25  | Question & Answer                                                     |

Upon completion of this session, participants should be able to: Discuss how genetic factors and the environment interact to determine allergic sensitization; Identify potential targets for prevention and treatment; Discuss different types of treatment for allergic diseases.
### Friday Scientific Program

#### Courses (continued)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1004</td>
<td>Markers of Allergic Inflammation</td>
<td>7:00 to 9:30 am</td>
<td>Convention Center, Level Two, Theatre (Room 411)</td>
<td>2.50 CME/CE</td>
<td>Lawrence B. Schwartz, MD PhD FAAAAI</td>
</tr>
<tr>
<td>1006</td>
<td>Masqueraders of Anaphylaxis/Angioedema</td>
<td>7:00 to 9:30 am</td>
<td>Convention Center, Level Two, Room 408B</td>
<td>2.50 CME/CE</td>
<td>Michael M. Frank, MD FAAAAI</td>
</tr>
</tbody>
</table>

### 1007 Endoscopic Evaluation and Management of Chronic Rhinosinusitis (Pre- and Post-Surgery) Including Cultures

- **7:00** Anatomy of the Sinuses
  - Robert C. Kern, MD
- **7:35** Question & Answer
- **7:50** Radiology of the Sinuses
  - Achilles G. Karagianis, DO
- **8:25** Question & Answer
- **8:40** Endoscopic Evaluation of the Sinuses (Pre- and Post-Surgery)
  - Wellington S. Tichenor, MD FAAAAI
- **9:15** Question & Answer

Upon completion of this session, participants should be able to:
- Describe the anatomy of the parasinus sinuses with specific focus on structures that are of pathophysiological and surgical relevance;
- Discuss radiological modalities and their usage in CRS diagnosis;
- Describe typical radiological findings in CRS and the usage and limitations of endoscopic evaluation of the nose and sinuses before and after surgery.

### 1008 Pathogenesis of Chronic Rhinosinusitis

- **7:00** Role of TSLP in Chronic Rhinosinusitis with Nasal Polyps
  - Atsushi Kato, PhD
- **7:20** Question & Answer
- **7:30** Role of IL-33 in Chronic Rhinosinusitis with Nasal Polyps
  - Joshua A. Boyce, MD FAAAAI
- **7:50** Question & Answer
- **8:00** Role of Prostaglandin D2 in Chronic Rhinosinusitis with Nasal Polyps
  - Katherine N. Cahill, MD
- **8:20** Question & Answer
- **8:30** Role of the Microbiome in Chronic Rhinosinusitis and Risk of Nasal Polyposis
  - Marek L. Kowalski, MD PhD
- **8:50** Question & Answer
- **9:00** Role of Staphylococcus Aureus in Chronic Rhinosinusitis with Nasal Polyps
  - Claus Bachert, MD PhD
- **9:20** Question & Answer

Upon completion of this session, participants should be able to:
- Discuss the role of TSLP and its metabolic products in the inflammation of nasal polyps;
- Recognize the mechanisms by which IL-33 contributes to the pathogenesis of CRS with nasal polyps and the potential to target this cytokine in therapy;
- Identify the mechanisms by which PGD2 directs inflammation in rhinosinusitis and nasal polyps and become aware of unique aspects of the pathology and pathophysiology of nasal polyp disease in Asia and in Europe.
1009 | Best Social Media Practices for Allergists: How to be a Social Media Superstar

7:00 to 9:30 am
Convention Center, Level Two, Room 405
Pre-registration and ticket required.
Credit: 2.50 CME/CE
Moderator: Giselle Mosnaim, MD MS FAAAAI
Bring Your Mobile Device to Participate.

7:00 | How to Use Blogging for an Allergist’s Practice
Nathaniel D. Hare, MD FAAAAI

7:25 | Question & Answer/ Hands-On Instruction

7:37 | How to Use Facebook for an Allergist’s Practice
Daniel A. Ramirez, MD

8:02 | Question & Answer/ Hands-On Instruction

8:14 | How to Use Twitter for an Allergist’s Practice
Matthew S. Bowdish, MD FAAAAI

8:39 | Question & Answer/ Hands-On Instruction

8:51 | How to Use YouTube for an Allergist’s Practice
Sakina S. Bajowala, MD FAAAAI

9:16 | Question & Answer/ Hands-On Instruction

Upon completion of this session, participants should be able to: Discuss how to setup a Twitter account and learn how to use it to connect with patients and colleagues; Discuss how to setup a Facebook professional page and learn how to use it to connect with patients and colleagues; Identify what a free blog is and learn how to use YouTube to embed and record videos to maintain an interactive website for your practice.

1010 | Problem-Based Learning: COPD Overlap Syndrome

7:00 to 9:30 am
Convention Center, Level Two, Room 518
Pre-registration and ticket required.
Credit: 2.50 CME/CE
This Session Will Use a Problem-Based Learning Approach.
PBL Facilitator: Ray S. Davis, MD FAAAAI

7:00 | PBL Case Presentation
Ray S. Davis, MD FAAAAI

7:50 | Is it Asthma? COPD? Both?
Timothy J. Craig, DO FAAAAI

8:10 | Pathophysiologic Features and Basis of ACOS
Donald P. Tashkin, MD

8:30 | DDX of the Patient with Suspected ACOS
Elliot Israel, MD FAAAAI

8:50 | Therapeutic Approaches to ACOS
John Oppenheimer, MD FAAAAI

9:10 | Panel Discussion

Upon completion of this session, participants should be able to: Describe the diagnostic criteria for COPD and asthma; Discuss how these entities may overlap in some patients; Describe how to incorporate older and newer therapeutic options for these patient groups.
## Friday Scientific Program

### Course

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1102</td>
<td><strong>Allied Health: Advanced Practice Course</strong></td>
<td>8:00 to 12:30 pm</td>
<td>Convention Center, Level Two, Room 515A</td>
<td>4.00</td>
<td>Nina A. Zimmermann, MSN RN ANP-BC AE-C</td>
<td>Description of advanced practice course topics and their implementation.</td>
</tr>
</tbody>
</table>

### Workshop

<table>
<thead>
<tr>
<th>Workshop ID</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1151</td>
<td><strong>Allied Health: Marketing for the Allergy Practice</strong></td>
<td>9:30 to 10:45 am</td>
<td>Convention Center, Level Two, Room 406AB</td>
<td>1.25</td>
<td>John D. Milewski, MSHA FACMPE</td>
<td>Description of marketing strategies and their implementation.</td>
</tr>
</tbody>
</table>
Courses

1201 Allergen Immunotherapy, Today and Tomorrow: Session II. Immunotherapy with Food Allergens

10:00 am to 12:30 pm
Convention Center, Level One, Petree Hall C
Credit: 2.50 CME/CE
Moderator: Marshall Plaut, MD FAAAAI

10:00 Epicutaneous Peanut to Treat Peanut Allergy
Stacie M. Jones, MD

10:25 Question & Answer

10:30 Insights from New Mechanistic Studies on Food Allergy
Cecilia Berin, PhD

10:55 Question & Answer

11:00 Low Dose Immunotherapy in Very Young Children to Treat Peanut Allergy
Brian P. Vickery, MD FAAAAI

11:25 Question & Answer

11:30 Epigenetic Changes During Food Allergen Immunotherapy
Kari C. Nadeau, MD PhD FAAAAI

11:55 Question & Answer

12:00 Does Tolerance to Peanut Persist After Prolonged Avoidance? The LEAP-On Study
Gideon Lack, MD

Upon completion of this session, participants should be able to: Discuss current and future approaches to allergen immunotherapy for food allergy; Discuss the potential mechanisms by which immunotherapy modulates the immune response to allergens; Discuss the durability of immune unresponsiveness induced by allergen immunotherapy or by ingestion of food allergens beginning in infancy.

1202 Diagnostic Challenges in Mastocytosis: Serum Tryptase, Allele-Specific PCR and GIPathology

10:00 am to 12:30 pm
Convention Center, Level One, Petree Hall D
Credit: 2.50 CME/CE
Moderator: Catherine R. Weiler, MD PhD FAAAAI
This Session Will Use Audience Response System Technology.

10:00 My Patient Has Elevated Tryptase. Now What?
Joseph H. Butterfield, MD FAAAAI

10:20 Question & Answer

10:30 KIT Mutational Analysis: Allele-Specific PCR
Dean D. Metcalfe, MD FAAAAI

10:50 Question & Answer

11:00 Mast Cells in the GI Tract: Is It Mastocytosis?
Cem Akin, MD PhD FAAAAI

11:20 Question & Answer

11:30 Value of Flow Cytometry in Diagnosis of Mastocytosis: Advantages and Pitfalls
Alberto Ortia, MD PhD

11:50 Question & Answer

12:00 Hymenoptera Anaphylaxis: When to Suspect Mastocytosis?
Patrizia Bonadonna, MD CME

12:20 Question & Answer

Upon completion of this session, participants should be able to: Discuss utility and interpretation of elevated tryptase level; Discuss which cases can be evaluated at general allergist level and when a referral to a mastocytosis center is indicated; Discuss utility and interpretation of allele-specific PCR and indications for bone marrow biopsy.

1203 NIEHS: Autophagy and Phagocytosis: At the Crossroads of Inflammation and Tolerance

10:00 am to 12:30 pm
Convention Center, Level Two, Room 404AB
Credit: 2.50 CME/CE
Moderator: Jennifer Martinez, PhD

10:00 The Interplay Between the Autophagy Machinery and Innate Immunity
Speaker to be announced.

10:18 Question & Answer

10:25 Connecting Autophagy, Phagocytosis and Antigen Presentation
Julie Magarian Blander, PhD

10:43 Question & Answer

10:50 Phagocytosis and Lipid Sensing: Molding the Metabolic Profile
Ruoning Wang, PhD

11:08 Question & Answer

11:15 LC3-Associated Phagocytosis as a Critical Regulator of the Innate Immune Response
Jennifer Martinez, PhD

11:33 Question & Answer

11:40 Differential Cell Death Pathways Can Alter the Innate Immune Response
Francis Ka Ming Chan, PhD

11:58 Question & Answer

12:05 Efferocytosis and Prevention of Autoimmune Disorders
Kodi S. Ravachandran, PhD

12:23 Question & Answer

Upon completion of this session, participants should be able to: Identify the role of phagocytosis and autophagy in the modulation of the innate immune response; Discuss the role of the autophagy machinery in antigen presentation and modulation of the adaptive immune response; Examine the role of phagocytosis and autophagy in the pathogenesis of autoimmune disorders.

1204 Introductory Course in Rhinolaryngoscopy with Hands-On Instruction

10:00 am to 12:30 pm
Convention Center, Level Two, Room 407
Pre-registration and ticket required. Fee: $50.
Credit: 2.50 CME/CE
Moderator: Jerald W. Koepke, MD FAAAAI

10:00 Introductory Course in Rhinolaryngoscopy with Hands on Instruction
Jerald W. Koepke, MD FAAAAI

11:15 Hands-On Instruction
Allen D. Adinoff, MD FAAAAI
Kevin R. Murphy, MD
Grant C. Olson, MD
Donald W. Pulver, MD FAAAAI
C. Ross Westley, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the surgical anatomy of the upper airway, including the nasal cavity, pharynx and larynx; Identify examples of normal and abnormal anatomy, as well as disease presentations and post-operative changes found with endoscopic examination of the upper airway; Identify indications for and the use of the fiberoptic rhinoscope in the allergist’s office.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Moderator</th>
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<tr>
<td>1205</td>
<td>1205 Lessons from Functional Genomics: New Data from the AADCRC</td>
<td>10:00 am to 12:30 pm</td>
<td>Convention Center, Level Two, Room 408A</td>
<td>2.50 CME/CE</td>
<td>Angela Haczku, MD PhD FAAAAI</td>
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<tr>
<td>10:00</td>
<td>Asthma: Genomics Approaches to New Treatments</td>
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<td>Gurjit K. Khurana Hershey, MD PhD FAAAAI</td>
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<td>10:40</td>
<td>Question &amp; Answer</td>
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<tr>
<td>10:50</td>
<td>Eosinophilic Gastrointestinal Disorders</td>
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<td>Marc E. Rothenberg, MD PhD FAAAAI</td>
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<td>11:30</td>
<td>Question &amp; Answer</td>
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<tr>
<td>11:40</td>
<td>Novel Insights into the Contribution of ORMDL3 in Asthma</td>
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<td>Benjamin A. Raby, MD MPH</td>
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<td>12:20</td>
<td>Question &amp; Answer</td>
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Upon completion of this session, participants should be able to: Discuss the new information available about the genetic regulation of allergic disease that can be practically applied to patient care; Discuss the most recent data from large population cohorts that inform our therapeutic approach; Discuss new insights into ORMDL3 and allergic disease.

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<tr>
<th>Course Code</th>
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<tr>
<td>1206</td>
<td>1206 Inflammatory Origins of CRS: Uncovering Opportunities for Disease Prevention and Modification</td>
<td>10:00 am to 12:30 pm</td>
<td>Convention Center, Level Two, Room 408B</td>
<td>2.50 CME/CE</td>
<td>David W. Hauswirth, MD FAAAAI</td>
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<tr>
<td>10:00</td>
<td>The Role of Biofilms and the Microbiome in the Development of CRS</td>
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<td>Robert C. Kern, MD</td>
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<td>10:30</td>
<td>Negative Effects of Antibiotics in Origins of CRS</td>
<td></td>
<td>Martin Wagenmann, MD FAAAAI</td>
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<tr>
<td>11:00</td>
<td>Question &amp; Answer Panel Discussion</td>
<td></td>
<td>Anju T. Peters, MD FAAAAI</td>
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<td>11:15</td>
<td>Antibody Deficiency: Epidemiological, Clinical and Pathological Overlap with CRS</td>
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<td>Claus Bachert, MD PhD</td>
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<td>11:45</td>
<td>Biologics in Chronic Rhinosinusitis with Nasal Polyps: Current State and Future Role</td>
<td></td>
<td>Tanya M. Laidlaw, MD FAAAAI</td>
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<tr>
<td>12:15</td>
<td>Question &amp; Answer Panel Discussion</td>
<td></td>
<td>Larry Borish, MD FAAAAI</td>
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Upon completion of this session, participants should be able to: Describe the role of the microbiome and biofilms in the development of CRS; Discuss the implications of antibiotic use and overuse in CRS; Identify inflammatory pathways in CRS and opportunities for disease modification.

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<tr>
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<tr>
<td>1207</td>
<td>1207 How to Apply for and Obtain an NIH Grant for the New Investigator</td>
<td>10:00 am to 12:30 pm</td>
<td>Convention Center, Level Two, Room 405</td>
<td>2.50 CME/CE</td>
<td>Larry Borish, MD FAAAAI</td>
<td>Attendees will be Required to Submit a One to Three Page Grant Proposal Consisting Primarily of Hypotheses and Specific Aims to Participate in this Course.</td>
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<tr>
<td>10:00</td>
<td>NIH Grants as Seen from the NIAID</td>
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<td>Alkis Togias, MD FAAAAI</td>
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<td>10:15</td>
<td>Grants as Seen from the NIH</td>
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<td>Mike Minnicozzi, PhD</td>
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<td>10:30</td>
<td>Panel Discussion</td>
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<td>Nora A. Barrett, MD FAAAAI</td>
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<tr>
<td>11:00</td>
<td>Small Group Discussion with Session Faculty to Review Grant Applications</td>
<td></td>
<td>Larry Borish, MD FAAAAI</td>
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Upon completion of this session, participants should be able to: Describe the system of NIH funding mechanisms; Critically evaluate grant applications.

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<th>Course Code</th>
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<tr>
<td>1208</td>
<td>1208 Finding a Job and Getting Started in Practice</td>
<td>10:00 am to 12:30 pm</td>
<td>Convention Center, Level Two, Room 502A</td>
<td>2.50 CME/CE</td>
<td>Larry Borish, MD FAAAAI</td>
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<tr>
<td>10:00</td>
<td>Overview of AAAAI, Office of Practice Management and RSLAIS</td>
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<td>Sharon B. Markovics, MD FAAAAI</td>
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<td>10:05</td>
<td>Overview of the Changing Healthcare Market and the Allergy Market</td>
<td></td>
<td>David L. Patterson, MD MS MBA FAAAAI</td>
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<td>10:35</td>
<td>Finding a Job, Different Practice Opportunities (Single, Multi-Specialty, Academics), and Different Types of Practices</td>
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<td>Tao T. Le, MD MHS FAAAAI</td>
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<td>11:10</td>
<td>Question &amp; Answer</td>
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<td>Vinay Mehta, MD FAAAAI</td>
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<td>11:20</td>
<td>Practice Finances 101: For Private Practice and Academics</td>
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<td>Tanya M. Laidlaw, MD FAAAAI</td>
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<td>11:55</td>
<td>Marketing Your Practice and Referral Development</td>
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<td>R. Stokes Peebles Jr., MD FAAAAI</td>
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<td>12:20</td>
<td>Question &amp; Answer</td>
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<td>Tanya M. Laidlaw, MD FAAAAI</td>
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Upon completion of this session, participants should be able to: Discuss the changing landscape of American medicine and the practice of allergy; Explain how to identify and join the right practice opportunity; Discuss the fundamentals of office management; Identify strategies for marketing a practice, and review tips on building a patient base.
Courses (continued)

1209 Making Your Technology Work for You
10:00 am to 12:30 pm
Convention Center, Level Two, Room 502B
Credit: 2.50 CME/CE
Moderator: Anne K. Ellis, MD MSc FAAAAI
Bring Your Mobile Device to Participate.
10:00 Making the Technology Work and Pay Off for Your Practice
Nabeel Farooqui, MD
10:25 My EMR Is Too Much Work! Maximizing Productivity Now That You Have Your EMR
Priya J. Bansal, MD FAAAAI
10:50 Social Media Tools for Marketing and Communications
Sakina S. Bajowala, MD FAAAAI
11:15 Educating Our Patients through Technology: How to Create Handouts, Videos and More
Ves Dimov, MD
11:35 iPhones, iPads, and Androids: New Apps and Tools to Assist in Your Practice
Melinda M. Rathkopf, MD FAAAAI
11:55 Telemedicine: The New Frontier
Chitra Dinakar, MD FAAAAI
12:15 Question & Answer

Upon completion of this session, participants should be able to: Discuss how technology can assist in work flow from the beginning to the end, utilizing the EMR to the fullest; Discuss social media and marketing tools for the practice; Discuss and provide an introduction to telemedicine.

1210 The Principles of Healthy Homes and Using Home Environmental Assessment in Disease Management
10:00 am to 12:30 pm
Convention Center, Level One, Concourse Hall, Room 152
Credit: 2.50 CME/CE
Moderator: James W. Sublett, MD
This Session Will Use Audience Response System Technology.
10:00 Principles of a Healthy Home
Kevin Kennedy, MPH CIEC
10:35 Question & Answer
10:50 Taking an Environmental Health History
Wanda Phipatanakul, MD MS FAAAAI
11:25 Question & Answer
11:40 Communicating Findings and Reporting Assessment Results
Jay M. Portnoy, MD FAAAAI
12:15 Question & Answer

Upon completion of this session, participants should be able to: Recognize potentially harmful respiratory exposures in homes including allergens, mold, pests, particulate, and other pollutants; Identify the seven principles of healthy housing; Describe how to collaborate with environmental professionals to make healthy homes a reality.

1211 NHLBI: Incorporating New Methodology in Asthma Clinical Trials
10:00 am to 12:30 pm
Convention Center, Level Two, Room 515B
Pre-registration and ticket required.
Credit: 2.50 CME/CE
Moderator: Christine A. Sorkness, PharmD
10:00 Cross-Age Studies: Important Decisions
Stanley J. Szefler, MD FAAAAI
10:20 Question & Answer
10:25 Microbiome: Challenges and Opportunities
Susan V. Lynch, PhD
10:45 Question & Answer
10:50 Monitoring Asthma Control in Clinical Trials
David Mauger, PhD
11:10 Question & Answer
11:15 Composite Outcomes: Strengths and Weaknesses
Daniel J. Jackson, MD
11:35 Question & Answer
11:40 Case Study: Small Group Discussion
12:05 Small Group Report-Out
12:20 Panel Discussion Question & Answer

Upon completion of this session, participants should be able to: Discuss how the age of the study population affects asthma clinical trials; Discuss the process of data collection for biologic specimens and clinical data in asthma trials; Discuss how data is converted into clinically meaningful information for patients with asthma.

Workshop

1301 Allied Health: The Allergist’s Coding Update for 2016
11:00 to 12:15 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderator: Joan E. Hawkins
11:00 Speaker
Teresa Thompson, CPC CMSCS CCC
11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss what is new in coding this year; Discuss awareness of allergy testing and serum dosing limits; Identify the rules for physician extender billing and state variations.
Friday Scientific Program

Basic Science Poster Discussion Workshop

1351 Cellular Effectors of Allergy and Disturbed Immunity
12:30 to 1:45 pm
JW Marriott, Platinum Ballroom Level, Salon D
Credit: 1.25 CME/CE
Moderators: Zoulfia Allakhverdi, PhD FAAAAI
Kathryn E. Hulse, PhD

12:30 Poster Viewing
1:10 Discussion of the following Posters:
Group 2 Innate Lymphoid Cells Directly Induce B Cell Activation in Humans
Richard Kasjanski, MS
Novel IL-9-Producing Mucosal Mast Cells Promote IgE-Mediated Food Allergy
Yui-His Wang, PhD
Follicular Helper T (Tfh) Cells Are Indispensable for IgE Antibody Responses to Airborne Allergens
Takao Kobayashi, PhD
Copy Number Variation in Donor KIR Genes and Motifs Titrates Natural Killer (NK) Cells' Functional Response to EBV Infections and Influences the Risk of Developing Post-Transplant Lymphoproliferative Disease (PTLD) after Allogeneic HCT
Rehan M. Faridi, PhD
Allergen-Specific CD4+ T Cells in Human Asthma Have an Increased Capacity to Respond to Innate Type 2 Signals
Morris F. Ling, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

Workshops

1401 Allied Health: Ask the Expert Question & Answer Roundtable Luncheon
12:30 to 1:45 pm
Convention Center, Level Two, Room 410
Pre-registration and ticket required. Fee: $30. Box lunch included.
Credit: 1.25 CME/CE
Moderator: John D. Milewski, MSHA
Billing, Coding and ICD-10 Question & Answer
Teresa Thompson, CPC CMSCS CCC
PCMH for the Allergist
Thomas J. Derrico
Collection Strategies for High Deductible Plans
Joan E. Hawkins
Compliance: HIPAA
Mary H. Thal, BS RN
Vertical Integration: What’s the Next Step?
Robert A. Glazer, MBA
Staff Training and Motivation
Ron Hartley, BA

Upon completion of this session, participants should be able to discuss billing, coding, ICD-10, PCMH for the allergist, staff training and collection strategies for high deductible plans; identify hot-topic subjects and address issues that arise in practice.

1501 JACI: Year-in-Review
12:30 to 1:45 pm
Convention Center, Level Two, Room 403A
Credit: 1.25 CME/CE
Moderator: Cezmi A. Akdis, MD FAAAAI
This Session Requires Pre-Meeting Reading.

12:30 Atopic Dermatitis
Kenji Kabashima, MD FAAAAI
12:45 Question & Answer
12:55 Asthma
Harald Renz, MD FAAAAI
1:10 Question & Answer
1:20 Eosinophilic Esophagitis
Robert A. Wood, MD FAAAAI
1:35 Question & Answer

Upon completion of this session, participants should be able to: Discuss and provide an update on the cutting edge literature on atopic dermatitis, food allergy, and asthma in regards to pathogenesis, treatment and prevention.

1502 Dilemmas in Asthma Management
12:30 to 1:45 pm
Convention Center, Level Two, Room 403B
Credit: 1.25 CME/CE
Moderator: Caroline C. Horner, MD FAAAAI
Panel Discussion with Audience Question & Answer Technology
William W. Busse, MD FAAAAI
William J. Calhoun, MD FAAAAI
Susan M. Tarlo, MBBS FAAAAI

Upon completion of this session, participants should be able to: Discuss clinical phenotypes of asthmatics with fungal sensitization, steroid resistant and work-exacerbated asthma; Describe optimal management strategies for difficult asthma phenotypes.

1503 ILC2: Gateway to Th2 inflammation
12:30 to 1:45 pm
Convention Center, Level Two, Theatre (Room 411)
Credit: 1.25 CME/CE
Moderator: Taylor Doherty, MD FAAAAI

12:30 Panel Discussion
12:35 IL22 as Regulators of Allergic Dermatitis
Brian S. Kim
12:50 Question & Answer
12:55 IL22 in Gut Immunity
Speaker to be announced.
1:15 Panel Discussion
1:20 IL22 in the Pathogenesis of Allergic Lung Disease
Hirohito Kita, MD
1:40 Question & Answer

Upon completion of this session, participants should be able to: Discuss how ILC2 contributes in a substantial way to the induction of allergic skin diseases; Describe ILC2 cells that have important regulatory roles in the balance between maintenance of normal gut homeostasis and establishment of inflammatory bowel disease; Identify mechanisms by which ILC2 contributes to asthma pathogenesis.
1504 SLIT: Practical Considerations, Unmet Needs and FAQs
12:30 to 1:45 pm
Convention Center, Level Two, Room 503
Credit: 1.25 CME/CE
Moderator: Bryan L. Martin, DO FAAAAI
12:30 Panel Discussion
Linda Cox, MD FAAAAI
Stephen R. Durham, MA MD FRCP
Ralph Mosges, MD FAAAAI
Harold S. Nelson, MD FAAAAI
Upon completion of this session, participants should be able to: Describe characteristics of the ideal patient for SCIT vs. SLIT incl. what to do with polysensitized patients; Discuss safety and adherence issues concerning SLIT; Discuss and contrast the off-label use of allergen extract solution for SLIT compared with FDA-approved sublingual tablets.

1505 FPIES: What We Know, What We Don’t Know and What We Still Need to Know
12:30 to 1:45 pm
Convention Center, Level Two, Room 518
Pre-registration and ticket required.
Credit: 1.25 CME/CE
Moderator: Terri F. Brown-Whitehorn, MD
Case-Based Discussion
12:30 FPIES: What We Know about Diagnosis and Management of Acute and Chronic Phenotype
Anna H. Nowak-Wegrzyn, MD FAAAAI
12:45 Question & Answer
12:55 FPIES: What We Know about Nutrition Management
Marion E. Groetch, MS RD
1:10 Question & Answer
1:20 FPIES: What We Still Need to Know about Epidemiology and Pathophysiology
Jean-Christoph Caubet, MD
1:35 Question & Answer
Upon completion of this session, participants should be able to: Discuss and appraise consensus guidelines for diagnosis and management of FPIES; Describe nutritional management of FPIES; Describe the unmet needs in FPIES, including epidemiology, pathophysiology and others.

1506 The Safety of Asthma and Allergy Medications During Pregnancy: New Horizons
12:30 to 1:45 pm
Convention Center, Level Two, Room 409AB
Credit: 1.25 CME/CE
Moderator: Michael Schatz, MD MS FAAAAI
12:30 The Safety of Asthma and Allergy Medications During Pregnancy: Knowledge Gaps
Jennifer A. Namazy, MD FAAAAI
12:45 The Safety of Asthma and Allergy Medications During Pregnancy: The New FDA Pregnancy Label
Tamara Johnson, MD MS
1:00 The Safety of Asthma and Allergy Medications During Pregnancy: The Role of VAMPSS
Christina Chambers, PhD MPH
1:15 Question & Answer
Upon completion of this session, participants should be able to: Identify knowledge gaps regarding the safety of asthma and allergy medications during pregnancy; Optimize use of the information provided by the new FDA pregnancy labeling system for clinical decision making; Appreciate the role of VAMPSS in providing new information for the pregnancy label and filling in knowledge gaps regarding the safety of asthma and allergy medications during pregnancy.

1507 The Use of Social Media in the Allergy Practice
12:45 to 1:45 pm
JW Marriott, Diamond Ballroom Level, Salon 3
Pre-registration and ticket required. Fee: $40. Box lunch included.
Sessions and meals are limited to 30 people.
Credit: 1.00 CME/CE
1510 The Use of Social Media in the Allergy Practice
Priya J. Bansal, MD FAAAAI
David R. Stukus, MD FAAAAI
Upon completion of this session, participants should be able to: Discuss how social media can be used to improve practice marketing; Identify methods of improving patient communication; Identify potential problems posed by using social media.

1512 Whole Exome Sequencing: Guidance in Modalities and Interpretation for the Practicing Immunologist
JW Marriott, Diamond Ballroom Level, Salon 8
Karin Chen, MD
Attila Kumanovics, MD
Upon completion of this session, participants should be able to: Discuss whole exome sequencing and how to utilize public databases; Discuss specific examples including CVID and RAG deficiency and how whole genome sequencing approaches are being employed.
Friday Scientific Program

Seminars (continued)

1513 The Intricacy of Penicillin and Cephalosporin Allergy Evaluation

JW Marriott, Diamond Ballroom Level, Salon 9
Eric M. Macy, MD FAAAAI
Miguel A. Park, MD

Upon completion of this session, participants should be able to: Discuss the different components of the penicillin skin test; Discuss the evaluation and management of patients with other beta lactam allergies; Discuss the role of oral challenges to penicillin and/or amoxicillin in the evaluation of penicillin allergy.

1514 Non-IgE-Mediated Food Allergies

JW Marriott, Diamond Ballroom Level, Salon 10
Mirna Chehade, MD MPH
Stephanie A. Leonard, MD

Upon completion of this session, participants should be able to: Identify clinical manifestation of non-IgE mediated food allergy such as FPIES, proctocolitis and enteropathy; Describe approach to diagnosis; Describe practical management.

Pro/Con Debate

1551 Allied Health: Precautionary Allergen Labeling Contains Useful Information

12:45 to 1:45 pm
Convention Center, Level Two, Room 404AB
Credit: 1.00 CME/CE
Moderator: Scott H. Sicherer, MD FAAAAI
Pro
Carina Venter, PhD RD
Con
Paul J. Turner, FRACP PhD

Upon completion of this session, participants should be able to: Identify how to interpret precautionary labels and provide appropriate education to families with food allergies; Discuss how to interpret precautionary labels based on the avoidance needs of patients with IgE-mediated food allergies, FPIES and EoE; Identify the research surrounding threshold levels and what these mean or may mean in terms of labeling for risk of cross contact in the U.S. and other countries.

Presidential Plenary

1601 The Origins of Childhood Asthma

2:00 to 3:30 pm
Convention Center, Level One, South Exhibit Hall G
Credit: 1.50 CME/CE
Moderator: Robert F. Lemanske Jr., MD FAAAAI
2:00 The Contribution of Respiratory Pathogens and Allergic Sensitization to Asthma Inception
Robert F. Lemanske Jr., MD FAAAAI
2:30 The Microbial Environment and its Influence on Allergy and Asthma in Early Life
Erika Von Mutius, MD MSc
3:00 Gene By Environment Interactions and Asthma
Carole Ober, PhD

Upon completion of this session, participants should be able to: Describe the etiology of respiratory tract wheezing illnesses in preschool children that increase risk for the expression of asthma during school age; Discuss genetic risk pathways for the development of asthma during childhood; Discuss the influence of microbial exposures in early life that modify the risk of developing childhood asthma.

Symposia

1801 What Can Implementation Research Teach Us About the Management of Asthma?

4:00 to 5:15 pm
Convention Center, Level One, Petree Hall C
Credit: 1.25 CME/CE
Moderator: Giselle Mosnaim, MD MS FAAAAI
4:00 What is Implementation Research and How can it Improve Asthma Outcomes?
Cynthia S. Rand, PhD
4:20 Question & Answer
4:25 Making the Switch from Randomized Trials to Implementation Research
Andrea J. Apter, MD MA MSc FAAAAI
4:45 Question & Answer
4:50 Community-Level Implementation Research Can Address Asthma Disparities
Michelle M. Cloutier, MD
5:10 Question & Answer

Upon completion of this session, participants should be able to: Describe and define the role of implementation research to improvement of asthma outcomes; Identify the methodologies for conducting implementation research in asthma; Identify new areas for implementation research in asthma.

1802 Management of Atopic Dermatitis: What's New?

4:00 to 5:15 pm
Convention Center, Level One, Petree Hall D
Credit: 1.25 CME/CE
Moderator: Kelly D. Stone, MD PhD FAAAAI
This Session Will Use Audience Response System Technology.
4:00 The Skin Microbiome in Atopic Dermatitis
Donald Y.M. Leung, MD PhD FAAAAI
4:20 Patient Education Strategies
Dagmar Simon, MD
4:40 Systemic Immune Treatments
Lisa A. Beck, MD FAAAAI
5:00 Question & Answer

Upon completion of this session, participants should be able to: Discuss the role of the skin microbiome in atopic dermatitis; Discuss patient education for atopic dermatitis; Discuss possible therapeutic consequences owing to new insights into the pathogenesis of atopic dermatitis.
### Symposia (continued)

<table>
<thead>
<tr>
<th>1803</th>
<th>Automating Pollen Identification/NAB</th>
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<tbody>
<tr>
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<td>Convention Center, Level Two, Room 404AB</td>
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<td>Credit: 1.25 CME/CE</td>
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<tr>
<td></td>
<td>Moderator: Dennis K. Ledford, MD FAAAAI</td>
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<tr>
<td>4:00</td>
<td>Flow Cytometry</td>
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<tr>
<td>20</td>
<td>Question &amp; Answer</td>
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<tr>
<td>25</td>
<td>Monoclonal Antibodies</td>
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<td></td>
<td>Martin D. Chapman, PhD FAAAAI</td>
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<tr>
<td>45</td>
<td>Question &amp; Answer</td>
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<tr>
<td>50</td>
<td>Real Time PCR</td>
</tr>
<tr>
<td>10</td>
<td>Question &amp; Answer</td>
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</tbody>
</table>

Upon completion of this session, participants should be able to: Discuss current laboratory techniques which could permit automated allergen determinations; Review the problems associated with collecting samples for automated allergen assessments; Identify and provide an up-to-date scientific analysis of how soon such techniques will be available to the community.

<table>
<thead>
<tr>
<th>1804</th>
<th>B-Regulatory Cells: No Longer Playing Second Fiddle to T Regs</th>
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<tbody>
<tr>
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<td>4:00 to 5:15 pm</td>
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<td></td>
<td>Convention Center, Level Two, Theatre (Room 411)</td>
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<td></td>
<td>Credit: 1.25 CME/CE</td>
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<tr>
<td></td>
<td>Moderator: Cezmi A. Akdis, MD FAAAAI</td>
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<tr>
<td>4:00</td>
<td>PD-L1hi B Cells Are Critical Regulators of Humoral Immunity</td>
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<td>20</td>
<td>Question &amp; Answer</td>
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<tr>
<td>25</td>
<td>IL-10 Expressing B Cells Regulate Innate and Adaptive Immune</td>
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<td></td>
<td>Responses</td>
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<tr>
<td>45</td>
<td>Question &amp; Answer</td>
</tr>
<tr>
<td>50</td>
<td>Regulatory B Cells and Tolerance in Transplantation</td>
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<tr>
<td>10</td>
<td>Question &amp; Answer</td>
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</tbody>
</table>

Upon completion of this session, participants should be able to: Discuss the prominent role B cells that express PD-L1 occupy in the regulation of humoral immune responses; Describe the settings in which B lymphocytes express IL-10, providing these B cells with potent ability to regulate both innate and adaptive immune responses; Discuss settings in which B lymphocytes may play important roles as modulators of all responses in organ transplantation.

<table>
<thead>
<tr>
<th>1805</th>
<th>Secondary Immune Deficiencies (Non-HIV)</th>
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<tbody>
<tr>
<td></td>
<td>4:00 to 5:15 pm</td>
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<tr>
<td></td>
<td>Convention Center, Level Two, Room 408A</td>
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<td></td>
<td>Credit: 1.25 CME/CE</td>
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<tr>
<td></td>
<td>Moderator: Christina L. Nance, MD</td>
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<tr>
<td>4:00</td>
<td>Secondary Immunodeficiency Due to Underlying Disease States,</td>
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<td>Environmental Exposures and Miscellaneous Causes</td>
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<tr>
<td>20</td>
<td>Question &amp; Answer</td>
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<tr>
<td>25</td>
<td>Secondary Immunodeficiency Induced by Drugs and Biologic</td>
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<td>Therapies</td>
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<td>45</td>
<td>Question &amp; Answer</td>
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<tr>
<td>50</td>
<td>Solid Organ Transplantation and Secondary Antibody Deficiency</td>
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<tr>
<td>10</td>
<td>Question &amp; Answer</td>
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</tbody>
</table>

Upon completion of this session, participants should be able to: Discuss secondary immunodeficiency due to underlying disease states, environmental exposures and other causes; Discuss underlying mechanisms and sequelae of the immune dysfunction of secondary immunodeficiencies.

<table>
<thead>
<tr>
<th>1806</th>
<th>Non-IgE-Mediated Gastrointestinal Food Allergies in Children and Adults</th>
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<tbody>
<tr>
<td></td>
<td>4:00 to 5:15 pm</td>
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<tr>
<td></td>
<td>Convention Center, Level Two, Room 408B</td>
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<tr>
<td></td>
<td>Credit: 1.25 CME/CE</td>
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<tr>
<td></td>
<td>Moderator: Kirsi M. Jarvinen-Seppo, MD FAAAAI</td>
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<tr>
<td>4:00</td>
<td>Pathophysiology of Inflammatory Responses to Food Allergens in</td>
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<td></td>
<td>the Gut: Potential Targets for Prevention</td>
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<tr>
<td>20</td>
<td>Question &amp; Answer</td>
</tr>
<tr>
<td>25</td>
<td>Modification of FPIES Natural History by Evolution of Systemic IgE</td>
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<tr>
<td></td>
<td>Responses to Foods</td>
</tr>
<tr>
<td>45</td>
<td>Question &amp; Answer</td>
</tr>
<tr>
<td>50</td>
<td>Spectrum of Wheat Sensitivity in Children and Adults:</td>
</tr>
<tr>
<td></td>
<td>Opportunities for Disease Modification</td>
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<tr>
<td>10</td>
<td>Question &amp; Answer</td>
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</tbody>
</table>

Upon completion of this session, participants should be able to: Describe immune responses to foods in the GI tract; Describe manifestations, diagnosis and management of food protein-induced enterocolitis syndrome (FPIES) with emphasis on the evolution of systemic IgE immune response to foods and implications for management; Describe the continuum of immune responses to wheate from childhood to adulthood and potential therapeutic targets.
Friday Scientific Program

**Symposia (continued)**

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>1807</td>
<td>Allergy in Schools: Keeping Kids Healthy and Safe</td>
<td>4:00 to 5:15 pm</td>
<td>Convention Center, Level Two, Room 502A</td>
<td>1.25 CME/CE</td>
<td>Carla M. Davis, MD FAAAAI</td>
<td>Michael C. Young, MD FAAAAI</td>
</tr>
<tr>
<td>1808</td>
<td>Microbial Regulation of Allergic Airway Inflammation: Lessons from the AADCRC</td>
<td>4:00 to 5:15 pm</td>
<td>Convention Center, Level Two, Room 502B</td>
<td>1.25 CME/CE</td>
<td>R. Stokes Peebles, Jr., MD FAAAAI</td>
<td>James E. Gern, MD FAAAAI</td>
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</table>

**Allied Health Plenary**

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<tr>
<th>Session</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>1810</td>
<td>Allied Health Plenary: Working Together to Improve Asthma Care</td>
<td>4:00 to 5:15 pm</td>
<td>Convention Center, Level Two, Room 515A</td>
<td>1.25 CME/CE</td>
<td>Nina A. Zimmermann, MSN RN ANP-BC AE-C</td>
<td>Elizabeth Matsui, MD MHS</td>
</tr>
<tr>
<td>1810</td>
<td>Asthma Care in the Underserved</td>
<td>4:45 pm - 6:30 pm</td>
<td>Convention Center, Level Two, Room 515B</td>
<td>No CME/CE</td>
<td>Andrew W. Murphy, MD FAAAAI</td>
<td>Robert F. Lemanske, Jr, MD FAAAAI</td>
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**Federation of RSLAAIS Assembly Forum, Business Meeting and Reception**

<table>
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<tr>
<th>Session</th>
<th>Topic</th>
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<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>5:10</td>
<td>RSLAAIS Assembly Business Meeting</td>
<td>4:45 to 6:30 pm</td>
<td>Convention Center, Level Two, Room 502C</td>
<td></td>
<td>Andrew W. Murphy, MD FAAAAI</td>
<td>Robert F. Lemanske, Jr, MD FAAAAI</td>
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</table>

**Practice Roundtable: The Future of Allergy, Asthma and Immunology**

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<tr>
<th>Session</th>
<th>Topic</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Panelists</th>
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<tbody>
<tr>
<td>5:25</td>
<td>Practice Roundtable: The Future of Allergy, Asthma and Immunology</td>
<td>5:25 pm</td>
<td>Convention Center, Level Two, Room 515B</td>
<td>No CME/CE</td>
<td>Andrew W. Murphy, MD FAAAAI</td>
<td>Ted Freeman, MD FAAAAI</td>
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</table>

**Adjournment**

Upon completion of this session, participants should be able to identify key political, social, and economic factors influencing the future of allergy, asthma and immunology practice. Other topics to be discussed include: future application of technology in allergy practice, future healthcare payment strategies and quality measures, future practice frameworks and the future roles of academic allergy in community practice.
Saturday Scientific Program

Seminars

6:45 to 7:45 am

Pre-registration and ticket required. Fee: $40. Continental breakfast included. Sessions and meals are limited to 30 people.
Credit: 1.00 CME/CE

2001 Smoking Cessation in Asthmatics: Behavioral, Pharmacologic and E-Cigarette Modalities

JW Marriott, Diamond Ballroom Level, Salon 1

Riccardo Polosa, MD PhD FAAAAI
Mark F. Sands, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the behavioral and pharmacologic options for smoking cessation; Describe the safety and efficacy of e-cigarettes for smoking cessation.

2002 Performing Outpatient Aspirin Desensitizations for Patients with AERD

JW Marriott, Diamond Ballroom Level, Salon 2

Katherine N. Cahill, MD
Whitney Stevens, MD PhD

Upon completion of this session, participants should be able to: Discuss how to apply aspirin desensitization protocols; Discuss how to identify patients for outpatient desensitization.

2003 Making Your EMR Work for You

JW Marriott, Diamond Ballroom Level, Salon 3

Sakina S. Bajowala, MD FAAAAI
Priya J. Bansal, MD FAAAAI

Upon completion of this session, participants should be able to: Identify problems encountered by practices when adopting an EHR; Discuss how to overcome barriers; Identify how the EHR can be harnessed to improve office efficiency.

2004 The Link to Immunodeficiency: Targeted Treatment

JW Marriott, Diamond Ballroom Level, Salon 6

Troy R. Torgerson, MD PhD
Jolan E. Walter, MD PhD

Upon completion of this session, participants should be able to: Describe impaired tolerance mechanisms among patients with autoimmunity and primary immunodeficiency; Discuss the current approach to treat autoimmune cytopenias, the most common autoimmune complications among patients with autoimmunity and primary immunodeficiencies; Discuss targeted and innovative therapies for autoimmunity in certain immunodeficiencies.

2005 How Allergen Extracts are Made: From Source Materials to Allergen Extracts

JW Marriott, Diamond Ballroom Level, Salon 7

Rosa Codina, PhD FAAAAI
W. Elliott Horner, PhD LEED AP FAAAAI

Upon completion of this session, participants should be able to: Discuss the source materials and methods to manufacture fungal raw materials used to produce allergen extracts; Describe the source materials and methods to manufacture insect and mammalian raw materials used to produce allergen extracts; Discuss the source materials and methods to manufacture venom extracts.

2006 Update in Occupational Allergy: Occupational Anaphylaxis

JW Marriott, Diamond Ballroom Level, Salon 8

Santiago Quirce, MD PhD
Susan M. Tarlo, MBBS FAAAAI

Upon completion of this session, participants should be able to: Discuss the current scientific evidence linking exposure to occupational triggers and the risk of anaphylaxis; Describe the state-of-the-art diagnosis of occupational anaphylaxis; Identify possible preventive measures.

2007 Early Barrier Therapy to Prevent and Treat Eczema

JW Marriott, Diamond Ballroom Level, Salon 9

Lisa A. Beck, MD FAAAAI
Christine B. Cho, MD

Upon completion of this session, participants should be able to: Discuss and evaluate the use of barrier therapy before eczema clinically appears; Discuss the barrier therapy as secondary prevention; Discuss different types of barrier creams and their applications.

2008 Clinical Challenges in the Prevention of Food Allergy Through Early Introduction

JW Marriott, Diamond Ballroom Level, Salon 10

This Session Requires Pre-Meeting Reading.

Kirsten Beyer, MD
George Du Toit, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss and compare the evidence for early introduction of peanut versus other foods such as egg and milk in food allergy prevention in various infant populations; Describe the approaches to practical implementation to early food introduction for at-risk infants; Discuss whether early introduction via maternal diet during pregnancy and lactation has a protective effect.

2009 EoE: Dietary Pitfalls and Practical Management in Children and Adults: Are there Similarities at All?

JW Marriott, Platinum Ballroom Level, Salon A

Alison M. Cassin, MS RD CSP
Vincent A. Mukkada, MD

Upon completion of this session, participants should be able to: Describe the best practice in the management of multiple food avoidance in children and adults with EoE; Identify the main foods involved in EoE; Discuss practical tips on the dietary management of EoE in children and adults.

2010 Legalization of Cannabis: Implications for the Allergy Care Provider

JW Marriott, Platinum Ballroom Level, Salon B

David Naimi, DO FAAAAI
Richard W. Weber, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss the physiological effects of cannabis exposure to the respiratory system; Identify the patterns of use of cannabis by adolescents; Discuss how to approach and advise patients of all ages who use cannabis.

2011 Mobile Asthma Care Challenges, Rewards and Reach

JW Marriott, Platinum Ballroom Level, Salon F

Mary E. Bollinger, DO FAAAAI
Lynne G. Scott, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss mobile asthma care delivery systems in underserved populations; Discuss disease tracking systems for clinical outcome measures of asthma.
Seminars (continued)

**2012** Drug Allergy Testing and Desensitization Protocols in Your Practice

JW Marriott, Platinum Ballroom Level, Salon G
Rebecca S. Gruchalla, MD PhD FAAAAI
David A. Khan, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss drug allergy testing protocols; Discuss desensitization protocols for the outpatient setting; Discuss how to create desensitization protocols for the inpatient setting.

**2013** Prostaglandin Regulation of Allergic Diseases

JW Marriott, Platinum Ballroom Level, Salon H
Joshua A. Boyce, MD FAAAAI
R. Stokes Peebles Jr., MD FAAAAI

Upon completion of this session, participants should be able to: Discuss the effector and regulatory functions of PGE2 in allergic inflammation; Discuss and appreciate how products of the different arms of the prostaglandin pathways govern distinct biological effects.

Allied Health Seminars

**6:45 to 7:45 am**
Pre-registration and ticket required. No fee. Sessions are limited to 30 people.
Credit: 1.00 CME/CE

**2021** Allied Health: Treatment Options for the Young Wheezers

JW Marriott, Platinum Ballroom Level, Salon I
Leonard B. Bacharier, MD FAAAAI
Bradley E. Chipp, MD FAAAAI

Upon completion of this session, participants should be able to: Identify treatment of wheezing only with colds; Discuss treatment of exacerbations in the mild persistent wheezer, inhaled corticosteroids and OCS- which one and how to give; Identify the role of Azithromycin in young wheezers.

**2022** Allied Health: Cooking and Meal Time with Food Allergy

Supported through an educational grant from Nutricia North America.

JW Marriott, Platinum Ballroom Level, Salon J
Lynn Christie, MS RD LD
Wendy Everson, RD LD

Upon completion of this session, participants should be able to: Identify strategies for planning enjoyable and nutritious meals with a family member who has a food allergy; Discuss preparation of safe meals at home including prevention of cross contamination.

Workshop

**2051** Allied Health: With the Changing Marketplace of High Deductible Plans How are Clinics Addressing Their Collection Processes to Keep Current with the Trends of the Marketplace?

7:45 to 9:00 am
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE

7:45 Develop Effective Collection Policies and Protocols
John D. Milewski, MSHA FACMP

8:30 Question & Answer

Workshop

**2101** Immunoglobulin E: The First 50 Years and Beyond

8:15 IgE: A Historic Perspective
Thomas A.E. Platts-Mills, MD PhD FAAAAI FRS

8:45 Mechanisms of IgE Production and Its Regulation
Hannah J. Gould, PhD

9:15 Role and Limitations of IgE in Diagnosis and Treatment of Allergic Disease
Thomas B. Casale, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the historic aspects and key scientists involved in discovery of IgE; Discuss the role of IgE in pathogenesis and diagnosis of allergic disease, and mechanisms of its regulation of production; Identify the disorders that can be successfully treated by targeting allergen specific IgE.

**2151** Allied Health: PQRS Compliance in the Allergy Office

9:15 to 10:30 am
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE

9:15 Speaker
Charles F. Furr

10:00 Question & Answer

Upon completion of this session, participants should be able to: Discuss how to meet allergy compliance measures; Identify the timelines and reporting options; Discuss what we know about PQRS audits, appeals and the PQRS Wizard as a tool.
Saturday Scientific Program

Posters

7:00 am to 6:00 pm
Convention Center, Level One, South Exhibit Hall H
Posters on display from 7:00 am to 6:00 pm. Authors present from 9:45 to 10:45 am.
Credit: No CME/CE
Refer to pages 80 – 169 for abstracts and pages 203 – 225 for authors.

2201 Asthma Epidemiology
2202 Asthma Therapy I: Biologics
2203 Common Variable Immunodeficiency (CVID) and Other Hypogammaglobulinemia
2204 Advancement in Allergic Diseases
2205 Indoor Allergens and Fungi
2206 Exposures, Asthma and Allergic Diseases
2207 Drug Allergy Diagnosis and Management
2208 Anaphylaxis and Venom Immunotherapy
2209 Innovations in the Prediction and Treatment of Allergic Diseases
2210 Immunotherapy, Anaphylaxis
2211 Rhinosinusitis
2212 Cytokines, Chemokines and Innate Mechanisms
2213 Mast Cells and Basophils
2214 Allied Health Saturday Poster Session

Workshop

2251 Allied Health: The Patient-Centered Specialist Program: Becoming a Medical Neighbor
10:45 am to 12:00 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderator: Joan E. Hawkins

10:45 Is the Patient-Centered Medical Home a Path to NCOA Certification?
Thomas J. Derrico

11:30 Question & Answer
Upon completion of this session, participants should be able to: Discuss the development of the medical home model in primary care; Discuss the integration potential between the allergist and the primary care provider; Discuss the NCOA’s certification requirements and the path to certification.

Symposia

2301 World Allergy Forum: Role of Intolerance in Food Allergy
10:45 am to 12:00 pm
Convention Center, Level One, South Exhibit Hall G
Credit: 1.25 CME/CE
Moderators: Robert F. Lemanske Jr., MD FAAAAI
Mario Sánchez-Borges, MD FAAAAI

10:45 Food Allergy: Worldwide Patterns
Michael E. Levin, MBChB PhD FAAAAI

11:05 Question & Answer

11:10 Potential Regimens for Tolerance Inductions
Susan Prescott, MD PhD

11:30 Question & Answer

11:35 Treatment Prevention and Guidelines Worldwide
Hugh A. Sampson, MD FAAAAI

11:55 Question & Answer
Upon completion of this session, participants should be able to: Identify the worldwide patterns associated with food intolerances; Describe the regimens used for tolerance inductions; Describe new therapeutic options in prevention of food allergy worldwide.

2302 Lessons from Performing Guideline-Driven, Evidence-Based Asthma Interventions in the Real World: Who Benefits?
10:45 am to 12:00 pm
Convention Center, Level One, Petree Hall D
Credit: 1.25 CME/CE
Moderator: To be announced.

10:45 Found in Translation: How to Identify Key Elements of an Evidence-Based Intervention and How They are Adapted and Retained in Clinics Serving Diverse Underserved Communities
David M. Stevens, MD

11:05 Question & Answer

11:10 Effectiveness of the CHAMPS Intervention on Asthma Symptoms and Healthcare Utilization: Implications for Populations and Healthcare Centers That May Benefit from an Evidence-Based Intervention
Suzanne Kennedy, PhD

11:30 Question & Answer

11:35 Incremental Cost-Effectiveness of the CHAMPS Intervention: Implications for Supporting an Evidence-Based Intervention
Avi Dor, PhD

11:55 Question & Answer
Upon completion of this session, participants should be able to: Describe how to promote effective adaptation when developing an evidence-based intervention, such as ongoing dialogue between researchers and the target healthcare setting to respond to the needs of the clinic while monitoring fidelity to the intervention; Discuss if evidence-based asthma interventions are cost effective when translated across several different healthcare settings with various insurance providers, and identify what elements payers are interested in supporting for potential intervention sustainability.
### Saturday Scientific Program

#### 2303 New Molecular Breakthroughs in the Study of Immunoglobulin E

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Notes</th>
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<tbody>
<tr>
<td>10:45 am</td>
<td>IgE Repertoire Development: Relevance to Food Allergy and Asthma</td>
<td>Convention Center, Level Two, Room 404AB</td>
<td>1.25 CME/CE</td>
<td>Donald W. Macglashan, MD PhD</td>
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<tr>
<td>11:05</td>
<td>Posttranslational Modification of IgE is Essential for Function</td>
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<td>Robert M. Anthony, PhD</td>
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<tr>
<td>11:25</td>
<td>Through IgE, Basophils Are the Gatekeepers to Allergic Inflammation</td>
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<td>Laurence E. Cheng, MD PhD FAAAAI</td>
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<tr>
<td>11:45</td>
<td>Question &amp; Answer</td>
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Upon completion of this session, participants should be able to: Describe the molecular mechanisms of IgE production and activation of mast cells; Discuss new opportunities for development of drugs that affect mast cell function; Discuss the nature of post-translational modifications that regulate the activities of IgE.

#### 2304 Epithelium and Innate Immune Responses: Airways and Skin

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Notes</th>
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<tbody>
<tr>
<td>10:45 am</td>
<td>The Role of Taste Receptors in Epithelial Immune Responses and Chronic Sinus Disease</td>
<td>Convention Center, Level Two, Room 411</td>
<td>1.25 CME/CE</td>
<td>Robert P. Schechter, PhD FAAAAI</td>
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<tr>
<td>11:05</td>
<td>Question &amp; Answer</td>
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<tr>
<td>11:10</td>
<td>Barrier, Innate Immunity, Commensal Bacteria and Inflammation in the Skin</td>
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<td>Kenji Kabashima, MD PhD</td>
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<td>11:30</td>
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<td>11:35</td>
<td>Epithelial Responses in the Lungs Drive Innate and Adaptive Immunity</td>
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<td>Jay W. Kolls, MD</td>
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<td>11:55</td>
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</table>

Upon completion of this session, participants should be able to: Describe the presence of bitter and sweet taste receptors in multiple anatomic compartments that can serve as innate immune system sentinels; Discuss the multiple roles that epithelial cells in the skin serve in host defense and regulators of inflammation; Discuss how epithelial cells in the lung produce many secreted molecules that regulate innate and adaptive immune responses.

#### 2305 Epigenetic Mechanisms in Allergic Diseases

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45 am</td>
<td>Epigenetic Mechanisms That Modulate Food Allergy</td>
<td></td>
<td></td>
<td>Kari C. Nadeau, MD PhD FAAAAI</td>
<td></td>
</tr>
<tr>
<td>11:05</td>
<td>Epigenetic Regulation of AERD</td>
<td></td>
<td></td>
<td>Benjamin A. Raby, MD MPH</td>
<td></td>
</tr>
<tr>
<td>11:25</td>
<td>Epigenetic Regulation of Transcriptional Response to Cytokines in Airway Cells</td>
<td></td>
<td></td>
<td>Carole Ober, PhD</td>
<td></td>
</tr>
<tr>
<td>11:45</td>
<td>Question &amp; Answer</td>
<td></td>
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</tr>
</tbody>
</table>

Upon completion of this session, participants should be able to: Discuss epigenetic mechanisms that regulate allergic disease; Describe the difference between gene-environment interaction and epigenetics; Discuss gene-environment interactions that regulate cytokine responses.

#### 2306 Managing Stinging Insect Allergy in the 21st Century

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Credit</th>
<th>Moderator</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45 am</td>
<td>Mechanism of Tolerance to Venom Induced By Immunotherapy</td>
<td></td>
<td></td>
<td>Cezmi A. Akdis, MD FAAAAI</td>
<td></td>
</tr>
<tr>
<td>11:05</td>
<td>Question &amp; Answer</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11:10</td>
<td>Initiation and Discontinuation of Venom Immunotherapy: How Long is Enough?</td>
<td></td>
<td></td>
<td>David B.K. Golden, MD FAAAAI</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Question &amp; Answer</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>11:35</td>
<td>Anaphylaxis after Hymenoptera Sting-Overlap with Mast Cell Disorder</td>
<td></td>
<td></td>
<td>Mariana C. Castells, MD PhD FAAAAI</td>
<td></td>
</tr>
<tr>
<td>11:55</td>
<td>Question &amp; Answer</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Upon completion of this session, participants should be able to: Describe the mechanism of tolerance development during venom immunotherapy; Assess the indications for initiation and discontinuation of venom immunotherapy; Evaluate the overlap between venom-induced anaphylaxis and mast cell disorders.
**Saturday Scientific Program**

### Symposia (continued)

<table>
<thead>
<tr>
<th>Session 2307</th>
<th>What Do I Do With These Abnormal Newborn Screening Results? 🍀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>10:45 am to 12:00 pm</td>
</tr>
<tr>
<td>Location</td>
<td>Convention Center, Level Two, Room 502A</td>
</tr>
<tr>
<td>Credit</td>
<td>1.25 CME/CE</td>
</tr>
<tr>
<td>Moderator</td>
<td>Lisa J. Kobrynski, MD MPH FAAAAI</td>
</tr>
<tr>
<td>Note</td>
<td>This Session Will Use Audience Response System Technology.</td>
</tr>
</tbody>
</table>

**Saturday, March 5**

10:45 | What Have We Learned So Far? | Vincent R. Bonagura, MD FAAAAI |
11:05 | Question & Answer            |
11:10 | Not SCID but Not Normal      | Kathleen E. Sullivan, MD PhD FAAAAI |
11:30 | Question & Answer            |
11:35 | Transplantation Options and Novel Therapies                  | Donald B. Kohn, MD |
11:55 | Question & Answer            |

**2310**

*2308 NHBI's Clinical Asthma Research Network (AsthmaNet)'s Approach to Key Asthma Questions in Children and Adults 🍀*

<table>
<thead>
<tr>
<th>Time</th>
<th>10:45 am to 12:00 pm</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td>Convention Center, Level One, Concourse Hall, Room 152</td>
</tr>
<tr>
<td>Credit</td>
<td>1.25 CME/CE</td>
</tr>
<tr>
<td>Moderator</td>
<td>William W. Busse, MD FAAAAI</td>
</tr>
<tr>
<td>Note</td>
<td>This Session Will Use Audience Response System Technology.</td>
</tr>
</tbody>
</table>

10:45 | Are Inhaled Corticosteroids Superior to Leukotriene Antagonists in Toddlers with Early Asthma? | Daniel J. Jackson, MD |
11:05 | Question & Answer |
11:10 | Does Acetaminophen Use Increase Exacerbations in Children with Early Asthma? | William J. Sheehan, MD |
11:30 | Question & Answer |
11:35 | Airway and Gut Microbiome and Phenotypes of Mild Asthma | Homer A. Boushey, Jr., MD FAAAAI |
11:55 | Question & Answer |

**2311**

*2311 Allied Health: Comorbidities of Atopic Dermatitis 🍀*

<table>
<thead>
<tr>
<th>Time</th>
<th>10:45 am to 12:00 pm</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td>Convention Center, Level Two, Room 407</td>
</tr>
<tr>
<td>Credit</td>
<td>1.25 CME/CE</td>
</tr>
<tr>
<td>Moderator</td>
<td>Sally A. Noone, RN MSN</td>
</tr>
</tbody>
</table>

10:45 | Sleep Disturbances in Atopic Dermatitis | Anna B. Fishbein, MD |
11:05 | Question & Answer |
11:10 | Mental Health Comorbidity in Atopic Dermatitis | Jennifer S. LeBovidge, PhD |
11:30 | Question & Answer |
11:35 | Medical Comorbidities of Atopic Dermatitis | Kelly D. Stone, MD PhD FAAAAI |
11:55 | Question & Answer |

*2312 Allied Health: Cutting Edge: Health Related Quality of Life and Allergy Disease 🍀*

<table>
<thead>
<tr>
<th>Time</th>
<th>10:45 am to 12:00 pm</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td>Convention Center, Level Two, Room 409AB</td>
</tr>
<tr>
<td>Credit</td>
<td>1.25 CME/CE</td>
</tr>
<tr>
<td>Moderator</td>
<td>Scott H. Sicherer, MD FAAAAI</td>
</tr>
</tbody>
</table>

10:45 | Health-Related Quality-of-Life and Food Allergies: What Do We Know? | Matthew J. Greenhawt, MD MBA MSc |
11:05 | Question & Answer |
11:10 | The Role of the Dietitian in Health-Related Quality-of-Life in Food Allergy: What Can We Do? | Carina Venter, PhD RD |
11:30 | Question & Answer |
11:55 | Question & Answer |

**Note:** Upon completion of this session, participants should be able to: Discuss the incidence of SCID and survival outcomes after implementation of newborn screening programs; Identify idiopathic lymphopenia, dilemmas and strategies for management; Discuss various transplantation protocols and new experimental treatment options for SCID.

**Note:** Upon completion of this session, participants should be able to: Identify the incidence of SCID and survival outcomes after implementation of newborn screening programs; Identify idiopathic lymphopenia, dilemmas and strategies for management; Discuss various transplantation protocols and new experimental treatment options for SCID.

**Note:** Upon completion of this session, participants should be able to: Describe the systemic comorbidities associated with atopic dermatitis; Identify the atopic dermatitis patients at highest risk for systemic comorbidities; Discuss treatment considerations for atopic dermatitis and their impact on associated comorbidities.

**Note:** Upon completion of this session, participants should be able to: Describe the incidence of SCID and survival outcomes after implementation of newborn screening programs; Identify idiopathic lymphopenia, dilemmas and strategies for management; Discuss various transplantation protocols and new experimental treatment options for SCID.

**Note:** Upon completion of this session, participants should be able to: Discuss individualized long-term controller therapy in toddlers with asthma; Discuss the effect of acetaminophen versus ibuprofen on asthma exacerbations in children with asthma; Discuss the potential role of airway microbiome on the effect of ICS on adult asthma.
Saturday Scientific Program

Allied Health Session

2411 Allied Health Professional Assembly Business Meeting and Oral Abstract Session
12:15 to 1:45 pm
Convention Center, Level Two, Room 503
Credit: 1.25 CME/CE
Moderators: Sally A. Noone, RN MSN
Nina A. Zimmermann, MSN RN ANP-BC AE-C

12:15 Business Meeting

12:30 Association Between Outdoor Air Pollution and Acute Exacerbations of Respiratory Diseases in Pittsburgh
Nicole Pleskovic, BS

12:45 Patient Use Online Resources and Social Media for Food Allergy Information
Beth D. Strong, RN CCRC

1:00 Food Allergy Education Session Improves Nurses’ Knowledge, Confidence, and Attitudes Towards managing Food Allergic Children in a School Environment
Zara Atal

1:15 Long-Term Follow up after Peanut Immunotherapy
Kim Mudd, RN MSN CCRP

1:30 Improving Asthma Outcomes through Systems Change: The Breathe Initiative
Claudia Guglielmo, MPA AE-C

Seminars

2501 Understanding the Immune Basis of Drug-Induced Skin Reactions
Convention Center, Level Two, Room 410
Peter Arkwright, MD PhD FAAAAI
David H. Dreyfus, MD PhD FAAAAI

2502 Epigenetics in Asthma
Convention Center, Level Two, Room 501A
Faoud T. Ishmael, MD PhD FAAAAI
Donata Vercelli, MD

2503 Immune Deficiency in CRS: Screening and Treatment
Convention Center, Level Two, Room 501B
Leslie C. Grammer, MD FAAAAI
Anjeni Keswani, MD

2504 Learning Hereditary Angioedema by Team Based Learning
Convention Center, Level Two, Room 501C
Timothy J. Craig, DO FAAAAI
Paul Haidet, MD MPH

2505 Latex Allergy: An Update for the Clinician
Convention Center, Level Two, Room 504
Donald H. Beezhold, PhD FAAAAI
Kevin J. Kelly, MD FAAAAI

2506 Airway Epithelium as the Interplay Between Type 2 Innate Lymphoid Cells (ILC2) and Th2 Immunity

2507 Allele-Specific PCR to Diagnose D816V+ Clonal Mast Cell Disorders
Convention Center, Level Two, Room 506
Cem Akin, MD PhD FAAAAI
Dean D. Metcalfe, MD FAAAAI

2508 Managing Milk Allergy in Children
Convention Center, Level Two, Room 507
Supinda Bunyavanich, MD MPH FAAAAI
Marion E. Groetch, MS RD

2509 Drug Allergy Challenges in the Office
Convention Center, Level Two, Room 501C
Miguel A. Park, MD
Roland Solensky, MD FAAAAI

2510 Mechanisms of Allergic Inflammation in Omenn Syndrome
Convention Center, Level Two, Room 501D
Jolan E. Walter, MD PhD

Upon completion of this session, participants should be able to discuss the principles of diagnosis and management of HAE.

Upon completion of this session, participants should be able to: Discuss clinical immunology of latex allergy; Describe diagnosis and management of latex allergy; Describe changes in the hospital latex precautions.

Upon completion of this session, participants should be able to: Discuss the role of epithelial cell-derived cytokines/immune modulators in chronic airway inflammation; Describe the activity of epithelial cell-derived cytokines/immune modulators on ILC2 and allergic airways changes.

Upon completion of this session, participants should be able to discuss molecular diagnosis and targeted therapy of mastocytosis.

Upon completion of this session, participants should be able to: Describe clinical immunology of latex allergy; Describe diagnosis and management of latex allergy; Describe changes in the hospital latex precautions.

Upon completion of this session, participants should be able to: Discuss molecular diagnosis and targeted therapy of mastocytosis.

Upon completion of this session, participants should be able to: Describe clinical immunology of latex allergy; Describe diagnosis and management of latex allergy; Describe changes in the hospital latex precautions.

Upon completion of this session, participants should be able to: Discuss the spectrum of gene mutations that can lead to expression of Omenn Syndrome; Discuss and recognize potential mechanisms by which hypomorph RAG mutations can lead to the expression of allergic manifestations in these patients.
Saturday Scientific Program

Symposia (continued)

2511 Molecular Allergy Diagnosis: Does It Help in Managing Your Patient With Multiple Environmental and Food Allergies?
Convention Center, Level Two, Room 511B
Jacob D. Kattan, MD
Maria Antonella Muraro, MD PhD
Upon completion of this session, participants should be able to: Describe the phenomenon of immunologic and clinical cross-reactivity; Discuss and compare the current and future platforms for allergenic components testing; Discuss the role of component testing in food and environmental allergy.

2512 Challenging Cases in Venom Immunotherapy (VIT)
Convention Center, Level Two, Room 511C
David B.K. Golden, MD FAAAAI
Dennis K. Ledford, MD FAAAAI
Upon completion of this session, participants should be able to: Identify the indications for initiation of VIT; Discuss and appraise the evidence for the optimal duration of VIT; Describe the evidence of mast cell disorder in patients with anaphylaxis from stinging insects.

Pro/Con Debates

2551 Rhinovirus is More Important Than RSV in the Origin of Asthma
12:30 to 1:30 pm
Convention Center, Level Two, Room 404AB
Credit: 1.00 CME/CE
Moderator: Steve N. Georas, MD
Pro
James E. Gern, MD FAAAAI
Con
Tina V. Hartert, MD MPH
Upon completion of this session, participants should be able to: Discuss the asthma outcomes of rhinoviral infection; Identify the asthma outcome of RSV infection; Discuss the different effects of these common viral infections.

2552 Are You Nuts? Peanuts Should Not be Removed From Schools and Other Public Places
12:30 to 1:30 pm
Convention Center, Level Two, Room 408A
Credit: 1.00 CME/CE
Moderator: J. Andrew Bird, MD FAAAAI
Pro
Julie Wang, MD FAAAAI
Con
David Mark Fleischer, MD FAAAAI
Upon completion of this session, participants should be able to: Identify the risks of public places (schools, airplanes) for peanut-allergic individuals; Describe the approaches to mitigating risk of peanut allergic reactions in public places.

2553 Allergen Immunotherapy: Dose Adjustment: Are They Needed for Local Reactions, Peaks of Season, Gaps in Treatment?
12:30 to 1:30 pm
Convention Center, Level Two, Room 408B
Credit: 1.00 CME/CE
Moderator: Michael R. Nelson, MD PhD FAAAAI
Pro
Tolly Epstein, MD MS FAAAAI
Con
Mike Tankersley, MD FAAAAI
Upon completion of this session, participants should be able to: Discuss whether immunotherapy doses need to be altered for local reactions during peak allergen season and if there is a gap in therapy, or maintained; Discuss whether or not large local reactions predict anaphylaxis.

Symposia

2554 Imaging Immunity in Health and Disease
12:30 to 1:30 pm
Convention Center, Level Two, Theatre (Room 411)
Credit: 1.00 CME/CE
Moderator: William T. Shearer, MD PhD FAAAAI
12:30 Kinetic Assessment of In Vivo Immunity
Michael D. Cahalan, PhD
12:45 Question & Answer
12:50 Cell-to-Cell Interactions that Define the Immune Response
To Be Announced
1:05 Question & Answer
1:10 Dissecting Primary Immunodeficiency through Imaging
Jordan S. Orange, MD PhD FAAAAI
1:25 Question & Answer
Upon completion of this session, participants should be able to: Discuss how imaging can be utilized in allergy/immunology; Discuss how imaging can be utilized to help with diagnosis and management of primary immunodeficiency.

2555 Maintenance of Certification: Past, Present and Future
12:30 to 1:30 pm
Convention Center, Level Two, Room 403A
Credit: 1.00 CME/CE
Moderator: J. Andrew Bird, MD FAAAAI
12:30 Discussion Leader
Stephen I. Wasserman, MD FAAAAI
1:00 Discussion Leader
David Price, MD
Upon completion of this session, participants should be able to: Describe the history and development of the ABMS MOC program for physicians; Outline the key components that physicians must complete to satisfy MOC requirements.
Oral Abstract Sessions

2601 Asthma Featured Biologics
2:00 to 3:15 pm
Convention Center, Level Two, Room 502B
Credit: 1.25 CME/CE
Moderators: Caroline C. Horner, MD FAAAAI
Christopher C. Randolph, MD FAAAAI
2:00 Suppression of Lipid Mediators By the Humanized Anti-IgE Antibody Omalizumab in Aspirin-Exacerbated Respiratory Disease
Hiroaki Hayashi, MD
2:15 Efficacy of Reslizumab with Asthma, Chronic Sinusitis with Nasal Polyps and Elevated Blood Eosinophils
Steven F. Weinstein, MD FAAAAI
2:30 Efficacy of Reslizumab in Older Patients (>65 years) with Asthma and Elevated Blood Eosinophils: Results from a Pooled Analysis of Two Phase 3, Placebo-Controlled Trials
David I. Bernstein, MD FAAAAI
2:45 Exploratory Analysis of the Roles of Multiple Biomarkers in Predicting Response to Omalizumab in Allergic Asthma
William W. Busse, MD FAAAAI
3:00 Omalizumab Decreases Rates of Cold Symptoms in Inner-City Children with Allergic Asthma
Ann T. Esquivel, MD
Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

2602 From the Bench to the Bedside; When Clinical and Basic Science Research Advance Clinical Care
2:00 to 3:15 pm
Convention Center, Level Two, Theatre (Room 41)
Credit: 1.25 CME/CE
Moderator: Antonella Cianferoni, MD PhD FAAAAI
2:00 Nasal Influenza Immunisation with LAIV (FluMist) Is Safe in Egg-Allergic Children with Asthma or Recurrent Wheeze: Data from the Sniffle-2 Study
Paul J. Turner, FRACP PhD
2:15 Maternal DNA Methylation of TH17 Cytokine Genes in Second Half of Pregnancy Changes with Parity
Urpta Nilormee
2:30 Epicutaneous Immunotherapy Using Plasma-Derived Factor VIII Reduces the Inhibitory Immune Response to Therapeutic Factor VIII in Experimental Hemophilia a
Sébastien Lacroix-Desmazes
2:45 Antiviral Cytotoxic T Lymphocytes Can be Rapidly Generated Against an Extended Spectrum of Viruses
Michael Keller, MD
3:00 Siglec-Engaging Tolerance-Inducing Antigenic Liposomes (STALs) in the Prevention of Peanut Allergy
Kelly Orgel, BS
Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

2603 Respiratory Viruses, Illness and Asthma
2:00 to 3:15 pm
Convention Center, Level Two, Room 502A
Credit: 1.25 CME/CE
Moderators: Peter W. Heymann, MD
Daniel J. Jackson, MD
2:00 Upper Respiratory Infections during Infancy and Childhood
Aeroallergen Sensitization and Asthma
Leilanie Perez Ramirez, MD MS
2:15 Rhinovirus C Targets Ciliated Respiratory Epithelial Cells
Theodor F Griggs, PhD
2:30 Rhinovirus Infection Results in Increased and More Persistent Dysregulation of Gene Expression
Huyen-Tran Nguyen, MD
2:45 TSLP Neutralization Inhibits ILC2 Activation Induced By Multiple Pathogenic Clinical Isolates of RSV
Matthew T. Stier, BS
3:00 Interrogation of the Effects of Rhinovirus on Th2 Promoting Pathways in Allergic Asthma
Rachana Agrawal, PhD
Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

2604 Drug Allergy Diagnosis and Management
2:00 to 3:15 pm
Convention Center, Level Two, Room 515A
Credit: 1.25 CME/CE
Moderators: Jean-Christoph Caubet, MD
David A. Khan, MD FAAAAI
2:00 Beneficial Outcomes of an Inpatient Penicillin Allergy Testing Protocol
Justin R. Chen, MD
2:15 Omalizumab Inhibits Aspirin-Provoked Respiratory Reaction in Patients with Aspirin Exacerbated Respiratory Disease
David M. Lang, MD
2:30 Intravenous Iron Hypersensitivity Evaluation and Desensitization
Joyce T. Hsu, MD
2:45 Desensitization to Platinums: Our Experience with 153 Desensitizations
Meaghan R. Misiasz, MD
3:00 Increased Risk of Antituberculosis Drugs-Induced Maculopapular Eruption in Patients with Superoxide Dismutase 1 Gene Mutation
Sang-Heon Kim
Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.
Saturday Scientific Program

Oral Abstract Sessions (continued)

2605 Mind the Education Gaps!
2:00 to 3:15 pm
Convention Center, Level Two, Room 404AB
Credit: 1.25 CME/CE
Moderators: Asriani M. Chiu, MD FAAAAI
Gerald B. Lee, MD
2:00 Comparison of Food Allergy Awareness and Self-Management Among College Students at 3 Large US Universities
Marilyn R. Karam, MD
2:15 Quality of Facebook Pages on Food Allergy: Many Food Ingredient Alerts and Event Announcements but Little Research News and Patient Education
Mosaab Mahamden
2:30 Level of Knowledge, Concerns and Healthcare Practices Among Physicians Regarding E-Cigarettes
Venkatkiran Kanchustambham, MD
2:45 Educational Needs Assessment of US Allergy/Immunology Fellowship Programs: Assessment Methods for Determining Competency of Fellows in-Training
Lily C. Pien, MD MHPE FAAAAI
3:00 Immunotherapy Guide Increases Dosing Accuracy
Jared I. Darveaux, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

2606 Rhinitis, Immunotherapy
2:00 to 3:15 pm
Convention Center, Level Two, Room 408A
Credit: 1.25 CME/CE
Moderators: Christopher W. Calabria, MD
Michael R. Nelson, MD PhD FAAAAI
2:00 A Randomized Placebo-Controlled Trial of Intradermal Grass Pollen Immunotherapy for Seasonal Allergic Rhinitis
Anna D. Slocik, MRCS DOHNS MBBS BSc
2:15 Vitamin D Level in Allergic Rhinitis: A Systemic Review and Meta-Analysis
Yoon Hee Kim, MD
2:30 Nasal Challenge with Ragweed Pollen Extract (RWPE) Increases the Level of Fortilin in Nasal Lavage Fluid from Subjects with Allergic Rhinitis
Julia W. Tripple, MD
2:45 IL-2 Mediates Generalized Th1 Th2 Downregulation during Allergen-Specific Immunotherapy
Véronique M. Schulten, PhD
3:00 A New Digital Tool to Assess Allergic Rhinitis Symptom Control
Jean Bousquet, MD PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

2607 Microbiome
2:00 to 3:15 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderator: Nives Zimmermann, MD FAAAAI
2:00 Monitoring Circulating Virus-Specific CD4+ T Cells and Probiotic Effect in an Experimental Rhinovirus Challenge Model
Lyndsey M. Muehling, MS
2:15 Viral Infections and Their Impact on the Respiratory Microbiome in Pediatric Patients with Cystic Fibrosis
Gina T. Coscia, MD
2:30 A Prospective Microbiome-Wide Association Study of Childhood Food Sensitization and Allergy
Jessica Rabe Savage, MD MHS
2:45 Features of the Bronchial Bacterial Microbiome Associated with Allergy and Mild Allergic Asthma.
Juliana Durack, PhD
3:00 A Rationally Designed Microbial Consortium Attenuates Allergic Asthma in a Murine Model
Nikole E. Kimes, PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

2608 New Approaches to Disease Modification and Prevention
2:00 to 3:15 pm
Convention Center, Level Two, Room 408B
Credit: 1.25 CME/CE
Moderators: Désirée E.S. Larenas Linnemann, MD FAAAAI
Rebecca Scherzer, MD FAAAAI
2:00 The Clinical and Immunological Effects of Pru p 3 Silt on Peach and Peanut Tolerance in Patients with Systemic Allergic Reactions.
Francisca Gómez, MD PhD
2:15 Immune Tolerance Induction Following AIT Is Associated with Induction of Circulating CD4+CXCR5+PD-1+FoxP3+ T Follicular Regulatory Cells
Hjh Hanisah Hj Awg Sharif, BHSc MSc
2:30 Early Introduction of Egg for Infants with Atopic Dermatitis to Prevent Egg Allergy: A Double-Blind Placebo-Controlled Randomized Clinical Trial
Osamu Natsume, MD
2:45 Farm Exposure Is Associated with Reduced Rates of Viral Respiratory Illnesses in Early Life
Jamee R. Castillo, MD
3:00 Could Allergen Immunotherapy be a Therapeutic Intervention in Eosinophilic Oesophagitis?
Moises A. Calderon, MD PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.
Saturday Scientific Program

Workshops

2611 Allied Health Travel Grant Recipients
2:00 to 3:15 pm
Convention Center, Level Two, Room 409AB
Credit: 1.25 CME/CE
Moderator: Stephen J. McGeady, MD FAAAAI

2:00 Common Variable Immune Deficiency (CVID)
Olivia Rae Ackerman, MSN APRN PPCNP-BC

2:05 Food Allergy
Alexia K. Beauregard, MS RN CSP LD

2:10 Driven Inpatient Penicillin Allergy Testing Program
Scott A. Tarver, PharmD BCPS

2:15 Question & Answer

2:30 Work Related Asthma
Joshua C. Lipszyc, BA MSc

2:35 Asthma Impact Model for Fresno
Stephani A. Pineda, BSPH

2:45 Question & Answer

2:50 Managing and Measuring Environmental Data
Jean Curtin-Brosnan, MA

3:10 Question & Answer

2612 Allied Health: Collecting and Managing Data from an Environmental Home Assessment
2:00 to 3:15 pm
Convention Center, Level Two, Room 403A
Credit: 1.25 CME/CE
Moderator: Susan L. Balcer-Whaley, MPH

2:00 Conducting an Environmental Home Assessment
Susan L. Balcer-Whaley, MPH

2:20 Question & Answer

2:25 Tools of the Trade
Michelle Newman, RN

2:45 Question & Answer

2:50 Managing and Measuring Environmental Data
Jean Curtin-Brosnan, MA

3:10 Question & Answer

Keynote

2701 The Past, Present and Future of Asthma
3:30 to 4:30 pm
Convention Center, Level One, South Exhibit Hall G
Credit: 1.00 CME/CE
Moderator: Robert F. Lemanske Jr., MD FAAAAI
Stephen T. Holgate, MD DSc FAAAAI
Holgate is Medical Research Council Clinical Professor of Immunopharmacology and Honorary Consultant Physician at the University of Southampton Foundation Hospital Trust. He has utilized many approaches to study the mechanisms of asthma including epidemiology, genetics, pathology, microbiology, immunology, pharmacology, biochemistry and experimental medicine. This research has informed guidelines on asthma management and has identified and validated novel therapeutic targets.

Upon completion of this session, participants should be able to: Explain how knowledge gained over the last five decades has transformed the way allergy and asthma are diagnosed and treated; Recognize the huge steps that have been made in unravelling the genetic code in determining new mechanisms and therapeutic targets for the treatment of allergy and asthma, the biological revolution; Realize that we are at the start of a further revolution, the digitalization of biology and the convergence of the physical and biological sciences to create a new precision and personalized approach to chronic diseases such as asthma.

Workshops

2801 AAP: Hot Topics in Pediatric Allergy
4:45 to 6:00 pm
Convention Center, Level One, Petree Hall C
Credit: 1.25 CME/CE
Moderator: Elizabeth Matsui, MD MHS
This Session Requires Pre-Meeting Reading.

4:45 Food Allergy
Corinne Keet, MD PhD

5:00 Question & Answer

5:10 Eczema
Lynda C. Schneider, MD FAAAAI

5:25 Question & Answer

5:35 Asthma
Chitra Dinakar, MD FAAAAI

5:50 Question & Answer

Upon completion of this session, participants should be able to: Describe the latest developments in pediatric allergy and immunology; Discuss how these latest developments might affect the care of pediatric patients.
Saturday Scientific Program

Workshops (continued)

2802 Vocal Cord Dysfunction (VCD): More Common Than You Think
4:45 to 6:00 pm
Convention Center, Level Two, Room 403B
Credit: 1.25 CME/CE
Moderator: Mark F. Sands, MD FAAAAI
4:45 Vocal Cord Dysfunction: More Common Than You Think
Stephen A. Tilles, MD FAAAAI
5:00 Question & Answer
5:10 Practical Approach to VCD Diagnosis: Laryngoscopy and More
Andrei A. Petrov, MD
5:25 Question & Answer
5:35 Principles of Speech Therapy in the Management of VCD
Gerriann Jackson, MS CCC-SLP
5:50 Question & Answer

Upon completion of this session, participants should be able to: Discuss that VCD exists on a spectrum of airway disorders and is probably under-diagnosed in many patients with severe, difficult-to-control asthma; Discuss a rational approach to VCD diagnosis, including characteristic features in history, physical exam and pulmonary function tests; Describe an approach to VCD management via speech therapy.

2803 How Allergic Immune Responses are Initiated and Regulated: The Role of Epithelial Cells and Immune System in Allergic Diseases
4:45 to 6:00 pm
Convention Center, Level Two, Room 404AB
Credit: 1.25 CME/CE
Moderator: Michiko K. Oyoshi, PhD MSc FAAAAI
4:45 Friend or Foe: Pathogenic and Protective Roles of Epithelial Cell-Derived Cytokines in Allergic Diseases
Steven Ziegler, PhD
5:00 Question & Answer
5:10 Epithelial Regulation of Allergic Inflammation
David Artis, PhD
5:25 Question & Answer
5:35 Anti-Epithelial Cell-Derived Cytokine Therapies: Basic Mechanisms Underlying the Development of New Therapies
Kari C. Nadeau, MD PhD FAAAAI
5:50 Question & Answer

Upon completion of this session, participants should be able to: Describe the role of epithelial cell-derived cytokines in the initiation and amplification of Th-2 immune responses; Describe the relationship of epithelial cell-derived cytokines and allergic responses; Discuss the unique challenges of targeting epithelial cell-derived cytokines in allergic disease.

2804 Adherence Challenges in Asthma: Pediatrics, Adolescents and Older Adults
4:45 to 6:00 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderator: Andrea J. Apter, MD MA MSc FAAAAI
4:45 Adherence Challenges in Pediatric Asthma
Bruce G. Bender, PhD FAAAAI
5:00 Adherence Challenges in Adolescents with Asthma
Giselle Mosnaim, MD MS FAAAAI
5:15 Adherence Challenges in Older Adults with Asthma
Sharmilee M. Nyenhuis, MD FAAAAI
5:30 Case Presentation Audience Challenge

Upon completion of this session, participants should be able to: Discuss issues of adherence to asthma medications unique for each age group; Discuss how to approach patients about medication adherence; Describe specific strategies to improve medication adherence in each age group.

2805 Immune Deficiency Lurking in the Allergy Clinic
4:45 to 6:00 pm
Convention Center, Level Two, Room 408A
Credit: 1.25 CME/CE
Moderator: Rebecca Scherzer, MD FAAAAI
This Session Will Use Audience Response System Technology.
4:45 Eczema As a Sign of Immune Deficiency
Elena E. Perez, MD PhD FAAAAI
5:00 Question & Answer
5:10 Ruling out Immune Deficiencies in Eosinophilia
Amy D. Kilon, MD
5:25 Question & Answer
5:35 When a High IgE Means More Than a High IgE
Alexandra F. Freeman, MD
5:50 Question & Answer

Upon completion of this session, participants should be able to: Distinguish allergy phenotypes from immune deficiencies; Discuss primary immune deficiencies from the perspective of a practicing allergist.

2806 Chronic Rhinosinusitis in Children
4:45 to 6:00 pm
Convention Center, Level Two, Room 408B
Credit: 1.25 CME/CE
Moderator: Robert Naclerio, MD FAAAAI
This Session Will Use Audience Response System Technology.
4:45 Clinical Presentation and Pathophysiology of Chronic Rhinosinusitis in Children
Daniel L. Hamilos, MD FAAAAI
5:00 Question & Answer
5:10 Medical Treatment of Rhinosinusitis in Children
David W. Hauswirth, MD FAAAAI
5:25 Question & Answer
5:35 Surgical Options in Children with Chronic Rhinosinusitis
Fuad M. Baroody, MD FAAAAI
5:50 Question & Answer

Upon completion of this session, participants should be able to: Discuss aspects of CRS pathophysiology that are relevant to children; Demonstrate particularities of CRS symptoms and clinical presentation in children; Discuss pediatric aspects of medical treatment of CRS and the features, indications and contraindications of sinus surgery in children with CRS.
Saturday Scientific Program

Workshops (continued)

2807 How Bronchial Smooth Muscle Cells Make Airways Hyper-Responsive

4:45 to 6:00 pm
Convention Center, Level Two, Room 409AB
Credit: 1.25 CME/CE
Moderator: Reynold A. Panettieri, MD

4:45 Hard-Wired Defects in RGS4 and Severe Asthma
Kirk M. Druery, MD

5:00 Question & Answer

5:10 ASM Signaling Defects and Airway Hyperresponsiveness
Michael M. Grunstein, MD PhD

5:25 Question & Answer

5:35 Bitter Taste Receptors and Bronchodilation
Stephen Liggett, MD

5:50 Question & Answer

Upon completion of this session, participants should be able to: Describe the effect of bronchial smooth muscle cells in AHR; Describe signaling in smooth muscle cells and their effect on AHR.

2808 Advances in Natural Killer Cell and Natural Killer T Cell Biology

4:45 to 6:00 pm
Convention Center, Level Two, Theatre (Room 411)
Credit: 1.25 CME/CE
Moderator: Antonella Cianferoni, MD PhD FAAAAI

4:45 Natural Killer T Cells as Immunoregulators
Mitchell Kronenberg, PhD

5:05 Inherited Deficiency of NK Cell Function
Jordan S. Orange, MD PhD FAAAAI

5:25 Immunologic Recognition by NK Cells
Wayne Y. Yokoyama, MD

5:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss specific signals that stimulate the activation of NKT cells so that they can modulate the innate and adaptive immune responses; Discuss the spectrum of immunologic consequences that accrue in the setting of deficiency of NK cell function; Describe the mechanisms that NK cells use to recognize immunologic targets.

2809 Novel Biologicals for Asthma and Allergic Rhinosinusitis

4:45 to 6:00 pm
Convention Center, Level Two, Room 502A
Credit: 1.25 CME/CE
Moderator: Hirohisa Saito, MD PhD FAAAAI

4:45 Biologicals in Allergy and Asthma
Sally E. Wenzel, MD FAAAAI

5:00 Question & Answer

5:10 Novel Allergen-Specific Immunotherapies and Biologicals for Allergic Rhinosinusitis
Claus Bachert, MD PhD

5:25 Question & Answer

5:35 Immunologic Mechanisms of Novel Allergen-Specific Immunotherapies
Ozmi A. Akdis, MD FAAAAI

5:50 Question & Answer

Upon completion of this session, participants should be able to: Discuss novel biologicals in allergy and immunology; Discuss mechanisms underlying novel immunologic therapies.

2810 Clinical Implications of Microbiome in Chronic Respiratory Disease

4:45 to 6:00 pm
Convention Center, Level Two, Room 502B
Credit: 1.25 CME/CE
Moderator: Amber U. Luong, MD PhD

4:45 Fungal Microbiome: Why is the Fungal Microbiome so Hard to Describe?
David B. Corry, MD

5:00 Question & Answer

5:10 Host-Microorganism Interactions in Chronic Respiratory Disease
Yvonne Huang, MD

5:25 Question & Answer

5:35 Relationship of the Upper and Lower Respiratory Tract Microbiome
Gary Huffnagle, PhD

5:50 Question & Answer

Upon completion of this session, participants should be able to: Discuss the deep sequencing technology, its limitations and consequences on the understanding of the microbiome, especially the limited understanding of the fungal microbiome; Identify current knowledge of airway microbiota and outline how host-microorganism interactions influence health and disease; Discuss how the microbiota in the mouth and nose influences the microbiome in the lungs and implications on disease.

2811 ABAI: How to Use the ABAI WebPortal for Maintenance of Certification (MOC) Activities

4:45 to 6:00 pm
Convention Center, Level Two, Room 503
Pre-registration and ticket required.
Credit: 1.25 CME/CE
Moderator: Stephen I. Wasserman, MD FAAAAI

4:45 Overview of ABAI MOC Components
Rayné Harrison

4:55 Overview of ABAI WebPortal
Gina Capozzoli

5:05 Question & Answer

5:15 Hands-On Instruction

Upon completion of this session, participants should be able to: Discuss the four major components of the ABAI MOC Program; Discuss how to successfully report MOC activities to the ABAI using the WebPortal; Demonstrate how to access, navigate and utilize the ABAI WebPortal for tracking and documenting personal progress through the MOC program.

2812 A Comparison of HAE Guidelines: What’s New?

4:45 to 6:00 pm
Convention Center, Level Two, Room 515A
Credit: 1.25 CME/CE
Moderator: Teresa Caballero, MD PhD

This Session Requires Pre-Meeting Reading.

4:45 2012 HAE Evidence-Based Recommendations (Hereditary Angioedema International Working Group: HAWK)
Bruce L. Zuraw, MD

5:00 Question & Answer

5:15 2014 HAE Canadian Guidelines
Stephen D. Betschel, MD

5:30 Panel Discussion with Question & Answer

5:50 Question & Answer

Upon completion of this session, participants should be able to: Discuss novel biologicals in allergy and immunology; Discuss mechanisms underlying novel immunologic therapies.
Workshops (continued)

2813  NSAID-Exacerbated Respiratory Disease (NERD)
4:45 to 6:00 pm
Convention Center, Level Two, Room 515B
Credit: 1.25 CME/CE
Moderator: Marek L. Kowalski, MD PhD

Panel Discussion
Speaker to be announced.
Martin Wagenmann, MD FAAAAI
Andrew A. White, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss and outline current knowledge and open questions in NERD; Discuss knowledge gaps in the natural course of NERD; Describe indications, contraindications and limitations of aspirin desensitization in asthma and nasal polyposis.

2814  Problem-Based Learning: Doctor, Can You Prevent My Baby from Developing Peanut Allergy?
4:45 to 6:00 pm
Convention Center, Level Two, Room 518
Pre-registration and ticket required.
Credit: 1.25 CME/CE
This Session Will Use a Problem-Based Learning Approach.

Target Lecture
Facilitator
Ray S. Davis, MD FAAAAI
Content Expert
Hugh A. Sampson, MD FAAAAI

Upon completion of this session, participants should be able to: Assess known risk factors for peanut allergy; Appraise the results of the LEAP study; Assess the screening for peanut allergy in infants at risk.

2815  When Writing a Script Just Isn’t Enough: Strategies to Overcome Barriers Associated with Poor Asthma Control in Older Adults
4:45 to 6:00 pm
Convention Center, Level One, Concourse Hall, Room 152
Credit: 1.25 CME/CE
Moderator: Alan P. Baptist, MD MPH FAAAAI

Diagnostic and Management Approaches for Asthma in Older Adults with Significant Co-Morbidities
Tolly Epstein, MD MS FAAAAI

Upon completion of this session, participants should be able to: Discuss diagnostic and therapeutic approaches to the elderly asthmatic; Describe the effect of financial concerns and medication related side-effects on asthma management in the elderly; Explain how non-pharmaceutical interventions including pulmonary rehabilitation impact the elderly asthmatic.

2816  FIT Workshop: Interesting Cases Part 1
4:45 to 6:00 pm
JW Marriott, Platinum Ballroom Level, Salon C
Credit 1.25 CME/CE
Moderators: T. Prescott Atkinson, MD PhD FAAAAI
Katherine Gundling, MD

Panel Discussion
Speaker to be announced.

Upon completion of this session, participants should be able to: Discuss correct methods for application of skin tests in patients with obesity, tattoos and/or aging skin; Discuss and adequately interpret skin testing in patients with obesity, tattoos and/or aging skin; Describe the problems encountered with skin testing in patients who are obese, have tattoos or have aged skin.

2821  Allied Health: What Allied Health Professionals Need to Know about Drug Sensitivity
4:45 to 6:00 pm
Convention Center, Level Two, Room 403A
Credit: 1.25 CME/CE
Moderator: Sally A. Noone, RN MSN
This Session Will Use Audience Response System Technology.

Clinical Approach to Drug Allergy
Miguel A. Park, MD

Upon completion of this session, participants should be able to: Evaluate the management of challenging patient cases by trainees in allergy/immunology; Compare and contrast management strategies for challenging patient cases with peers.

2822  Allied Health: Skin Testing: Getting to the Point
4:45 to 6:00 pm
Convention Center, Level Two, Room 405
Pre-registration and ticket required.
Credit: 1.25 CME/CE
Moderator: T. Prescott Atkinson, MD PhD FAAAAI

Overview of Devices
Carla M. Duff, CPNP MSN CCRP IgCN

Overview of Challenges
William R. Blouin, ARNP CPNP

Hands-On Instruction
Upon completion of this session, participants should be able to: Discuss correct methods for application of skin tests in patients with obesity, tattoos and/or aging skin; Discuss and adequately interpret skin testing in patients with obesity, tattoos and/or aging skin; Describe the problems encountered with skin testing in patients who are obese, have tattoos or have aged skin.
Sunday Scientific Program

Seminars

6:45 to 7:45 am
Pre-registration and ticket required. Fee: $40. Continental breakfast included. Sessions and meals are limited to 30 people.
Credit: 1.00 CME/CE

3001 Mast Cell Activation Syndrome(s): Diagnosis and Treatment
JW Marriott, Diamond Ballroom Level, Salon 1
Mariana C. Castella, MD PhD FAAAAI
Lawrence B. Schwartz, MD PhD FAAAAI
Upon completion of this session, participants should be able to: Discuss mast cell activation syndrome diagnosis; Discuss mast cell activation syndrome treatment options.

3002 Eosinophil Cytolysis: Programmed Death Pathways and Significance in Disease
JW Marriott, Diamond Ballroom Level, Salon 2
Hans-Uwe Simon, MD PhD FAAAAI
Nives Zimmermann, MD FAAAAI
Upon completion of this session, participants should be able to: Discuss the role of pathologic eosinophil cell death in eosinophilic diseases; Describe the power of clinical investigations as an in vivo approach to understand eosinophil biology; Discuss the clinical value of analyzing eosinophil cytolysis including cell-free granules in sputum and tissue samples.

3003 Chronic Rhinosinusitis: The Evidence Base for Current Treatments
JW Marriott, Diamond Ballroom Level, Salon 3
Robert C. Kern, MD
Anju T. Peters, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss the current and future options of CRS treatment; Describe the different types of CRS and the relevance of this distinction for therapy; Describe the role of established medical treatments and discuss alternative options; List the indications for surgical treatment of FESS and its outcome.

3004 Chronic Rhinosinusitis in Children
JW Marriott, Diamond Ballroom Level, Salon 6
Daniel L. Hamilos, MD FAAAAA
David W. Hauswirth, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss the pathophysiology of chronic rhinosinusitis in children; Discuss treatment strategies for chronic rhinosinusitis in children; Discuss the surgical options for children with chronic rhinosinusitis who fail medical therapy.

3005 Recurrent Infection in Adults
JW Marriott, Diamond Ballroom Level, Salon 7
Ralph Shapiro, MD
Mark R. Stein, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss the indications for an evaluation of the immune system in adult patients; Describe the appropriate work-up for an immunodeficiency disorder in adults and how the changes in the immune response as people age might influence the results; Discuss the treatment approaches for adult patients with primary immunodeficiency disease.

3006 Exercise-Induced Anaphylaxis: Food-Dependent and -Independent
JW Marriott, Diamond Ballroom Level, Salon 8
Anna M. Feldweg, MD
Mario Geller, MD FAAAAA
Upon completion of this session, participants should be able to: Describe mechanism of EIA; Identify common triggers in FDEIA; Describe approach to diagnosis and management.

3007 Helpful Advice in Improving Asthma Adherence
JW Marriott, Diamond Ballroom Level, Salon 9
Bruce G. Bender, PhD FAAAAA
Andrew G. Weinstein, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss the causes of non-adherence; Identify the impact of non-adherence on control of asthma; Identify effective strategies to improve adherence.

3008 Mold: Facts & Fiction
JW Marriott, Diamond Ballroom Level, Salon 10
James J. Anderson, MLT
Peter J. Pitkin, PhD
Upon completion of this session, participants should be able to: Discuss evidence that the risk of mold is often overstated, misstated or misunderstood; Discuss the proven risk presented by mold; Identify mycotoxins, mVOCs and current mold guidelines.

3009 When Do You Give SLIT vs. SCIT?
JW Marriott, Platinum Ballroom Level, Salon A
Joerg R. Kleine-Tebbe, MD FAAAAA
Richard F. Lockey, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss the advantages and disadvantages of SCIT vs. SLIT; Describe the limitations of current evidence; Discuss typical clinical scenarios where SLIT or SCIT would be preferable.

3010 Nasal Allergen Provocation Test: A Real Challenge
JW Marriott, Platinum Ballroom Level, Salon B
Paloma Campo, MD PhD
Carmen Rondon, MD PhD
Upon completion of this session, participants should be able to: Describe the different methods for performing nasal allergen provocation test (NAPT) and the real difficulties and challenges; Discuss the different methods of evaluation and sources of variability (extracts, protocols, etc); Discuss the applications in different entities and settings (diagnosis of local allergic rhinitis, clinical trials, research, private practice).

3011 Challenges in the Diagnosis and Treatment of Exercise-Induced Bronchoconstriction (EIB)
JW Marriott, Platinum Ballroom Level, Salon F
Christopher C. Randolph, MD FAAAAA
William W. Storms, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss the diagnosis of EIB, including the use of provocative testing methods; Discuss the current therapies for EIB.

3012 AERD: More Than Asthma
JW Marriott, Platinum Ballroom Level, Salon G
Sven-Erik Dahlén, MD PhD
Tanya M. Laidlaw, MD FAAAAA
Upon completion of this session, participants should be able to: Discuss mechanisms by which aspirin may modulate several types of respiratory disease; Describe current approaches to diagnosis and avoidance of AERD.

3013 Gene Therapy as a Treatment of Primary Immune Defects
JW Marriott, Platinum Ballroom Level, Salon H
Donald B. Kohn, MD
Matthew Porteus, MD PhD
Upon completion of this session, participants should be able to: Discuss and analyze general information about gene therapy; Discuss current indications for gene therapy in patients with primary immunodeficiency; Evaluate considerations of future use of gene therapy in primary immunodeficiency disorders.
### Allied Health Seminars

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>6:45 to 7:45 am</td>
<td>Pre-registration and ticket required. No fee. Sessions are limited to 30 people. &lt;br&gt;Credit: 1.00 CME/CE</td>
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#### 3021 Allied Health: Tips and Tricks on Starting and Managing a Research Center

**Location:** JW Marriott, Platinum Ballroom Level, Salon I  
**Speakers:** Sonia C. Mancia, BSN RN  
**Kim E. Mudd, RN MSN CCRP**

Upon completion of this session, participants should be able to: Describe the resources needed to establish a research center; Describe the challenges in maintaining a successful research center.

### Plenary

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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| 8:15 to 9:45 am | Clinical Insights Into the Prevention and Modification of Atopic Disease  
**Moderator:** Stephen A. Tilles, MD FAAAAI  
**Credit:** 1.50 CME/CE |

#### 3101 Preventing Asthma Exacerbations: Lessons Learned from Biologic Trials

**Location:** Convention Center, Level One, South Exhibit Hall G  
**Speakers:** William W. Busse, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss basic principles of immune tolerance, and how the timing of allergen exposure can exert a profound influence on subsequent sensitization and symptoms of food allergy in susceptible children; Discuss new thinking about the mechanisms and consequences of skin barrier breakdown for atopic dermatitis and allergen sensitization, including how barrier function impacts microbial colonization, and is attenuated by new biologic therapies; Discuss the effects of asthma exacerbation on disease natural history, including how new biologic therapies targeting eosinophils and Th2 pathways are providing unexpected new insights into disease pathobiology (an example of bidirectional translational research).

### Posters

<table>
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<tr>
<th>Time</th>
<th>Session</th>
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| 7:00 am to 6:00 pm | Posters on display from 7:00 am to 6:00 pm. Authors present from 9:45 to 10:45 am.  
**Credit:** No CME/CE  
Refer to pages 80 – 169 for abstracts and pages 203 – 225 for authors. |

#### 3201 Asthma Genotypes, Phenotypes and Management
Sunday Scientific Program

**Symposia**

**3301  EAACI: Managing Allergy at the Frontline**

<table>
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<th>Time</th>
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<tr>
<td>10:45 am</td>
<td>Convention Center, Level One, Petree Hall C</td>
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<tr>
<td></td>
<td><strong>Credit:</strong> 1.25 CME/CE</td>
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<tr>
<td></td>
<td><strong>Moderators:</strong> Maria Antonella Muraro, MD PhD, Ioana O. Agache, CME</td>
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<tr>
<td>10:45 am</td>
<td><strong>Anaphylaxis Severity Score: Towards a Harmonized Approach?</strong></td>
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<td></td>
<td>Maria Antonella Muraro, MD PhD</td>
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<td>11:05 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:10 am</td>
<td><strong>Molecular Diagnosis: How to Move Forward? Diagnostic Algorithms and Beyond</strong></td>
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<td>Carsten Bindslev-Jensen, MD PhD DMSci FAAAAI</td>
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<tr>
<td>11:30 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:35 am</td>
<td><strong>Allergen-Specific Immunotherapy: Dealing with Personalized Medicine</strong></td>
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<td></td>
<td>Marek Jutel, MD PhD</td>
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<td>11:55 am</td>
<td><strong>Question &amp; Answer</strong></td>
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Upon completion of this session, participants should be able to: Describe a new severity score for anaphylaxis and the potential of harmonized evaluation; Identify properly the relevance of components in daily practice for diagnosis and treatment; Discuss how allergen-specific immunotherapy can fit in the framework of personalized medicine.

**3302  T Cell Determination Heterogeneity and Hijacking in Allergic Disease**

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<tr>
<td>10:45 am</td>
<td>Convention Center, Level One, Petree Hall D</td>
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<td><strong>Credit:</strong> 1.25 CME/CE</td>
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<td><strong>Moderator:</strong> David D. Chaplin, MD PhD FAAAAI</td>
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<tr>
<td>10:45 am</td>
<td><strong>IL-2-Dependent Tissue-Resident Th2 Memory Cells Drive Asthma</strong></td>
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<td></td>
<td>Marion Pepper, PhD</td>
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<td>11:05 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:10 am</td>
<td><strong>Reprogramming of T Regulatory Cells In Allergic Disease</strong></td>
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<td>Talal A Chabila, MD MSc</td>
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<tr>
<td>11:30 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:35 am</td>
<td><strong>Novel Pathways for Th9 Cell Development and Allergic Lung Disease</strong></td>
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<td></td>
<td>Richard Siegel, MD PhD</td>
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<tr>
<td>11:55 am</td>
<td><strong>Question &amp; Answer</strong></td>
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Upon completion of this session, participants should be able to: Recognize unique functions of memory T Cells in allergic disease; Identify the extent of plasticity in differentiated T Cell lineages and implications in allergic disease; Identify heterogeneity of T Cell differentiation pathways and implications in allergic disease.

**3303  Difficult Viral Infections Due to Defects in Innate Immunity**

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<th>Time</th>
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<tr>
<td>10:45 am</td>
<td>Convention Center, Level Two, Theatre (Room 411)</td>
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<td><strong>Credit:</strong> 1.25 CME/CE</td>
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<td></td>
<td><strong>Moderator:</strong> Lisa R. Forbes, MD</td>
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<tr>
<td>10:45 am</td>
<td><strong>Innate Immune Control of Influenza</strong></td>
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<td>To Be Announced</td>
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<tr>
<td>11:05 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:10 am</td>
<td><strong>Defects in the PI-3 Kinase Signaling Pathway</strong></td>
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<td>Carrie L. Lucas, PhD</td>
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<tr>
<td>11:30 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:35 am</td>
<td><strong>NK Cell Deficiency</strong></td>
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<td></td>
<td>Emily Mace, PhD</td>
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<tr>
<td>11:55 am</td>
<td><strong>Question &amp; Answer</strong></td>
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Upon completion of this session, participants should be able to: Discuss the role of PI-3 kinase defects in viral susceptibility; Discuss presentations and causes of NK cell deficiency; Identify defects in innate immune function that lead to severe influenza infections.

**3304  Emerging and Current Diagnostics and Therapies for Eosinophilic Esophagitis**

<table>
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<th>Time</th>
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<tr>
<td>10:45 am</td>
<td>Convention Center, Level Two, Room 408A</td>
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<td><strong>Credit:</strong> 1.25 CME/CE</td>
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<tr>
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<td><strong>Moderator:</strong> John J. Lee, MD</td>
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<tr>
<td>10:45 am</td>
<td><strong>Current Therapeutic Approaches in the Management of Eosinophilic Esophagitis</strong></td>
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<td></td>
<td>Douglas R. McDonald, MD PhD</td>
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<tr>
<td>11:05 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:10 am</td>
<td><strong>Biomarkers in Eosinophilic Esophagitis</strong></td>
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<td>Gisoo Ghaffari, MD FAAAAA</td>
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<tr>
<td>11:30 am</td>
<td><strong>Question &amp; Answer</strong></td>
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<tr>
<td>11:35 am</td>
<td><strong>Use of Biologic Therapy in Eosinophilic Esophagitis</strong></td>
</tr>
<tr>
<td></td>
<td>Amal H. Assa’ad, MD FAAAAA</td>
</tr>
<tr>
<td>11:55 am</td>
<td><strong>Question &amp; Answer</strong></td>
</tr>
</tbody>
</table>

Upon completion of this session, participants should be able to discuss current and emerging therapies as well as biomarkers in patients with EOE.

**3305  Severe Asthma in Children: From Mechanisms to Disease Modification**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>10:45 am</td>
<td>Convention Center, Level Two, Room 408B</td>
</tr>
<tr>
<td></td>
<td><strong>Credit:</strong> 1.25 CME/CE</td>
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<tr>
<td></td>
<td><strong>Moderator:</strong> William W. Busse, MD FAAAAA</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>This Session Will Use Audience Response System Technology.</strong></td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Asthma Epidemiology and Alternate Diagnoses to Consider</strong></td>
</tr>
<tr>
<td></td>
<td>Theresa W. Guilbert, MD MS</td>
</tr>
<tr>
<td>11:05 am</td>
<td><strong>Question &amp; Answer</strong></td>
</tr>
<tr>
<td>11:10 am</td>
<td><strong>Mechanisms of Severe Asthma in Children</strong></td>
</tr>
<tr>
<td></td>
<td>Leonard B. Bacharier, MD FAAAAA</td>
</tr>
<tr>
<td>11:30 am</td>
<td><strong>Question &amp; Answer</strong></td>
</tr>
<tr>
<td>11:35 am</td>
<td><strong>The Role of Biologic Therapies: Are There Opportunities for Disease Modification?</strong></td>
</tr>
<tr>
<td></td>
<td>Daniel J. Jackson, MD</td>
</tr>
<tr>
<td>11:55 am</td>
<td><strong>Question &amp; Answer</strong></td>
</tr>
</tbody>
</table>

Upon completion of this session, participants should be able to: Describe the frequency and common features of severe asthma in children; Identify common underlying mechanisms of severe asthma in children; Discuss the efficacy of omalizumab and the potential for disease modification in children.
Symposia (continued)

3306 Using SCIT vs. SLIT to Modify Allergic Disease

10:45 am to 12:00 pm
Convention Center, Level Two, Room 502A
Credit: 1.25 CME/CE
Moderator: Linda Cox, MD FAAAAI

10:45 SCIT vs. SLIT: Efficacy in Clinical Trials
Stephen R. Durham, MA MD FRCP

11:05 Question & Answer

11:10 Nasal and Systemic Biomarkers for Immunotherapy Efficacy: Lessons Learned from the SLIT-SCIT Trial
Mohamed H. Shamji, PhD FAAAAI

11:30 Question & Answer

Upon completion of this session, participants should be able to: Discuss the latest data on the efficacy and safety of SCIT compared to SLIT for grass pollen allergy; Identify several newly discovered biomarkers forAIT efficacy; Discuss and explain safety and adherence issues of SLIT and SCIT and utilize resources to try to overcome them.

3307 New Strategies for the Prevention of Allergic Diseases

10:45 am to 12:00 pm
Convention Center, Level Two, Room 502B
Credit: 1.25 CME/CE
Moderator: Désirée E.S. Larenas Linnemann, MD FAAAAI

10:45 Preventing Food Allergy By Early Weaning: Remaining Questions
Gideon Lack, MD

11:05 The GAP Trial: Can Sublingual Immunotherapy Prevent the Development of Allergic Asthma?
Erkka J. Valovirta, MD PhD

11:25 Can Bacterial Vaccine Reduce Ongoing Allergic Inflammation?
Erika Von Mutius, MD MSc

11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss the more in-depth consequences and public health implications of data presented in the LEAP study; Describe trials to detect the preventive effects of allergen immunotherapy; Identify the latest data concerning stimulation of the innate immune system in allergic and asthma inflammation.

3311 Allied Health: Determining Bioequivalence of Generic Inhalers

10:45 am to 12:00 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderator: Anne E. Borgmeyer, DNP RN CPNP AE-C

10:45 Use of Methacholine Challenge to Determine Bioequivalence of Beta Agonist Inhalers
Leslie Hendelos, PharmD

11:05 Question & Answer

11:10 FDA Requirements
Gunther Hochhaus, PhD

11:30 Question & Answer

11:35 Pharmacokinetics of Inhaled Drugs
Antonina G. Evans, BSPharm AE-C

11:55 Question & Answer

Upon completion of this session, participants should be able to: Identify the differences in regulatory requirements for inhalers; Discuss the different methods of determining bioavailability of inhalers; Describe the pharmacokinetic studies of inhalers.

3312 Allied Health: Advocacy for Patients with Primary Immune Deficiency Disease (PIDD)

10:45 am to 12:00 pm
Convention Center, Level Two, Room 409AB
Credit: 1.25 CME/CE
Moderator: Stephen J. McGeady, MD FAAAAI

10:45 Advocacy for Patients with Primary Immune Deficiency Disease (PIDD): Assuming the Reins of Clinical Care
Carla M. Duff, CPNP MSN CCRP IgCN

11:05 Question & Answer

11:10 Advocacy for Patients with Primary Immune Deficiency Disease (PIDD): Advocacy for Life
William R. Brouin, MSN ARNP CPNP

11:30 Question & Answer

11:35 Strategies to Develop and Advocate Positive Relationships Between the Patient, Provider and Payer
Debbie Manning, RN BSN IgCN

11:55 Question & Answer

Upon completion of this session, participants should be able to: Discuss the approaches to use to assist PIDD patients to be a self-advocate; Discuss the techniques to support patients to manage the challenges of living with a chronic illness.
**Basic Science Poster Discussion Workshop**

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Moderators</th>
</tr>
</thead>
<tbody>
<tr>
<td>3401</td>
<td>Molecular Mediators of Mucosal Damage in the Gut and Airway</td>
<td>12:15 to 1:30 pm</td>
<td>Convention Center, Level Two, Room 403B</td>
<td>1.25 CME/CE</td>
<td>Dorothy S. Cheung, MD FAAAAI, Christina L. Nance, PhD</td>
</tr>
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</table>

**Seminars**

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3501</td>
<td>Rhinolaryngoscopy Case Presentations</td>
<td>12:30 to 1:30 pm</td>
<td>Convention Center, Level Two, Room 410</td>
<td>1.00 CME/CE</td>
<td>Mandel R. Sher, MD FAAAAI, Gary J. Stadtmauer, MD FAAAAI</td>
</tr>
</tbody>
</table>

Upon completion of this session, participants should be able to discuss typical, relevant and interesting clinical cases where rhinolaryngoscopy will be relevant for diagnosis and treatment of chronic rhinitis and rhinosinusitis.

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Time</th>
<th>Location</th>
<th>Credit</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3502</td>
<td>The Microbiome and Food Allergy</td>
<td>12:15 Poster Viewing</td>
<td>Convention Center, Level Two, Room 501A</td>
<td></td>
<td>Christina E. Ciaccio, MD MSc FAAAAI, Cathryn R. Nagler, PhD</td>
</tr>
</tbody>
</table>

Upon completion of this session, participants should be able to: Discuss the role of the microbiome in food allergy; Discuss future directions in microbiome research.
### Seminars (continued)

#### 3510 What's New in Chronic Cough?
**Convention Center, Level Two, Room 511A**
Kenneth W. Altman, MD PhD  
Karin A. Pacheco, MD MSPH FAAAAI

Upon completion of this session, participants should be able to: Discuss and apply new and updated knowledge in chronic cough; Describe updated strategies for diagnosis and management of chronic cough.

#### 3511 Novel Approaches for Smoking Cessation and Tobacco Harm Reduction: Do E-Cigarettes Have a Role?
**Convention Center, Level Two, Room 511B**  
Chitra Dinakar, MD FAAAAI  
Riccardo Polosa, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Discuss harm caused by cigarette smoking in atopic and asthmatic patients; Describe benefits of smoking cessation and tobacco harm reduction, including e-cigarettes, relative to asthma and allergic rhinitis; Discuss specific treatment options and strategies in achieving tobacco control in the smoking allergy patient.

#### 3512 Sleep Disordered Breathing (SDB) and its Relation to Allergy
**Convention Center, Level Two, Room 511C**  
Fuad M. Baroody, MD FAAAAI  
Samuel L. Friedlander, MD

Upon completion of this session, participants should be able to: Describe the clinical spectrum of sleep disordered breathing and the specific role of the allergists in its diagnosis; Discuss the possibilities of medical treatment with specific focus on intranasal corticosteroids; Describe the relation between SDB and attention behavioral disorders.

### Allied Health Seminars

**12:30 to 1:30 pm**
Pre-registration and ticket required. No fee. Sessions are limited to 30 people.  
Credit: 1.00 CME/CE

#### 3521 Allied Health: Psychosocial Assessment and Intervention with Pediatric Asthma Patients
**Convention Center, Level Two, Room 512**  
Jennifer M. Darr, MSW LCSW  
Melissa T. Korenblat-Harlin, ACSW LCSW

Upon completion of this session, participants should be able to: Discuss the importance of understanding and identifying the psychosocial dynamics in the management of asthma; Describe the importance of understanding the psychosocial assessment methodology in effectively managing asthma; Describe the needs, strategies and interventions that address the psychosocial dimension.

#### 3522 Allied Health: Ayurvedic Approaches to the Diagnosis, Understanding and Treatment of Allergy, Asthma and Immunology
**Convention Center, Level Two, Room 513**  
Denise M. Kearney, MD  
Suniti K. Saini, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss the use of complementary and alternative medicine in the treatment of atopy and immunologic diseases in the U.S.; Describe the principals of ayurvedic therapies for the treatment of immunologic diseases.

### Pro/Con Debates

#### 3551 Eosinophilic Esophagitis: A Primary Disease of the Esophageal Mucosa
**12:30 to 1:30 pm**  
**Convention Center, Level Two, Room 404AB**
Credit: 1.00 CME/CE  
Moderator: Brett V. Kettelhut, MD FAAAAI

**Pro**  
Juan Pablo Abonia, MD

**Con**  
Jonathan M. Spiegel, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Describe basic pathophysiology and therapy of EoE; Discuss whether EoE should be treated as a systemic disease or as a primary disease of the esophageal mucosa.

#### 3552 Skin Testing is Necessary Before Early Introduction of Peanut for Prevention of Peanut Allergy
**12:30 to 1:30 pm**  
**Convention Center, Level One, South Exhibit Hall G**
Credit: 1.00 CME/CE  
Moderator: Anna H. Nowak-Wegrzyn, MD FAAAAI

**This Session Requires Pre-Meeting Reading.**

**Pro**  
Hugh A. Sampson, MD FAAAAI

**Con**  
Mimi Tang, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Discuss and evaluate the evidence for a preventive effect of early food protein introduction such as peanut, egg, and milk in infants at risk; Identify the feasibility of screening with skin prick testing in infants at risk prior to peanut introduction; Describe the practical aspects of oral food challenges in infants.

#### 3553 Should Antibiotic Prophylaxis Be Routinely Used in Patients With Antibody-Mediated Primary Immunodeficiency?
**12:30 to 1:30 pm**  
**Convention Center, Level Two, Room 408B**
Credit: 1.00 CME/CE  
Moderator: Vivian P. Hernandez-Trujillo, MD FAAAAI

**Pro**  
Kenneth Paris, MD MPH

**Con**  
Mark Ballow, MD FAAAAI

Upon completion of this session, participants should be able to discuss whether and when prophylactic antibiotics are appropriate in the management of primary immunodeficiency.
Workshops

3554  Allied Health: Allergen Immunotherapy in the Hospital and Community Setting
12:30 to 1:45 pm
Convention Center, Level Two, Theatre (Room 411)
Credit: 1.25 CME/CE
Moderator: Sonia C. Mancia, BSN RN IgCN

This Session Requires Pre-Meeting Reading.

12:30 Allergen Immunotherapy in the Hospital Setting
Amanda Troger, BSN RN CPN
1:00 Allergen Immunotherapy in the Community Setting
Humaira Robinson, MS-NLM RN
1:30 Question & Answer

Upon completion of this session, participants should be able to discuss practice parameters and adapt them into practice.

3555  FIT Workshop: Interesting Cases Part 2
12:30 to 1:45 pm
Convention Center, Level Two, Room 403A
Credit 1.25 CME/CE
Moderators: Kelly D. Stone, MD PhD FAAAAI
Paul J. Dowling, MD FAAAAI

12:30 Schnitzler Syndrome
Sultan Alandijani, MD
12:45 Orofacial Granulomatosis Masquerading as “Angioedema”
Chen Hsing Lin, MD
1:00 All That is Red and Bumpy Is Not Eczema
Schweta Arakali, MD
1:15 Hemothorax Associated with Status Asthmaticus
Peter A. Ricketti, DO
1:30 Recurrent Anaphylaxis to Cat, or is It?
Jay Jin, MD PhD

Upon completion of this session, participants should be able to: Evaluate the management of challenging patient cases by trainees in allergy/immunology; Compare and contrast management strategies for challenging patient cases with peers.

Oral Abstract Sessions

3601  Asthma Diagnosis and Biomarkers
2:00 to 3:15 pm
Convention Center, Level Two, Room 502B
Credit: 1.25 CME/CE

Moderators: Avraham Beigelman, MD MSCI FAAAAI
Bradley E. Chipps, MD FAAAAI

2:00 Non Type-2 Severe Asthma Has Increased Bronchoalveolar Mast Cell Mediator Release and Health Care Utilization
Merritt L. Fajt, MD

2:15 Endotypes of Difficult-to-Control Asthma in Inner City Children Differ By Race
Kari R. Brown, MD MS

2:30 MIP-1alpha Level in Nasopharyngeal Aspirates at First Wheezing Episode Is a Predictor of Recurrent Wheezing
Kazuko Sugai, MD PhD

2:45 Allergen-Induced Increase in Group 2 Innate Lymphoid Cells in the Airways of Mild Asthmatics
Ruchong Chen, MD

3:00 PAI-1, Early Life Infections and Asthma Risk, Exacerbations, and Reduced Lung Function
Kumar Rajesh, MD MS FAAAAI

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

3602  Common Variable Immunodeficiency (CVID) From the Bench to the Bedside
2:00 to 3:15 pm
Convention Center, Level Two, Room 408A
Credit: 1.25 CME/CE

Moderators: Patricia L. Lugar, MD MS
Elena E. Perez, MD PhD FAAAAI

2:00 Body Weight and Infectious Outcomes in Patients with Primary Immunodeficiency Diseases: Outcomes from within the US Immunodeficiency Network (USIDNET).
Melanie A. Ruffner, MD PhD

2:15 Clinical Experience of CVID Enteropathy
Edith Schussler, MD

2:30 Interrogating Genetic Susceptibility Loci in CVID and Autoimmunity
Luanna Yang

2:45 Extra-Immunologic Manifestations of Common Variable Immunodeficiency in Pediatric Versus Adult Patients
Lauren A Sanchez, MD MA

3:00 Role of B Cell Activating Factor in CVID Lung Disease
Paul J. Maglione, MD PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.
3603  **Fungal and Mouse Allergens and Allergy**  
2:00 to 3:15 pm  
Convention Center, Level Two, Room 502A  
Credit: 1.25 CME/CE  
Moderators: Sachin N. Baxi, MD  
Amber U. Luong, MD PhD  

2:00  **IgE Antibodies to Fungi Among Asthmatic Children Living in Homes Damaged By Hurricane Sandy in New York City**  
Adnan Divjan, BA  

2:15  **Fungal Metagenomic Analysis of Indoor Evaporative Cooler Environments in the Great Basin Desert Region**  
Angela R. Lemons, MS  

2:30  **Internal Transcribed Spacer rRNA Gene Sequencing Analysis of Dustborne Fungi in a Water-Damaged Office Building**  
Brett J. Green, PhD FAAAAI  

2:45  **The Murine Pulmonary Proteomic Profile Associated with Allergic Aspergillus Fumigatus Exposure**  
Ajay P. Nayak, PhD  

3:00  **Measurement of Major Allergen Mus m 1 in Commercial Mouse Allergen Extracts and Mouse Urine**  
Taruna Khurana, PhD  

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

3604  **Atopic Dermatitis**  
2:00 to 3:15 pm  
Convention Center, Level Two, Room 515A  
Credit: 1.25 CME/CE  
Moderator:  Anna De Benedetto, MD  
Lynda C. Schneider, MD FAAAAI  

2:00  **Filaggrin Associated Risk for Atopic Dermatitis Is Offset By Protective Missense Variants in Rptn and LCE1B Genes in the Epidermal Differentiation Complex.**  
Rasika A. Mathias, ScD  

2:15  **The Role of Gastrin Releasing Peptide (GRP) in Atopic Dermatitis (AD) Induced By Interleukin 13 (IL-13)**  
Eun Byul Choi  

2:30  **Novel Gene Signatures Observed in the Nonlesional Skin from European American Atopic Dermatitis Subjects Who Are Colonized with Staphylococcus Aureus**  
Takeshi Yoshida, PhD  

2:45  **Staphylococcus Aureus Colonization Is Associated with Increased Peanut Allergy Sensitization in Children with Atopic Dermatitis (AD)**  
Andrea L. Jones, MD  

3:00  **Distinct Features Identified in Adult Atopic Dermatitis Subjects Based on Age of Onset**  
Peck Y. Ong, MD FAAAAI  

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

3605  **Improving Self Management with Innovative Technologies**  
2:00 to 3:15 pm  
Convention Center, Level Two, Theatre (Room 411)  
Credit: 1.25 CME/CE  
Moderators: Giselle Mosnaim, MD MS FAAAAI  
David R. Stukus, MD FAAAAI  

2:00  **Adherence Barriers and Dulera Adherence in an Asthma Adherence Management Study: Preliminary Results**  
Andrew G. Weinstein, MD FAAAAI  

2:15  **Self-Injectable Epinephrine Adherence Survey Amongst Veterans**  
Anil M. Patel, MD  

2:30  **Association Between Medication Adherence Report Scale (MARS-5) and Caregiver-Reported Inhaled Corticosteroid Use in Inner City Children with Asthma**  
Lena Truong, PharmD  

2:45  **Remote Monitoring of Patients: Two New Smartphone App SymptomSeverity Tests for Asthma and Allergic Rhinitis.**  
Steven L. Kagen, MD FAAAAI  

3:00  **On-Line Monitoring Tool for Recommended Data Collection of Angioedema Attacks in Patients with Hereditary Angioedema**  
Jaclyn Bjelac, MD  

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

3606  **Rhinosinusitis & Sleep**  
2:00 to 3:15 pm  
Convention Center, Level Two, Room 408B  
Credit: 1.25 CME/CE  
Moderators: Paloma Campo, MD PhD  
Mike Tankersley, MD FAAAAI  

2:00  **Sleep-Disordered Breathing and Upper Airway Allergy: A Survey of Allergists’ Practices**  
Dennis Shusterman, MD MPH  

2:15  **High Burden of Obstructive Sleep Apnea in Subgroups of Chronic Rhinosinusitis: Importance of Phenotyping Chronic Rhinosinusitis Patients for Stratifying Risk Factors for This Major Comorbidity**  
Jessica W. Hui, MD  

2:30  **3D Quantitation of Sinonasal Inflammation Correlates with Symptoms and Disease-Specific Quality of Life in Patients with Rhinosinusitis**  
Sooyoung Lim, BS  

2:45  **Cross-Talk Between Human Mast Cells and Epithelial Cells By IgE-Mediated Periostin Production in Eosinophilic Nasal Polyps**  
Dae Woo Kim, MD  

3:00  **Eosinophil Production of PGD2 in Aspirin-Exacerbated Respiratory Disease**  
John W. Steinke, PhD FAAAAI  

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.
Oral Abstract Sessions (continued)

3607 T Cells and Innate Lymphoid Cells
2:00 to 3:15 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderators: Becky J. Buelow, MD
Mitchell H. Grayson, MD FAAAAI
2:00 Contributions of Two Distinct T Cell Subsets (CD4+, CD8+CD60+)
to Induction of Specific Memory IgE Responses
Charles J. Kim, BS
2:15 Identification of Functional Peanut-Responsive Tregs in Peanut
Allergic Human Blood
David Chiang, MS
2:30 Ovarian Hormones Increase Alternaria Extract Induced ILC2
Activation
Dawn Newcomb, PhD
2:45 Expression of Micro RNA-155 Is Induced By Dust Mite Extract in
CD4+ T-Cells of Dust Mite Allergic Subjects and Is Inhibited By
Glucocorticoids
Elizabeth M. Bairaj
3:00 Identification of Tr1 Cells in a Pediatric Population
Jenna R. Bergerson, MD MPH

Upon completion of this session, participants should be able to discuss recent research
developments in the field of allergy/immunology.

3611 Late Breaking Oral Abstract Session: Clinical/
Translational Sciences
2:00 to 3:15 pm
Convention Center, Level One, Petree Hall D
Credit: 1.25 CMR/CE
Moderators: Steve N. Georas, MD
Daniel J. Jackson, MD
2:00 The Skin Microbiome Differs with Age in Atopic Dermatitis
Baochen Shi, PhD
2:15 Enhanced Efficacy and Confirmed Safety of a Two-Year
Epicutaneous Immunotherapy (EPT) Treatment of Peanut Allergy
with Viaskin® Peanut: The Continuation of the Vipes Phase IIb
Randomized Controlled Trial (RCT)
Hugh A. Sampson, MD FAAAAI
2:30 The Efficacy of AR101, a Peanut-Derived Pharmaceutical for Oral
Immunotherapy (OIT), Is Maintained and Tolerance Is Increased
with Low-Dose Maintenance Therapy
J. Andrew Bird, MD FAAAAI
2:45 Efficacy and Safety of the SQ-House Dust Mite Sublingual
Immunotherapy Tablet in North American Children and Adults:
Findings From a Large Randomized, Placebo-Controlled Clinical
Trial
Hendrik Nolte, MD PhD
3:00 Pathogenic Autoantibodies in Patients with Severe Asthma and
Sputum Eosinophils
Marali Mukherjee, PhD

Interest Section Forums

3701 ADT: Asthma Endotypes: What are the
Therapeutic Implications? ▼
3:30 to 4:30 pm
Convention Center, Level One, Petree Hall C
Credit: 0.50 CME/CE
Moderator: Mark F. Sands, MD FAAAAI
3:30 Business Meeting
Mark F. Sands, MD FAAAAI
4:00 Asthma Endotypes: What are the Therapeutic Implications?
Mario Castro, MD MPH
4:25 Question & Answer
Upon completion of this session, participants should be able to: Describe asthma endo-
types; Discuss therapeutic options to appropriate asthma sub-groups.

3702 BCI: Traffic Pollution Exposure and Allergic
Disease: New Insights ▼
3:30 to 4:30 pm
Convention Center, Level Two, Theatre (Room 411)
Credit: 0.50 CME/CE
Moderator: Gurjit K. Khurana Hershey, MD PhD FAAAAI
3:30 Business Meeting
Gurjit K. Khurana Hershey, MD PhD FAAAAI
4:00 Traffic Pollution Exposure and Allergic Disease: New Insights
Talal A. Chatila, MD MSc
4:25 Question & Answer
Upon completion of this session, participants should be able to: Discuss impact of traffic
pollution on allergic disease; Discuss mechanistic basis of impact of traffic pollution on
allergic disease.

3703 EORD: Importance of School Environments for
Children with Asthma ▼
3:30 to 4:30 pm
Convention Center, Level Two, Room 403A
Credit: 0.50 CME/CE
Moderator: Jeffrey G. Demain, MD FAAAAI
3:30 Business Meeting
Jeffrey G. Demain, MD FAAAAI
4:00 Importance of School Environments for Children with Asthma
Wanda Phipatanakul, MD MS FAAAAI
4:25 Question & Answer
Upon completion of this session, participants should be able to: Describe the up do date
leadership, committee activities and future directions of the EORD section; Identify the
potential impact of the school environment on the respiratory health of children.
Interest Section Forums (continued)

3704  FADDA: Novel IgE-Independent Pathways for Drug Reactions

3:30 to 4:30 pm
Convention Center, Level Two, Room 515B
Credit: 0.50 CME/CE
Moderator: Sarbjit S. Saini, MD FAAAAI

3:30 Business Meeting
Sarbjit S. Saini, MD FAAAAI

4:00 Identification of a Mast-Cell-Specific Receptor Crucial for Pseudo-Allergic Drug Reactions
Xinzhong Dong, PhD

4:25 Question & Answer
Upon completion of this session, participants should be able to discuss recent advances in the understanding of IgE independent pathways that could be linked to pseudo-allergic drug reactions or anaphylactoid reactions.

3705  HEDQ: Teleallergy: The Use of Technology to Enhance Practice and Research in Allergy/Immunology

3:30 to 4:30 pm
Convention Center, Level Two, Room 403B
Credit: 0.50 CME/CE
Moderator: Bruce G. Bender, PhD FAAAAI

3:30 Business Meeting
Bruce G. Bender, PhD FAAAAI

4:00 The Use of Technology to Enhance Practice and Research in Allergy/Immunology
Giselle Mosnaim, MD MS FAAAAI

4:25 Question & Answer
Upon completion of this session, participants should be able to: Describe the emerging technologies making their way into medicine; identify how these technologies may be used by allergists to enhance clinical care and research.

3706  IRSO: New Perspectives in Allergy: The Relationship Between IgE Polysensitization and Multimorbidity

3:30 to 4:30 pm
Convention Center, Level One, Petree Hall D
Credit: 0.50 CME/CE
Moderator: Martin Wagenmann, MD FAAAAI

3:30 Business Meeting
Martin Wagenmann, MD FAAAAI

4:00 A New Classification of Allergy: Multimorbidity and IgE Polysensitization
Jean Bousquet, MD PhD

4:25 Question & Answer
Upon completion of this session, participants should be able to: Discuss new data based on large cohorts concerning the relation between IgE sensitization and allergic phenotypes; describe the value of prospective cohorts in understanding the development of different phenotypes of allergic diseases; define the relationship between IgE sensitization patterns and their role in determining the allergic phenotype.

3707  MAAI: Mechanistic Dissection of IgG4-Related Disease

3:30 to 4:30 pm
Convention Center, Level Two, Room 409AB
Credit: 0.50 CME/CE
Moderator: Nives Zimmermann, MD FAAAAI

3:30 Business Meeting
Nives Zimmermann, MD FAAAAI

4:00 Mechanistic Dissection of IgG4-Related Disease
Shiv Pillai, MBBS PhD

4:25 Question & Answer
Upon completion of this session, participants should be able to discuss the pathophysiology of IgG4-related diseases and how they relate to allergic diseases.

Featured Poster Session and Reception

4:45 to 6:15 pm
Convention Center, Level One, Concourse Foyer

All Annual Meeting delegates and their guests are invited to attend this event. No fee and no pre-registration required.
Credit: No CME/CE

Featured Posters highlight the highest quality abstracts submitted for presentation at the Annual Meeting. During the Featured Poster Session and Reception on Sunday evening, authors will be present with their posters to discuss their research. Take this opportunity to talk with these authors and network with other meeting delegates.

3801  Featured Asthma Therapy
3802  Research Advancement in Allergy and Inflammation
3803  Hazardous Exposures in Public and Work Places
3804  Immunotherapy for Food Allergy: Mechanism and Clinical Outcome
3805  Unleashing the Power of Health Information Technology
3806  Best of IRSO
3807  Mechanisms of Allergic Inflammation
3811  Best of Allied Health
### Seminars

**6:45 to 7:45 am**

Pre-registration and ticket required. Fee: $40. Continental breakfast included. Sessions and meals are limited to 30 people. Credit: 1.00 CME/CE

<table>
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<th>Session Code</th>
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| 4001         | Practical Approach to Infants with Abnormal SCID Newborn Screening Results | JW Marriott, Diamond Ballroom Level, Salon 1 | Jennifer Heimall, MD  
Jennifer M. Puck, MD  
Upon completion of this session, participants should be able to: Discuss how to approach the identification of patients with low TREC; Discuss strategies to follow-up on abnormal newborn screenings; Discuss recommendations for treatment of abnormal newborn screenings while diagnostic testing is being performed. |
| 4002         | Review and Discussion of Fungus Health Effects | JW Marriott, Diamond Ballroom Level, Salon 2 | Sachin N. Baxi, MD  
Ginger L. Chew, ScD MSPH  
Upon completion of this session, participants should be able to: Discuss the evidence suggesting adverse health effects from fungus exposure; Discuss what is known about allergy testing to fungus; Discuss when to consider a home assessment. |
| 4003         | Improving Compliance and Retention of Patients of Varied Cultural Backgrounds | JW Marriott, Diamond Ballroom Level, Salon 3 | Adrian M. Casillas, MD FAAAAI  
Jorge A. Quel, MD FAAAAI  
Upon completion of this session, participants should be able to discuss how to improve compliance and retention of patients of various cultural origins. |
| 4004         | How to Write a Manuscript and an IRB Protocol | JW Marriott, Diamond Ballroom Level, Salon 6 | Christina E. Ciaccio, MD MSc FAAAAI  
Anne Marie Singh, MD  
Upon completion of this session, participants should be able to: Discuss the components of a comprehensive human studies protocol that can achieve approval by an institutional review board; Describe and list the steps required to write a well-structured research manuscript. |
| 4005         | A Successful Approach to Food Allergy Diagnostic Dilemmas | JW Marriott, Diamond Ballroom Level, Salon 7 | Kirsti M. Jarvinen-Sappo, MD PhD FAAAAI  
Scott H. Sicherer, MD FAAAAI  
Upon completion of this session, participants should be able to: Describe indications for peanut oral food challenge; Describe management of solid food FPIES; Identify the pitfalls of panel testing for food panels. |
| 4006         | Asthma in the Older Adult | JW Marriott, Diamond Ballroom Level, Salon 8 | Alan P. Baptist, MD MPH FAAAAI  
Paula J. Busse, MD FAAAAI  
Upon completion of this session, participants should be able to: Discuss the assessment and diagnosis of asthma in the elderly; Discuss the treatment and monitoring of asthma in the elderly. |
| 4007         | Anti-Eosinophil Biologic Therapies in Allergic Diseases | JW Marriott, Diamond Ballroom Level, Salon 9 | Steven J. Ackerman, PhD  
Sameer K. Mathur, MD PhD FAAAAI  
Upon completion of this session, participants should be able to: Describe the currently available anti-eosinophil biologic therapies; Discuss the pros and cons of the currently available anti-eosinophil biologic therapies; Discuss future approaches to targeting eosinophils. |
| 4008         | CD34+Cells: Naive but Not Innocent Players of Allergic Inflammation | JW Marriott, Diamond Ballroom Level, Salon 10 | Zoufia Aliakdverdi, PhD FAAAAI  
Patricia C. Fulkerson, MD PhD  
Upon completion of this session, participants should be able to: Discuss the role of CD34 cells in allergic inflammation; Discuss hematopoietic progenitors and their role in allergic inflammation. |
| 4009         | Optimal SCIT Prescribing Using Optimal Dosing | JW Marriott, Platinum Ballroom Level, Salon A | Richard F. Lockey, MD FAAAAI  
Harold S. Nelson, MD FAAAAI  
Upon completion of this session, participants should be able to: Describe the dose ranges for optimal dosing for SCIT; Discuss the efficacy data for optimum dose ranges; Describe prescription writing based on optimal dosing. |
| 4010         | Office-Based Clinical Teaching of Residents and Students | JW Marriott, Platinum Ballroom Level, Salon B | Mark H. Moss, MD  
Lily C. Pien, MD MHPE FAAAAI  
Upon completion of this session, participants should be able to discuss and demonstrate proficiency with two office-based techniques for providing feedback to learners: the one-minute-preceptor and SNAPPS. |
| 4011         | Work-Exacerbated Asthma | JW Marriott, Platinum Ballroom Level, Salon F | Paul K. Henneberger, ScD  
Santiago Quirce, MD PhD  
Upon completion of this session, participants should be able to discuss and apply new and updated knowledge in work-exacerbated asthma. |
### Plenary

| Session | Title                                                                 | Time       | Location                          | Credit | Moderator/Presenter
|---------|----------------------------------------------------------------------|------------|-----------------------------------|--------|---------------------
| 4101    | The Exposome: The Dynamic Role of the Environment in Shaping Risk for Disease | 8:15 to 9:45 am | Convention Center, Level One, South Exhibit Hall G | 1.50 CME/CE | Wanda Phipatanakul, MD MS FAAAAI
| 8:15    | Metabolomics of Asthma and Allergic Disease                           | 8:15       | Convention Center, Level One, South Exhibit Hall G |        | Darryl James Adamko, MD
| 8:45    | What Have We Learned from Birth Cohorts and Asthma About the Effects of Environmental Exposures on Allergic and Immunologic Diseases? | 8:45       | Convention Center, Level One, South Exhibit Hall G |        | Peter J. Gergen, MD MPH
| 9:15    | How the Exposome Influences Clinical Outcomes in Eosinophilic Esophagitis: Opportunities for Disease Modification | 9:15       | Convention Center, Level One, South Exhibit Hall G |        | Seema Sharma Aceves, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Discuss the role of metabolomics, the study of small molecules generated from cellular metabolic activity, in defining unique metabolic profiles in asthma and other chronic diseases; Discuss what current epidemiologic studies have taught us about the interaction of the environment and genetics in defining complex, chronic diseases such as asthma, cystic fibrosis, and COPD; Discuss environmental factors that influence outcomes in eosinophilic esophagitis.

### Course

| Session | Title                                                                 | Time       | Location                          | Credit | Coordinator/Presenter
|---------|----------------------------------------------------------------------|------------|-----------------------------------|--------|----------------------
| 4150    | Allied Health: Association of Asthma Educators: Becoming an Asthma Educator and Care Manager | 9:00 to 4:00 pm | Convention Center, Level Two, Room 407 | 6.00 CME/CE | Maureen George, PhD RN AE-C
| 9:00    | Becoming an Asthma Educator and Care Manager                           | 9:00       | Convention Center, Level Two, Room 407 |        | Maureen George, PhD RN AE-C
| 9:45    | Assessment and Monitoring                                             | 9:45       | Convention Center, Level Two, Room 407 |        | Dewey F. Hahlbohm, PA-C AE-C
| 10:30   | Break                                                                | 10:30      | Convention Center, Level Two, Room 407 |        | Dewey F. Hahlbohm, PA-C AE-C
| 10:45   | Controlling Environmental Factors Contributing to Asthma               | 10:45      | Convention Center, Level Two, Room 407 |        | Dewey F. Hahlbohm, PA-C AE-C
| 11:45   | Medications                                                           | 11:45      | Convention Center, Level Two, Room 407 |        | Maureen George, PhD RN AE-C
| 12:45   | Lunch on Your Own                                                     | 12:45      | Convention Center, Level Two, Room 407 |        | Dewey F. Hahlbohm, PA-C AE-C
| 1:15    | Inhalation Devices                                                    | 1:15       | Convention Center, Level Two, Room 407 |        | Maureen George, PhD RN AE-C
| 2:15    | Education for Partnership in Care                                     | 2:15       | Convention Center, Level Two, Room 407 |        | Maureen George, PhD RN AE-C
| 3:00    | Break                                                                | 3:00       | Convention Center, Level Two, Room 407 |        | Maureen George, PhD RN AE-C
| 3:15    | Case Studies/Evaluation                                               | 3:15       | Convention Center, Level Two, Room 407 |        | Maureen George, PhD RN AE-C

Upon completion of this session, participants should be able to: Describe the burden of asthma in the United States; Describe key components of asthma management from EPR-3; Identify and evaluate patients’ and caregivers’ educational needs and select management tools to optimize partnerships in care.

### Posters

| Session | Title                                                                 | Time       | Location                          | Credit | Authors
|---------|----------------------------------------------------------------------|------------|-----------------------------------|--------|----------------------
| 4201    | Asthma Diagnosis                                                     | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4202    | Asthma Therapy II: Steroids, Bronchodilators, Other Therapies        | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4203    | Primary Immunodeficiency                                             | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4204    | Replacement Therapy in the Treatment of Immune Defects               | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4205    | Eosinophilic Gastrointestinal Disorders and Food Allergy             | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4206    | Urticaria and Angioedema                                             | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4207    | New Approaches to Tracking Health Outcomes                           | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4208    | New Insights into Medication-Related Outcomes                        | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4209    | Rhinitis, Diagnosis and Therapy                                      | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4210    | Immunotherapy, Rhinoconjunctivitis                                    | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4211    | T Cells and Allergens                                                | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.
| 4212    | Microbiome, Immunogenetics, Molecular Biology                        | 7:00 am to 6:00 pm | Convention Center, Level One, South Exhibit Hall H |        | 80 – 169 for abstracts and pages 203 – 225 for authors.

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**Symposia**

**4301 Novel Endotypes of Asthma: Lessons from the AADCRC**

10:45 am to 12:00 pm  
Convention Center, Level One, Petree Hall C  
Moderator: John V. Fahy, MD  
*This Session Will Use Audience Response System Technology.*

10:45 Aspirin-Exacerbated Respiratory Disease  
Tanya M. Laidlaw, MD FAAAAI

11:05 Question & Answer

11:10 Pollution-Induced Asthma  
Eric B. Brandt, PhD FAAAAI

11:30 Question & Answer

11:35 Allergic “Th2 High” Asthma  
Prescott Woodruff, MD MPH

11:55 Question & Answer

Upon completion of this session, participants should be able to: Describe Th2 High asthma phenotype and treatment; Describe presentation and management of AERD; Discuss the role of pollution in asthma pathogenesis, from mechanism to management.

**4302 Environmental and Lifestyle Influences on Childhood Asthma**

10:45 am to 12:00 pm  
Convention Center, Level One, Petree Hall D  
Moderator: Gang Dong, MD PhD

10:45 Preschool Exposures That Influence the Development of Asthma  
Leonard B. Bacharier, MD FAAAAI

11:05 Question & Answer

11:10 Immunologic Correlates of Multiple Early Sensitization Progressing to Childhood Asthma  
Matthew C. Altman, MD

11:30 Question & Answer

11:35 Microbiome Effects on Frequency of Viral Infection and Virus-Induced Exacerbations of Asthma  
Daniel J. Jackson, MD

11:55 Question & Answer

Upon completion of this session, participants should be able to: List the factors contributing to asthma development in pre-schoolers; Describe the immunologic basis for early life sensitization which increases asthma risk; Describe microbe-virus interrelationships in asthma and strategies for asthma prevention in childhood.

**4303 State-of-the-Art: Update from the AADCRC Food Allergy Research Centers**

10:45 am to 12:00 pm  
Convention Center, Level Two, Room 404AB  
Credit: 1.25 CME/CE  
Moderator: Brian P. Vickery, MD FAAAAI

10:45 Mechanistic Studies in T Cells During Food Allergen Immunotherapy  
Kari C. Nadeau, MD PhD FAAAAI

11:05 Question & Answer

11:10 Microengaving-Based Profiling of Human Food Allergic Immune Processes  
Erik R. Wambre, PhD MBE

11:30 Question & Answer

11:35 Surrogates of Persistent Tolerance Among the T and B Lymphocyte Antigen-Specific Responses During Peanut Oral Immunotherapy  
Wayne Shreffler, MD PhD

11:55 Question & Answer

Upon completion of this session, participants should be able to: Describe the T Cell responses during food immunotherapy; Describe the approaches to profiling food allergic processes; Describe the B and T lymphocyte surrogates of tolerance.

**4304 Phospholipases A2 and Lipid Mediators in the Pathogenesis of Asthma**

10:45 am to 12:00 pm  
Convention Center, Level Two, Room 406AB  
Credit: 1.25 CME/CE  
Moderator: Joshua A. Boyce, MD FAAAAI

10:45 Role of Group X sPLA2 and Epithelial Cells in Asthma  
Teal S. Hallstrand, MD MPH

11:05 Question & Answer

11:10 Role of Group V sPLA2 and Macrophages in Asthma  
Barbara Balestrieri, MD

11:30 Question & Answer

11:35 Influence of Human Genetic Variation on the Biosynthesis, Metabolism and Impact of Arachidonic Acid in Inflammatory Processes  
Floyd H. Chilton, PhD

11:55 Question & Answer

Upon completion of this session, participants should be able to: Describe how lipids are major mediators of asthma; Discuss the role of phospholipases A2 enzymes for the generation of lipids; Describe the role of innate immune cells that produce these enzymes and initiate asthma pathogenesis in humans.
Monday Scientific Program

Symposia (continued)

4305 Immunologic Insights into Environmental Triggers of Asthma

10:45 am to 12:00 pm
Convention Center, Level Two, Room 408A
Credit: 1.25 CME/CE
Moderator: John W. Steinke, PhD FAAAAI

10:45 How Do Rhinovirus Infections Cause Asthma Exacerbations?
James E. Gern, MD FAAAAI

11:05 Mold Exposure and Asthma: A New IgE-Independent Mechanistic Link
Gurjit K. Khurana Hershey, MD PhD FAAAAI

11:25 Controlled Human Exposures Unravel the Association Between Air Pollution Exposures and Asthma
Chris Carlsten, MD MPH

11:45 Question & Answer

Upon completion of this session, participants should be able to: Identify how environmental triggers of asthma can promote frequent exacerbation phenotypes; Discuss new immunologic mechanisms by which common environmental triggers promote asthma; Discuss how environmental allergens can act as immunomodulators independent of their antigenicity.

4306 Allergen Immunotherapy: From Mechanisms to Biomarkers

10:45 am to 12:00 pm
Convention Center, Level Two, Room 408B
Credit: 1.25 CME/CE
Moderator: Stephen R. Durham, MA MD FRCP

10:45 Mechanisms of Allergen Specific Immunotherapy: What’s New?
Mohamed H. Shamji, PhD FAAAAI

11:05 Question & Answer

11:10 Novel Biomarkers for Monitoring AIT
William W. Kwok, PhD

11:30 Question & Answer

11:35 Use of Molecular Allergology to Monitor AIT: Are We There Yet?
Rudolf Valenta, MD

11:55 Question & Answer

Upon completion of this session, participants should be able to: Describe novel local and systemic responses following allergen immunotherapy; Discuss how Th2A cells can be used to monitor tolerance induction during allergen immunotherapy; Discuss how molecular allergology can be utilized to select patients and monitor the effects of allergen immunotherapy.

4307 Surviving and Optimizing ICD-10

10:45 am to 12:00 pm
Convention Center, Level Two, Room 502A
Credit: 1.25 CME/CE
Moderator: Melinda M. Rathkopf, MD FAAAAI

10:45 Overview and Impact of ICD-10 Since Going Live: Common Problems
Teresa Thompson, CPC CMSCS CCC

11:05 Question & Answer

11:10 Strategies for ICD-10 Simplification and Optimization
A. Sean McKnight, MD FAAAAI

11:30 Question & Answer

11:35 Panel Discussion: ICD-10 Cases: How to Code the Difficult Cases
Teresa Thompson, CPC CMSCS CCC

Upon completion of this session, participants should be able to: Discuss the update on ICD-10 and its impact since the October 2015 go live date; Discuss common problems and identify strategies to optimize ICD-10 in clinical practice; Discuss difficult coding cases from attendees’ own clinical practices.

4308 The Spectrum of Angioedema: Bench to Bedside

10:45 am to 12:00 pm
Convention Center, Level Two, Room 502B
Credit: 1.25 CME/CE
Moderator: Paula J. Busse, MD FAAAAI

10:45 Pathophysiology of Angioedema: Role of Histamine, Leukotrienes and Bradykinin
Bruce L. Zuraw, MD

11:05 Question & Answer

11:10 Bradykinin-Induced Angioedema (ACE-I, HAE, AAE): Evaluation and Management
Aleena Banerji, MD

11:30 Question & Answer

11:35 NSAIDs-Induced Angioedema: Pathophysiology, Evaluation and Management
Rebecca Saff, MD PhD

11:55 Question & Answer

Upon completion of this session, participants should be able to: Discuss the mechanisms of angioedema in nonhistaminergic angioedema including mediators such as histamine, leukotrienes and bradykinin; Discuss the mechanism of angioedema with NSAIDs.
### Oral Abstract Sessions

#### 4601 Asthma Immunology and Inflammation
2:00 to 3:15 pm  
**Convention Center, Level Two, Room 502B**  
Credit: 1.25 CME/CE  
Moderators: Maleewan Kitcharoensakkul, MD  
Sameer K. Mathur, MD PhD FAAAAI

2:00 **Th17/Treg Disregulation in Allergic Asthmatic Children Is Associated with Elevated Notch Expression**  
W. X. Zhang, MD PhD

2:15 **The Effect of Age on Airway Inflammation in Older Versus Younger Patients with Asthma**  
Janette Birmingham, MS

2:30 **Eosinophilia-Associated Coronary Artery Vasospasm in Patients with Aspirin-Exacerbated Respiratory Disease**  
Neelam H. Shah, MD

2:45 **Airway but Not Blood Type 2 Innate Lymphoid Cells (ILC2s) from Asthmatic Patients Are Steroid-Resistant, Which Is Induced By IL7R-Alpha Ligands**  
Rafeul Alam, MD PhD FAAAAI

3:00 **Mast Cell-Derived PAI-1 Promotes Airway Inflammation and Remodeling in a Murine Model of Asthma**  
Ara Jo

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

#### 4602 Severe Combined Immunodeficiency (SCID)
2:00 to 3:15 pm  
**Convention Center, Level Two, Room 408A**  
Credit: 1.25 CME/CE  
Moderators: Francisco A. Bonilla, MD PhD FAAAAI  
Michael Keller, MD

2:00 **Using EMR Data Collections to Outline SCID Clinical Phenotypes**  
Shradha Agarwal, MD FAAAAI

2:15 **Predicting Optimal Timing of Halting IVIG Therapy after HSCT for SCID**  
Sarah E. Hennickson, MD PhD

2:30 **Use of Rabies Virus Vaccine As a Neoantigen to Evaluate Humoral Immune Function in Patients with Primary Immunodeficiency Disorders Receiving Immunoglobulin Replacement Therapy**  
Suvanee Charoenlap, MD

2:45 **Outcomes for Umbilical Cord Blood Transplantation in Severe Combined Immunodeficiency Disorders: Ten-Year Experience**  
Carrie N. Caruthers, MD

3:00 **Newborn Screening for Severe Combined Immune Deficiency with T Cell Receptor Excision Circle Assay in Mississippi 2012 – 2014**  
Anne B. Yates, MD FAAAAI

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

#### 4603 EORD Potpourri
2:00 to 3:15 pm  
**Convention Center, Level Two, Room 502A**  
Credit: 1.25 CME/CE  
Moderator: William J. Sheehan, MD

2:00 **Eosinophil Mediators in Nasal Washes Obtained during Experimental Infections with Rhinovirus-16 in Subjects with and without Asthma**  
Evan Rajadhyaksha, BS

2:15 **Tracking and Characterizing Human B-Cell Responses in Rhinovirus Infection**  
Jacob D. Eccles

2:30 **Induction of Airway BAFF during Upper Respiratory Infections in Patients with Asthma**  
Sergio E. Chiarella, MD

2:45 **Increasing Cupressaceae Pollen: A Growing Threat**  
Estelle Levetin, PhD FAAAAI

3:00 **Rapid Quantification of Juniperus Pollen Proves Overlapping Pollen Seasons**  
Rashmi Prava Mohanty

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

#### 4604 Eosinophilic Esophagitis: Pathophysiology and Genetic Susceptibility
2:00 to 3:15 pm  
**Convention Center, Level Two, Room 408B**  
Credit: 1.25 CME/CE  
Moderators: Mima Chehade, MD MPH  
Antonella Cianferoni, MD PhD FAAAAI

2:00 **11q13 Is an Allergic Risk-Locus That Increases Eoe Risk and Increases LRRC32 Expression**  
Leah C. Kottyan, PhD

2:15 **Group 2 Innate Lymphoid Cells and IL-9 Receptor Are Increased in Active Eosinophilic Esophagitis**  
Ashmi Doshi, MD

2:30 **Eosinophil-Related Gene Expression in Children with Eosinophilic Gastrointestinal Disorders (EGIDe)**  
Tetsuo Shoda, MD PhD

2:45 **Loss of SPINK7 in Esophageal Epithelial Cells Unleashes a Pro-Inflammatory Response Characterized By Excessive Cytokine Production and Loss of Barrier Function**  
Nurit Pereg Azouz

3:00 **Eosinophilic Esophagitis Is a Trait of Netherton Syndrome**  
Nathalia Bellon, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.
Monday Scientific Program

Oral Abstract Sessions (continued)

4605  Best of FADDA
2:00 to 3:15 pm
Convention Center, Level Two, Room 515A
Credit: 1.25 CME/CE
Moderators: Emily C. McGowan, MD
Sarbjit S. Saini, MD FAAAAI

2:00  D-Dimer Levels May Identify Chronic Urticaria Patients Who Would More Likely Fail H2 Blockers or Omalizumab
Tho Q. Truong, MD

2:15  Sonographic Assessment of Optimal Needle Length for Epinephrine Autoinjectors in Infants and Toddlers
Harold L. Kim, MD

2:30  Constitutive KIT Activity and IL-6 Production in Mast Cells Alters Levels of Reactive Oxygen Species (ROS) and the Scavenger Protein DJ-1 in Mastocytosis
Dokyun Kim, PhD

2:45  IgE-Mediated Atopic Dermatitis-like Skin Inflammation Is Downregulated By the Application of Allergen-Specific Monoclonal Antibody IgG1 Fab Fragments to the Skin
Shin Yoshino

3:00  Ibuprofen and Other Arylpropionic Acid Derivatives Can be Responsible for Immediate Selective Responses to Nsaids.
Diana Perez-Alzate, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

4606  Creating Quality Health Care
2:00 to 3:15 pm
Convention Center, Level Two, Room 406AB
Credit: 1.25 CME/CE
Moderators: Andrea J. Apter, MD MA MSc FAAAAI
Paige G. Wickner, MD MPH FAAAAI

2:00  Anaphylaxis Preparedness Initiative for Allergen Immunotherapy – Implementation of a Policy for Carrying Autoinjectable Epinephrine
Ahila Subramanian, MD MPH

2:15  Underutilization of Penicillin Skin Testing: A Call for Verifying Penicillin Allergy and Antibiotic Stewardship
 Roxanne C. Oriel, MD

2:30  Health-Related Quality of Life Is Impaired in Families with Wheat Allergy Vs. Grass Allergy
Nora Borres

2:45  Impairment of Autophagy in Pulmonary CD11c+ Cells Induces Corticosteroid-Unresponsive Airway Hyperreactivity
Hadi Maazi, PhD

3:00  Socioeconomic Disparities in the Economic Impact of Childhood Food Allergy
Lucy A. Blaiver, PhD

3:00  Allergy Misconceptions Among Attending Physicians, Resident Physicians and Mid-Level Providers
Kaitlyn M. Jackson

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

4607  Rhinosinusitis, Local IgE
2:00 to 3:15 pm
Convention Center, Level Two, Theatre (Room 411)
Credit: 1.25 CME/CE
Moderators: Kathryn E. Hulse, PhD
Anjeni Keswani, MD

2:00  Unified Airway Theory: Association of Bronchiectasis and Chronic Rhinosinusitis
Sumit Bose, MD

2:15  A Novel Method of Measuring Nasal Specific IgE in Systemic and Local Allergic Rhinitis Patients
Paloma Campo, MD PhD

2:30  Chronic Rhinosinusitis Patients with Gastroesophageal Reflux Disease Have Significantly Higher Prevalence of Atopic Conditions
Erica L. Palmisano, MD

2:45  Proton Pump Inhibitors (PPIs) May Modulate More Than Just Reflux in Chronic Rhinosinusitis with Nasal Polyps
Jin Young Min, MD PhD

3:00  Heterogenous Inflammation in Chronic Rhinosinusitis without Nasal Polyps
Atsushi Kato, PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

4611  Late Breaking Oral Abstract Session: Basic Science
2:00 to 3:15 pm
Convention Center, Level Two, Room 403A
Credit: 1.25 CMR/CE
Moderators: Mitchell H. Grayson, MD FAAAAI
R. Stokes Peebles, Jr., MD FAAAAI

2:00  The Leukotriene E4 Receptor, GPR99 Mediates Mast Cell-Dependent Mucosal Responses to the Mold Allergen, Alternaria Alternata
Lora G. Bankova, MD

2:15  Human Airway Epithelial Cells Express Functional IL-5 Receptors
Karina T. Barretto

2:30  Impairment of Autophagy in Pulmonary CD11c+ Cells Induces Corticosteroid-Unresponsive Airway Hyperreactivity
Hadi Maazi, PhD

2:45  Ara h 1 Peptide Immunotherapy Protects Against Peanut-Induced Anaphylaxis in a Dose-Dependent Manner
Elizabeth Simms, MSc

3:00  Identification of Tr1 Cells and Other CD4+ T Cell Subsets in Humans Using Mass Cytometry: A Tool for Understanding Asthma
Mary Prunicki, PhD MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.
Monday Scientific Program

Seminars

3:30 to 4:30 pm
Pre-registration and ticket required. Fee: $40. Refreshments included. Sessions and refreshments are limited to 30 people.
Credit: 1.00 CME/CE

4701 There’s an App for That: iPhone/IPad, Android and Web Tools for Clinical Practice
Convention Center, Level Two, Room 410
Tao T. Le, MD MHS FAAAAI
Melinda M. Rathkopf, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss how to select mobile technology applications to enhance practice; Discuss how to use mobile technology applications to improve practice efficiency; Discuss how to use mobile technology applications for communication with patients and colleagues.

4702 Oral Immunotherapy for Food Allergy
Convention Center, Level Two, Room 501A
Jacqueline A. Pongracic, MD FAAAAI
Anne Marie Singh, MD

Upon completion of this session, participants should be able to: Discuss and compare published evidence regarding food OIT; Discuss and appraise safety of food OIT; Discuss and compare desensitization and tolerance.

4703 So the Patient Has Eosinophilia: What Next?
Convention Center, Level Two, Room 501B
Gerald J. Gleich, MD FAAAAI
Amy D. Klion, MD

Upon completion of this session, participants should be able to: Identify the causes of eosinophilia and the definitions of hyperesinophilic syndrome (HES); Discuss the varied therapy of eosinophilia based on the underlying disorder.

4704 State-of-the-Art: Understanding the Genetics of CVID: Bench to Bedside
Convention Center, Level Two, Room 501C
Michael Keller, MD
John Steasman, MD

Upon completion of this session, participants should be able to: Discuss the current field of next generation sequencing and utility of this technology in the study of complex medical disorders including CVID; Describe the current understanding of the genetics of CVID, including newly discovered genes; Define the relationship between CVID genetics and patient prognosis and medical decision making; Discuss how understanding the genetics of CVID affects family planning, testing of minor children and genetic counseling.

4705 Evaluation and Management of the Difficult-to-Treat Rhinitis Patient
Convention Center, Level Two, Room 504
Jonathan A. Bernstein, MD FAAAAI
Mark S. Dykewicz, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss the consensus definitions of chronic rhinitis subtypes; Describe clinical tools readily available that will improve diagnosis of chronic rhinitis subtypes; Identify how improved diagnosis can lead to improved treatment outcomes of patients with chronic rhinitis.

4706 Mastocytosis Mimics: Cutting Through the Clutter
Convention Center, Level Two, Room 505
Joseph H. Butterfield, MD FAAAAI
Todd M. Wilson, DO FAAAAI

Upon completion of this session, participants should be able to discuss mastocytosis mimic and approaches to distinguish related disorders.

4707 Approaching the Pediatric Patient with Recurrent Infections
Convention Center, Level Two, Room 506
Kenneth Paris, MD MPH
Richard L. Wasserman, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Discuss the differential diagnosis of recurrent infections in children; Discuss how to initiate the appropriate evaluation of patients with recurrent infections based on their histories; Appreciate the variety of treatment modalities that are used in patients with recurrent infections.

4708 Dysregulation Coagulation System in Airway Inflammation and Remodelling
Convention Center, Level Two, Room 507
David B. Corry, MD
Robert P. Schleimer, PhD FAAAAI

Upon completion of this session, participants should be able to describe the pathophysiology of the coagulation system and its role in airway inflammation.

4709 Bacterial Influence on Asthma
Convention Center, Level Two, Room 510
Yvonne Huang, MD
Kirsten Koepper, MD MS

Upon completion of this session, participants should be able to: Identify bacteria linked to asthma development; Identify how bacteria alter the immune system; Identify methods to prevent and/or treat bacterial changes associated with asthma.

4710 Mouse Models of Asthma, Food Allergy and Skin Disease
Convention Center, Level Two, Room 511A
Paul Bryce, PhD
James J. Lee, PhD

Upon completion of this session, participants should be able to: Discuss examples of mouse models for study of food allergy and allergic skin diseases; Discuss the strengths and weaknesses of the major mouse models of allergic diseases of the airways, GI tract and skin.

Pro/Con Debate

4752 Rhinitis Guidelines Around the Globe: The Differences in the U.S. Practice Parameters on Rhinitis Translate into Better Clinical Applicability Than the ARIA 2015 and Integrated Care Pathways

3:30 to 4:30 pm
Convention Center, Level Two, Room 408B
Credit: 1.00 CME/CE
Moderator: Daniel L. Hamilos, MD FAAAAI
This Session Requires Pre-Meeting Reading.

Pro
Dana V. Wallace, MD FAAAAI

Con
Jean Bousquet, MD FAAAAI

3:30 Question & Answer

Upon completion of this session, participants should be able to: Discuss, compare and contrast U.S. practice parameters on rhinitis with guidelines from around the globe; Discuss the ARIA 2015 report as compared to the Integrated Care Pathways approach and determine which is best for patient care; Discuss and evaluate the EPOS and U.S. rhinitis guidelines to determine how their convergence could enhance patient care.
Monday, March 7

**Basic**

**Clinical**

**Translational**

2016 Theme

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**Workshops**

**4801 Update from the U.S. Food and Drug Administration (FDA)**

*4:45 to 6:00 pm*  
Convention Center, Level Two, Room 403A  
Credit: 1.25 CME/CE  
Moderator: Jay E. Slater, MD

**Year-in-Review: An Update from the U.S. Food and Drug Administration**

Badrul A. Chowdhury, MD PhD FAAAAI

**Question & Answer**

**Development of New Treatments in Severe Asthma**

Sofia Chaudhry, MD

**Question & Answer**

**Perioperative Drug Allergy**

Erika Torjusen, MD

**Question & Answer**

Upon completion of this session, participants should be able to: Identify recent issues of scientific importance at the FDA and their clinical implications; Discuss and recognize new data regarding potential treatment options in severe asthma; Discuss issues regarding perioperative drug allergy and its clinical implications.

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**4802 Advocacy: A Success Story**

*4:45 to 6:00 pm*  
Convention Center, Level Two, Room 403B  
Credit: 1.25 CME/CE  
Moderator: Theodore M. Freeman, MD FAAAAI

**Unassigned Epinephrine: The Federal Effort**

Lynn Morrison

**Legislation in Florida**

Miguel J. Lanz, MD FAAAAI

**Legislation in Texas**

Wesley W. Stafford, MD FAAAAI

**How to Advocate**

Emily Graham, RHIA CCS-P

**Question & Answer**

Upon completion of this session, participants should be able to: Discuss and outline the useful tactics for advocacy; Discuss and critique advocacy efforts.

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**4803 New Biological Therapies on the Horizon for Severe Allergic Diseases of the Airways and Skin**

*4:45 to 6:00 pm*  
Convention Center, Level Two, Room 404AB  
Credit: 1.00 CME/CE  
Moderators: David D. Chaplin, MD PhD FAAAAI  
Robert P. Schleimer, PhD FAAAAI

**Prospects for New Biological Therapies for Severe Asthma**

Mark C. Liu, MD FAAAAI

**Question & Answer**

**New Biological Therapies on the Horizon for Allergic Skin Diseases**

Mark Boguniewicz, MD FAAAAI

**Question & Answer**

Upon completion of this session, participants should be able to: Describe new pathways that are being targeted using biological therapies in allergic airway diseases; Discuss the rationale for novel biologic therapies targeting allergic diseases of the skin.
### Monday Scientific Program

<table>
<thead>
<tr>
<th>Workshops (continued)</th>
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<tbody>
<tr>
<td><strong>4806</strong> Clinical Quality Measures for Allergy/Immunology</td>
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<tr>
<td>4:45 to 6:00 pm</td>
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<tr>
<td>Convention Center, Level Two, Room 408B</td>
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<td>Credit: 1.25 CME/CE</td>
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<tr>
<td>Moderator: Kaiser G. Lim, MD FAAAAI</td>
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<tr>
<td>4:45 The Affordable Care Act: Changing from Volume-Based to Value-Based Reimbursement</td>
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<tr>
<td>John Oppenheimer, MD FAAAAI</td>
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<tr>
<td>5:00 Question &amp; Answer</td>
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<tr>
<td>5:10 Process Measures, Outcomes Measures and Evidence Based Guidelines</td>
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<tr>
<td>David M. Lang, MD FAAAAI</td>
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<tr>
<td>5:25 Question &amp; Answer</td>
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<tr>
<td>5:35 The AAAAI Qualified Clinical Data Registry</td>
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<tr>
<td>Linda Cox, MD FAAAAI</td>
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<tr>
<td>5:50 Question &amp; Answer</td>
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</tbody>
</table>

Upon completion of this session, participants should be able to: Discuss how the Affordable Care Act will impact clinical practice reimbursement; Discuss how process measures, outcomes measures and evidence-based guidelines implementation will impact clinical practice; Discuss how the AAAAI Qualified Clinical Data Registry may benefit your clinical practice.

| **4807** T Cell Plasticity and Functional Impact on Allergic Diseases |
| 4:45 to 6:00 pm |
| Convention Center, Level Two, Room 409AB |
| Credit: 1.25 CME/CE |
| Moderator: Larry Borish, MD FAAAAI |
| 4:45 Regulatory Affairs of GATA3 |
| Elizabeth Wohlfert, PhD |
| 5:00 Question & Answer |
| 5:10 T Cell Lineage Commitment and Specification |
| Kiyoshi Hirahara, MD PhD |
| 5:25 Question & Answer |
| 5:35 Th2 Lineage Heterogeneity |
| Calman Prussin, MD FAAAAI |
| 5:50 Question & Answer |

Upon completion of this session, participants should be able to: Discuss the role of GATA3 in regulatory T Cell function and its role in therapeutics; Describe the commitment of CD4 T Cells to specific lineages; Describe the heterogeneity and inter-convertibility of T Cell lineages.

| **4808** Autologous Correction of Primary Immunodeficiency Diseases |
| 4:45 to 6:00 pm |
| Convention Center, Level Two, Theatre (Room 411) |
| Credit: 1.25 CME/CE |
| Moderator: Troy R. Torgerson, MD PhD |
| 4:45 Update on Gene Therapy |
| Harry L. Malech, MD |
| 5:00 Question & Answer |
| 5:10 Potential Applications for Induced-Pluripotent Stem Cells |
| Katja G. Weinacht, MD PhD |
| 5:25 Question & Answer |
| 5:35 Novel Tools for Gene Editing |
| Caroline Y. Kuo, MD |
| 5:50 Question & Answer |

Upon completion of this session, participants should be able to: Discuss current progress in gene therapy trials for primary immunodeficiency diseases; Discuss potential uses of induced pluripotent stem cells for both diagnosis and treatment of primary immunodeficiency diseases; Describe the Cas9/CRISPR system and potential methods for site-specific correction of genetic defects in autologous cells.

| **4809** Indoor Air Pollution: New Risks and Health Effects |
| 4:45 to 6:00 pm |
| Convention Center, Level Two, Room 502A |
| Credit: 1.25 CME/CE |
| Moderators: Kent Pinkerton, PhD |
| Mark R. Windt, MD |
| 4:45 Environmental and Biological Impact of Nanoparticles and Manufacturing |
| Kent Pinkerton, PhD |
| 5:00 Question & Answer |
| 5:10 Indoor Air Pollution in the Developing World |
| William J. Martin II, MD |
| 5:25 Question & Answer |
| 5:35 Respiratory Health Risks of Indoor Dampness |
| Mark J. Mendell, PhD |
| 5:50 Question & Answer |

Upon completion of this session, participants should be able to: Discuss the current worldwide trends and impacts of pollution; Discuss the association between damp buildings and respiratory disease; Discuss and list possible new health effects from nanotechnology and manufacturing.
Monday Scientific Program

Workshops (continued)

<table>
<thead>
<tr>
<th>Workshops</th>
<th>Sensitization to Food Allergens: Role of the Adaptive and Innate Immune System</th>
<th>Viral Infection and Innate Immune Modulation: Implications for Allergy and Asthma</th>
</tr>
</thead>
</table>
| 4810      | 4:45 to 6:00 pm  
Convention Center, Level Two, Room 502B  
Credit: 1.25 CME/CE  
Moderator: Jonathan M. Spergel, MD PhD FAAAAI | 4:45 to 6:00 pm  
Convention Center, Level Two, Room 515A  
Credit: 1.25 CME/CE  
Moderator: Mitchell H. Grayson, MD FAAAAI |
| 4:45      | T Cell Response to Food Allergens: A Fine Balance Between Tolerance and Allergy | 4:45 Viral Alteration of the Innate Immune System |
|           | Cecilia Berin, PhD | Michael Teng, PhD |
| 5:00      | Question & Answer  
5:10 Sensitization Through the Skin: Relevance to Disease Pathogenesis | 5:00 Question & Answer  
5:10 Host Factor Variability in Response to Viral Infection |
|           | Sara Brown, MBChB MD | Allan Brasier, MD |
| 5:25      | Question & Answer  
5:35 Innate Immune Cells and Sensitization to Specific Allergen: Lessons Learned From Eosinophilic Esophagitis | 5:25 Question & Answer  
5:35 Innate Immune Dysfunction and the Development of Antiviral Adaptive Immunity |
|           | Antonella Cianferoni, MD PhD FAAAAI | R. Stokes Peebles, Jr., MD FAAAAI |
| 5:50      | Question & Answer | 5:50 Question & Answer |
|           | Upon completion of this session, participants should be able to: Describe the role of T Cells in specific allergen sensitization and tolerance; Describe how skin and epithelium may favor sensitization to major allergens; Describe the role of innate immune cells (NKT cells, basophils) in specific food allergy development. | 

4811 Siglecs in Immunity And Inflammation

<table>
<thead>
<tr>
<th>Workshops</th>
<th>Viral Infection and Innate Immune Modulation: Implications for Allergy and Asthma</th>
</tr>
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</table>
| 4812      | 4:45 to 6:00 pm  
Convention Center, Level Two, Room 515A  
Credit: 1.25 CME/CE  
Moderator: Mitchell H. Grayson, MD FAAAAI |
| 4:45      | Viral Alteration of the Innate Immune System |
| 4:45      | Michael Teng, PhD |
| 5:00      | Question & Answer  
5:10 Host Factor Variability in Response to Viral Infection |
| 5:25      | Question & Answer  
5:35 Innate Immune Dysfunction and the Development of Antiviral Adaptive Immunity |
| 5:50      | Question & Answer |
| 5:50      | Upon completion of this session, participants should be able to: Discuss how viruses can alter innate immune responses; Describe the differences in innate immune responses between individuals and their effects on antiviral responses; Discuss how alterations of innate immunity affect the development of antiviral adaptive immune responses. |

4813 How to Present Like a Pro and Make It Look Easy: Engaging the 21st Century Audience

<table>
<thead>
<tr>
<th>Workshops</th>
<th>Viral Infection and Innate Immune Modulation: Implications for Allergy and Asthma</th>
</tr>
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</table>
| 4814      | 4:45 to 6:00 pm  
Convention Center, Level Two, Room 515B  
Credit: 1.25 CME/CE  
Moderator: Mary Beth Fasano, MD FAAAAI |
| 4:45      | How to Structure an Engaging Presentation Using Adult Learning Principles |
| 4:45      | Asrani M. Chiu, MD FAAAAI |
| 5:00      | Question & Answer  
5:10 Presenting Your Graphic Data Effectively for Scientific Presentations |
| 5:25      | Question & Answer  
5:35 Beyond PowerPoint: When Other Tools Can Tell the Story |
| 5:50      | Question & Answer |
| 5:50      | Upon completion of this session, participants should be able to: Discuss how to structure an engaging presentation using adult learning principles; Discuss how to present your graphic data effectively for scientific presentations; Describe how to use tools other than PowerPoint to deliver effective presentations. |
**Workshops (continued)**

**4814  Pulmonary Function Testing (PFT)**

- **4:45 to 6:00 pm**
  - Convention Center, Level Two, Room 518
  - Pre-registration and ticket required.
  - Credit: 1.25 CME/CE
  - Moderator: Mark F. Sands, MD FAAAAI
  - Instructor
    - Donald W. Cockcroft, MD FAAAAI

**4:45 Small Group Discussion**

- **Instructors**
  - Riccardo Polosa, MD PhD FAAAAI
  - Mark F. Sands, MD FAAAAI
  - Donald P. Tashkin, MD
  - John M. Weiler, MD FAAAAI
  - Eric Kleerup, MD FAAAAI

Upon completion of this session, participants should be able to: Describe PFT manifestations of obstructive and restrictive lung disease; Recognize obstructive and restrictive lung disease patterns on the flow volume loop; Recognize variable and fixed obstructive patterns including vocal cord dysfunction and describe technically acceptable PFTs; Recognize fixed vs. reversible obstruction; Differentiate parenchymal from extrinsic restrictive defects.

**4815  Update on Asthma Treatment: Evidence-Based Recommendations for 2016**

- **4:45 to 6:00 pm**
  - Convention Center, Level One, Concourse Hall, Room 152
  - Credit: 1.25 CME/CE
  - Moderator: Steve N. Georas, MD

**4:45 Panel Discussion**

- **Instructors**
  - Matthew A. Rank, MD FAAAAI
  - Sally M. Seymour, MD
  - Stanley J. Szefler, MD FAAAAI

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: Describe current controversies about the use of LABA in asthma, including FDA guidelines about step-down therapy, and describe post-marketing studies currently being conducted to examine LABA safety by comparing LABA/ICS combination inhalers with ICS alone; Discuss and examine the clinical evidence behind use of LAMA in asthma and evidence-based criteria guiding patient selection; Discuss the basis for and practical approaches to step-down therapy once asthma control has been achieved.

**4816  New Approaches to Induce Tolerance and Modify the Natural History of Allergic Diseases**

- **4:45 to 6:00 pm**
  - Convention Center, Level One, Petree Hall C
  - Credit: 1.25 CME/CE
  - Moderator: Paul Bryce, PhD

**4:45 Immunological Routes We Can Influence to Enhance Tolerance**

- **Mubeccel Akdis, MD PhD**

**5:00 Question & Answer**

**5:10  Epicutaneous Immunotherapy: Could This be the Food Allergy Treatment for the Future?**

- **A. Wesley Burks, MD FAAAAI**

**5:25 Question & Answer**

**5:35  B and T Cell Epitope Peptides: Ultra-Short AIT Schedules Can be Effective**

- **Rudolf Valenta, MD**

**5:50 Question & Answer**

Upon completion of this session, participants should be able to: Identify new studies into alternatives to SCIT and SLIT and analyze trial results; Investigate the immunological bases for allergy and determine how to influence them from very early inception onward; Develop new methods of administration, including epicutaneous immunotherapy.
Scientific Abstract Sessions

Cellular Effectors of Allergy and Disturbed Immunity

Basic Science Workgroup

1351

Friday, March 4th, 2016, 12:30 PM - 1:45 PM

1 Group 2 Innate Lymphoid Cells Directly Induce B Cell Activation in Humans
Richard Kasjanski, MS1, Atsushi Kato, PhD4, Julie A Poposki, MS1, Bruce S. Bochner, MD, FAFAAA1, Yun Cao, BSc1, James E. Norton, MS4, Lydia Suh, BSc1, Roderick G. Carter, BSc1, Robert C. Kern, MD2, Catherine Smith, MD2, David B. Conley, MD2, Anju T. Peters, MD2, Leslie C. Grammer, MD1, Whitney W. Stevens, MD, PhD2, Kathleen E. Harris, BSc1, Bruce Tan, MD2, Robert P. Schleimer, PhD2 and Kathryn E. Hulse, PhD1, Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, 2Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL, 3Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, 4Institute of Allergy and Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL

2 Novel IL-9-Producing Mucosal Mast Cells Promote IgE-Mediated Food Allergy
Yui-Ishi Wang, PhD, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

3 Follicular Helper T (Th) Cells Are Indispensable for IgE Antibody Responses to Airborne Allergens
Takao Kobayashi, PhD1, Koji Iijima, PhD1, Chien-Chang Chen1, Alexander L. Dent, PhD3 and Hirohito Kita, MD4, 1Mayo Clinic, Rochester, MN, 2Indiana University, Indianapolis, IN

4 Copy Number Variation in Donor KIR Genes and Motifs Titrates Natural Killer (NK) Cells’ Functional Response to EBV Infections and Influences the Risk of Developing Post-Transplant Lymphoproliferative Disease (PTLD) after Allogeneic HCT
Rehan M. Faridi, PhD1, Taylor Kemp, BHS3, Poonam Dharmani, PhD1, Victor Lewis, MD2, Neaedredine Berka, PhD2, Ian Storek, MD, PhD2 and Faisal Khan, PhD1, University of Calgary, Calgary, AB, Canada, 1Alberta Children’s Hospital, Calgary, AB, Canada, 2Calgary Laboratory Services, Calgary, AB, Canada

5 Allergen-Specific CD4+ T Cells in Human Asthma Have an Increased Capacity to Respond to Inactive Type 2 Signals
Morris F. Ling, MD1,2, Sabina A. Islam, MD1,2, Daniel L. Hamilos, MD, FAAAAI1,2, Josesly L. Cho, MD1,2, Jason W. Griffith, MD, PhD1,2, R. Scott Harris, MD1,2, William W. Kwok, PhD1,2, James J. Moon, PhD1,2, Benjamin D. Medoff, MD1,2 and Andrew D. Luster, MD, PhD1,2, Massachusetts General Hospital, Boston, MA, 1Harvard Medical School, Boston, MA, 2Benaroya Research Institute at Virginia Mason, Seattle, WA

Asthma Epidemiology

ADT

2201

Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

Psychosocial Associations with Life-Threatening Asthma in Inner City Children
Mary E. Bollinger, DO1, Arlene Butz, ScD, CRNP2, Cassie Lewis-Land, MS2 and Tricia Morphew, MSE1, Department of Pediatrics, University of Maryland School of Medicine, Baltimore, MD, 2Johns Hopkins University School of Medicine, Baltimore, MD, 3Morphew Consulting, LLC, Manhattan Beach, CA

7 Prevalence of Asthma-Chronic Obstructive Pulmonary Disease (COPD) Overlap Syndrome in Brazilian Elderly Patients
Tamara A de Freitas1, Antonio Godinho Netto1, Beatriz Areanest2 and Fernando M. Aarestrup, MD, PhD3, 1SUPREMA, 2Universidade Federal de Juiz de Fora-MG, Brazil, Brazil, 3Universidade Federal de Juiz de Fora-MG, Brazil, Juiz de Fora, Brazil

8 Negative Skin Prick Test Predicts Asthma Remission in Preschool Children
Noppasorn Sithisarunkul, MD1, Pasuree Sangsupawanich, MD, PhD2 and Wanaporn Amnattanee, MD3, 1Prince of Songkla University, Hat-yai, Songkhla Province, Thailand, 2Prince of Songkla University, Hat-yai, Thailand

9 Early Diagnosis of Asthma and Allergies Among Wroclaw Children
Andrzej M. Fal1,2, Dorota Kiedzik1, Agnieszka Muszyńska1 and Iwona Pirowogow1, 1Wroclaw Medical University, 2National Institute of Public Health, 3Wroclaw Medical University, Poland

10 Spice Allergy: Asthma in the Food Industry
Mariangela Bermudez Martinez1, Ricardo Moreno-Borquez2, Paula Sanchez-Lopez1 and Pilar Gajate-Fernandez1, 1Hospital Rey Juan Carlos, Mossos, Spain, 2Hospital Rey Juan Carlos, Spain

11 Characteristics of Asthma Exacerbations in the Emergency Department at a Tertiary Hospital
Beatriz Pola, La Paz Hospital, Madrid, Madrid, Spain

12 The Association with Exercise Capacity and Anemia in Chronic Airway Disease
Hyun Jung Jin, MD, Yeungnam University College of Medicine, Daegu, South Korea and Jin Hong Chung, Yeungnam University College of Medicine, South Korea

13 Retrospective Analysis of Allergy Skin Testing Results and Relationship to Asthma in the Tucson Adult Population
Ryan Buckley, MD1, Snehal Patel, DO2 and Tara F. Carr, MD2, 1University of Arizona, Tucson, AZ, 2Banner University Medical Center, Division of Pulmonology, Allergy, Critical Care and Sleep Medicine, Tucson, AZ

14 Persisting Long Term Benefits of Smoking Abstinence and Reduction in Asthmatic Smokers Who Have Switched to Electronic Cigarettes
Davide Campagna, MD1,2, Jaymin B. Morjaria3, Pasquale Caponnetto4, Massimo Caruso, PhD, HT AAAA1, Maria Domenica Amaraldi4, Giovanni Ciampi3, Cristina Russo, MD and Riccardo Polosa, MD, PhD, FAAAAI1, 1Department of Clinical and Experimental Medicine, University of Catania, Italy, 2Internal and Emergency Medicine, “Polisiciliano - V. Emanuele”, University of Catania, Italy, 3Dept of Respiratory Medicine, University of Hull, Castle Hill Hospital, Cottingham, East Yorkshire, United Kingdom, 4Centro per la Prevenzione e Cur a del Tabagismo (CPC), “Polisiciliano - V. Emanuele”, University of Catania, Italy, 5Accident and Emergency Department, Garibaldi-Central Hospital, Catania, Italy

15 Cost and Healthcare Utilization in Asthma Patients with High Oral Corticosteroid Use
Karina Raimundo, BPharm, MS1, Ka M Ngai, MD, MPH2, Eunice Chang, PhD2, Michael Broder, MD, MSHS2 and...
24 Persistent of Airflow Obstruction in Asthmatic Children
Lori Banka, DO, Yang Lu, PhD, Lyne G. Scott, MD, Salima A. Thobani, MD, Marilyn Li, MD, Cindy Xi, MD and Kenny Y. Kwong, 1, 8LAC-USC Medical Center, Los Angeles, CA, 2Harbor-UCLA Medical Center, 3University of Southern California, CA, 4University of Southern California, Los Angeles, CA, 5LAC-USC Medical Center

25 Characteristics That Distinguish Difficult-to-Control Asthma in Inner-City Children
Jacqueline A. Pongracic, MD, FAAAAI, Rebecca A. Zabel, MS, Denise C. Babineau, PhD, Edward M. Zoratti, MD, FAAAAI, George T. O’Connor, MD, Robert A. Wood, MD, FAAAAI, Gurjit K. Khanna Hershey, MD, PhD, FAAAAI, Carolyn Kersersman, MD, Rebecca S. Grachalla, MD, PhD, FAAAAI, Meyer Kattan, MD, Stephen J. Teach, MD, Samuel J. Arbes Jr., William W. Busse, MD, FAAAAI, Peter J. Gergen, MD, MPH, Alkis Togias, MD, FAAAAI, Cynthia Visness, PhD, MPH and Andrew H. Liu, MD, FAAAAI 14,15

26 Income is an Independent Risk Factor for Worse Asthma Outcomes
Juan Carlos Cardet, MD, Tonya S. King, Margie Louisias, MD, Mario Castro, MD, MPH, Christopher D. Codispoti, MD, PhD, Ryan Dunn, MD, Brenda L. Giles, MD, Fernando Holguin, MD, MPH, John Lima, MD, PhD, Dayna Long, MD, Nijra Lugogo, MD, Sharmilee M. Nyenhuis, MD, FAAAAI, Victor E. Ortega, MD, Sama Ramratnam, MD, Michael E. Wechsler, MD, Moses, MD, Eliot Israel, MD, FAAAAI and Wanda Phuphutkulak, MS, MD, 1Medicine, Brigham and Women’s Hospital, Boston, MA, 2Penn State University, Hershey, PA, 3Brigham and Women’s Hospital, Boston, MA, 2Division of Pulmonary and Critical Care Medicine, Department of Medicine, Washington University School of Medicine, Saint Louis, MO, 3Department of Immunology and Microbiology, Allergy/Immunology Section, Rush University Medical Center, Chicago, IL, 3Rush University Medical Center, Chicago, IL, 4National Jewish, University of Chicago, 5The University of Pittsburgh Asthma Institute at UPMC and the University of Pittsburgh School of Medicine, Department of Pulmonary, Allergy and Critical Care Medicine, Pittsburgh, PA, 6American Lung Assn, Jacksonville, FL, 7University of California at San Francisco, 8Duke University, 9MC 719, University of Illinois at Chicago, Chicago, IL, 10Wake Forest University, 11Pediatric Pulmonary Clinic, 12National Jewish Health, Denver, CO, 13Division of Pediatric Allergy/Immunology, Boston Children’s Hospital, Harvard University School of Medicine, Boston, MA

27 Higher Immunoglobulin E (IgE) Levels Are Associated with Greater Emergency Care and Other Healthcare Utilization Among Asthma Patients in a Real-World Data Setting
Allan T. Luskin, MD, Evgeniya Antonova, MS, PhD, Michael Broder, MD, MSHS, Eunice Chang, PhD and Theodore A. Omachi, MD, MBA, 1University of Wisconsin, Madison, Madison, WI, 2Genentech, Inc, South San Francisco, CA, 3Partnership for Health Analytic Research, LLC, Beverly Hills, CA
28 Impact of a Mobile Health and Sensor-Driven Asthma Management Pilot Study on Symptoms, Control, and Self-Management David Van Sickle, PhD1, Meredith Barrett, PhD1, Olivier Humblet, ScD1, Jason Su, PhD2, Kelly Henderson1 and Ted Smith, PhD3, 1Propeler Health, 2University of California Berkeley, 3Louisville Metro Government Department of Economic Growth and Innovation

29 Is Unrecognized Food Allergy or Aeroallergen Sensitization Responsible for Emergency Department Visits Attributed to Asthma? Jennifer Dantzer, MD, Torie Grant, MD, Elizabeth Matsui, MD, MHS and Corinne Keet, MD, PhD, Division of Pediatric Allergy/Immunology, Johns Hopkins School of Medicine, Baltimore, MD

30 Insulin Resistance Modifies the Association Between Obesity and Current Asthma in Adults Samuel Y. Ash, MD1, Juan Carlos Cardet, MD2, Tope Kusa, MBBS, MPH3, Carlos Camargo, Jr, MD, DrPH4 and Elliot Israel, MD, FAAAI5, 1Brigham and Women’s Hospital, Boston, MA, 2Medicine, Brigham and Women’s Hospital, Boston, MA, 3Harvard School of Public Health, Boston, MA, 4Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA

31 Identification of Pathways to Asthma Severity in Inner-City Children Andrew H Liu, MD, FAAAAI1,2, Denise C. Babineau, PhD3,4, Rebecca A. Zabel, MS5, Edward M. Zoratti, MD, FAAAAI6,7, Jacqueline A. Pongracz, MD, FAAAAI7, George T. O’Connor, MD,2, Robert A. Wood, MD, FAAAAI8,9, Ginjit K. Kharaia Heresh, MD, PhD, FAAAAI10,11, Carolyn Kercsmar, MD6,7, Rebecca S. Gneussilla, MD, PhD, FAAAAI10,13, Meyer Kattan, MD4,13, Stephen J. Teach, MD14, Samuel J. Arbes Jr,3, Peter J. Gergen, MD, MPH17,18, Albik Tugias, MD, FAAAAI18, Cynthia Visnes, PhD, MPH19,20 and William W. Busse, MD, FAAAAI18,21, Children’s Hospital Colorado, University of Colorado School of Medicine, Aurora, CO, 2National Jewish Health, Denver, CO, 3Rho, Inc, Chapel Hill, NC, 4Rho Federal Systems Division Inc, Chapel Hill, NC, 5Department of Public Health Sciences, Henry Ford Health System, Detroit, MI, 6Henry Ford Health System, Detroit, MI, 7Ann and Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 8Boston University School of Medicine, Boston, MA, 9Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA, 10Cincinnati Children’s Hospital, Cincinnati, OH, 11University of Cincinnati, Cincinnati, OH, 12Cincinnati Children’s Hospital Medical Center, Cincinnati, OH, 13UT Southwestern Medical Center, Dallas, TX, 14New York Presbyterian/Columbia, New York, NY, 15College of Physicians and Surgeons, Columbia University, New York, NY, 16Children’s National Health System, Washington, DC, 17AAAI/DAT/NIH, Bethesda, MD, 18NIAID/NIH, Bethesda, MD, 19University of Wisconsin School of Medicine and Public Health, Madison, WI

32 Association Between Asthma Symptom Scores and Increased Perceived Stress and Trait Anxiety in Asthmatic Adolescents Cathryn J. Luria, MD1, Alexandra R. Sitark, MS2, Suzanne Havstad, MA2, Ganesa R Wegienka, PhD3, Haojin Kim, MD2,3, Edward M. Zoratti, MD, FAAAAI4,5, Christine L.M. Joseph, PhD6 and Andrea Cassidy-Bushrow, PhD2, 1Division of Allergy and Clinical Immunology, Henry Ford Health System, Detroit, MI, 2Department of Public Health Sciences, Henry Ford Health System, Detroit, MI, 3Henry Ford Health System, Division of Allergy and Clinical Immunology, Detroit, MI, 4Henry Ford Health System, Detroit, MI

33 Risk Factors Associated with Asthma-Related Hospitalizations Among Older Adults Joy Hsu, MD, MSCI, Centers for Disease Control and Prevention, Atlanta, GA, Jessica Chen, BA, Emory University and Maria C. Mirabeli, PhD, Centers for Disease Control and Prevention

34 Influence of Depression on Asthma Outcomes in Older Adults – Results from the National Health and Nutrition Examination Survey (2007-2012) Pooya M. Oza, MD1, Minal R. Patel, PhD, MPH2 and Alan P. Baptist, MD, MPH FAAAAI3, 1University of Michigan, Division of Allergy and Clinical Immunology, Ann Arbor, MI, 2University of Michigan School of Public Health, Ann Arbor, MI

Asthma Therapy I: Biologics

ADT

2202

Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

Retrospective Observational Study to Evaluate Long-Term Effectiveness and Safety of Omalizumab Treatment in Real-Life Setting in Allergy Centre of Spain Dorkas Margarita Marquez Hernandez, Jose A Basildas, Lys Herrera, Elena Mederos, A. Enriquez Matas, MD, Ruth Mielgo Ballesteros, MD and Consuelo Fernandez, Hospital Universitario 12 de Octubre, Madrid, Spain

Efficacious Use of Omalizumab in the Treatment of Cystic Fibrosis Diana Pharm1, Hoang Pham, MD 2016, BSC, BA3, Eva Gaudet, RN4, Shawn Aaron, MD5,6, Stephanie Santucci, RN7, and William H. Yang, MD1,7, 1Ottawa Allergy Research Corporation, Ottawa, ON, Canada, 2University of Ottawa, Faculty of Medicine, Ottawa, ON, Canada, 3Division of Respiratory Medicine, The Ottawa Hospital, Ottawa, ON, Canada, 4University of Ottawa Medical School, Faculty of Medicine, Ottawa, ON, Canada, 5University of Ottawa Medical School, Faculty of Medicine, Ottawa, ON, Canada

Effectiveness of Omalizumab in Asthmatics with Baseline Serum IgE>1500 IU/mL Using a Novel Method for Assessing Response: Reality Study Joseph D. Diaz, MD1, Jay Peters, MD2, Yoget Kaur, MS3 and Harjinder Singh, MD4, 1Allergy, Asthma and Immunology Associates of South Texas, San Antonio, TX, 2Univ. Texas Health Science Center San Antonio, San Antonio, TX

Impact of Visit Compliance on Response to Omalizumab Therapy in a Real-Life Clinical Setting: Reality Study Harjinder Singh, MD1, Jay Peters, MD2, Yoget Kaur, MS3 and Joseph D. Diaz, MD4, 1Univ. Texas Health Science Center San Antonio, San Antonio, TX, 2Allergy, Asthma and Immunology Associates of South Texas, San Antonio, TX

Omalizumab Can Be Effective in Patients with Allergic Bronchopulmonary Aspergillosis John W. O’Quinn, MD1, Diana Pharm1, Hoang Pham, MD 2016, BSC, BA2, Gonzalo G. Alvarez, MD3,4, Ivstan T. Bencez, MD4,5, Krishna B. Sharma, MD6,7, Mark Smith, MD8, Shawn Aaron, MD9,10, Jennifer Block, MD9, Tara Keays, MD11, Judith Leech, MD12, David Schneidermen, MD13, Jodi Cameron, RPN14, Jennifer Forgic, RN15, Alicja Ringer, RPN15, Stephanie Santucci, RN16 and William H. Yang, MD17,18, 1Ottawa Allergy Research Corporation, Ottawa, ON, Canada, 2University of Ottawa, Faculty of Medicine, Ottawa, ON, Canada, 3Division of Respiratory Medicine, The Ottawa Hospital, Ottawa, ON, Canada, 4University of Ottawa Medical School, Faculty of Medicine, Ottawa, ON, Canada, 5Division of Internal Medicine, Monfort Hospital, Ottawa, ON, Canada

Rapid Lung Function Improvement with Lebrikizumab in Patients with Uncontrolled Asthma Jonathan Corren, MD1, Nicola A. Hanania, MD2, Phillip E. Korenblat, MD, FAAAAI3, Julie K. Olslen, MD, MS4, Nikhil Kamath, MD5, Sarah Gray, PhD6, Nicolas Martin7.
Biomarkers Associated with Response in Patients Initiating Omalizumab: Baseline Levels Among Patients in the Prospective Observational Study to Evaluate Predictors of Clinical Effectiveness in Response to Omalizumab (PROSPERO) Study

Bradley E. Chipp, MD, FAAAAI1, William W. Busse, MD, FAAAAI, Allan T. Luskin, MD, PhD, Daniel W. Gleich, MD, PhD, FAAAAI, Lee S. Schroer, MD, PhD, FAAAAI, Genentech Inc, (a member of the Roche Group), South San Francisco, CA, 2Roche Products Limited, Welwyn Garden City, United Kingdom, 3Roche, Inc, (a member of the Roche Group), South San Francisco, CA, 4F Hoffmann-La Roche Ltd, Basel, Switzerland

Poor Asthma Control Is Associated with Overall Daily Activity Impairment: 3-Year Data from the EXCELS Study of Omalizumab

Eyguniya Antonova, MS, PhD1, Benjamin Trzaskoma, MS2, Theodore A. Omachi, MD, MBA1 and Michael Schatz, MD, MS, FAAAAI3, Genentech Inc, South San Francisco, CA, 2Kaiser Permanente Southern California, San Diego, CA

Improvements in Asthma Quality of Life Questionnaire (AQLQ) Domains with Reslizumab in Patients with Inadequately Controlled Asthma and Elevated Blood Eosinophils

Jorge Maspero, Allergy and Respiratory Research Unit, Fundación Cidea, Buenos Aires, Argentina, Joshua Jacobs, Allergy and Asthma Clinical Research, Inc, Walnut Creek, CA and Margaret Garin, Teva Pharmaceuticals, PA

The Extent of Serum Periostin Reduction in Asthma Patients Treated with Lebrikizumab Is Related to Baseline Periostin Levels: A Pooled Analysis of Phase II Studies

David F. Choy1, Cecile T.J. Holweg, PhD2, Fang Cai3, Joseph R. Arron1, John G. Matthews, MB, BS, MRSCP, PhD2 and Helen Scheeren, PhD1, Genentech, Inc., South San Francisco, CA, 2Genentech, Inc. (a member of the Roche Group), South San Francisco, CA, 3Genentech, Inc

Response to Omalizumab Therapy Based on Level of IgE: A Two Year Observational Study (REALITY Study)

Jay Peters, MD1, Harjinder Singh, MD, Yogeet Kaur, MS2 and Joseph D. Diaz, MD2, 1Univ. Texas Health Science Center San Antonio, San Antonio, TX, 2Allergy, Asthma and Immunology Associates of South Texas, San Antonio, TX

Blood Eosinophils and Serum IgE Predict Response to Omalizumab in Patients with Severe Allergic Asthma: Innovate Trial Post-Hoc Analysis

Volkan Manga, MD1, Marc Humbert, MD, PhD2, Ratko Djukanovic3, Steve Greenberg, MD4, Theodore A. Omachi, MD, MBA1, Benjamin Tzraskoma, MS2 and Roland Bab6, Novartis Pharma AG, Basel, Switzerland, 2Hospital Antoine Beclere, Université Paris-Sud, Clamart, France, 3University of Southampton, Southampton, United Kingdom, 4Novartis Pharmaceutical Corporation, East Hanover, NJ, 5Genentech, Inc., South San Francisco, CA, 6University Hospital Mainz, Mainz, Germany

Steroid Sparring Response with Mepolizumab: Durability of Steroid Reduction in Severe Asthma

Charlene M. Prazma, PhD1, Elisabeth H. Bel, MD, PhD2, Neil C Barnes, MD3, Robert Price4, Frank C Albers1 and Steven W Yancey1, 1GlaxoSmithKline, Research Triangle Park, NC, 2University of Amsterdam, Amsterdam, Netherlands, 3GlaxoSmithKline, Uxbridge, United Kingdom, 4The London School of Medicine and Dentistry, London, United Kingdom, 5GlaxoSmithKline, Clinical Statistics, Uxbridge, United Kingdom, 6GlaxoSmithKline, Respiratory Medical Franchise, Research Triangle Park, NC

Omalizumab and Severe Allergic Asthma: Assessment after 1 Year of Treatment

Rita Aguilar, MD, Ana M. Mendes, MD, Ana Célia Costa, MSc, Fatima Duarte, MD, Estrella Alonso, Anaíbel Lopes, MD, Elisa Pedro, MD and Manuel Pereira-Barbosa, Hospital de Santa Maria - Immunologicallergy Department, Lisbon, Portugal

Common Variable Immunodeficiency (CVID) and Other Hypogammaglobulinemia

BCI

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Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

Use of Rituximab in Late Onset Leiaky SCID

Diana X. Nichols-Vinueza, MD1,2, Hung S. Luu, MD2,3, Norberto Rodriguez Baez, MD,1,2, Yadira Rivera-Sanchez, MD,1,2, Kenneth S. Chen, MD,1,2, Lee-Jun Wong, PhD2, Hui Yu, PhD3 and M. Teresa De La Morena, MD3, 1Department of Pediatrics, 2University of Texas Southwestern Medical Center Dallas, TX, 3Department of Pathology Children’s Health, 4Center for Cancer and Blood Disorders Children's Health, 5Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX, 6Baylor Mirca Genetic Laboratories, Houston, TX, 7The Division of Allergy and Immunology, 8Department of Pediatrics and Internal Medicine, University of Texas Southwestern Medical Center Dallas, TX

Anti-GAD65 Positive Stiff-Person Syndrome: Novel Association with Common Variable Immune Deficiency

Jack G. Ghabily, MD1, Mark Guido, MD2, Sara Atwater, MD2 and Guna Krishnaswamy, FAAAAI, AAAL, ABIMH, 1University of Alabama at Birmingham, Birmingham, AL, 2WAKE FOREST BAPTIST MEDICAL CENTER, 3WAKE FOREST BAPTIST MEDICAL CENTER, WINSTON SALEM, NC

The Effect of Immunoglobulin Levels on CVID Enteropathy Pathogenesis and Clinical Severity

Meng Chen, MD1, Edith Schussler, MD2, Mabel Ko, MD2, Paul J. Maglione, MD, Ph.D2 and Charlotte Cunningham-Rundles, MD, PhD2, 1New York University Langone Medical Center, New York, New York, 2Columbia School of Medicine at Mount Sinai, New York, NY
54 An Older Gentleman with Common Variable Immunodeficiency (CVID): A Question of Primary Immunodeficiency Versus Secondary Belimumab-Induced Immunodeficiency
Amy R. Schiffman, MD, Tulane University School of Medicine, New Orleans, LA and Laurianne G. Wild, MD, FAAPAAL, Tulane University, New Orleans, LA

55 31 Year Old Caucasian Male Presenting with Hypogammaglobulinemia and T/B-Cell Lymphopenia
Nicholas L. Hartog, MD1, John Chrisinger, MD1 and H. James Wedner, MD, FAAPAAL1, 1Washington University School of Medicine, Saint Louis, MO, 1Washington University School of Medicine, St. Louis, MO

56 An Unusual Presentation of Cutaneous Leukocytoclastic Vasculitis to Subcutaneous but Not IV Insulin in a Patient with Common Variable Immunodeficiency (CVID), Type 1 DM (T1D), and Autoimmune Enteropathy (AIE)
Julie J. Kim-Chang, MD, Duke University Medical Center, Durham, NC and Patricia L. Lugar, MD, MS, Medicine, Duke University Medical Center, Durham, NC

57 A Case of Concurrent Hypogammaglobulinemia, Cancer, and Cardiomyopathy: A Beta-Catenin Connection?
Camelia Hernandez, MD and Cecilia Mikiia, MD, MPH, FAAPAAL, Walter Reed National Military Medical Center, Bethesda, MD

58 Three Cases of Elevated IL-1beta in Common Variable Immunodeficiency (CVID) with Autoimmune Complications
Jennifer Toh, MD, Albert Einstein/Montefiore Medical Center, Bronx, NY, Tatyana Gavrillova, MD, Allergy and Immunology, Montefiore Medical Center, Bronx, NY and Arye Rubinstein, MD, FAAPAAL, Albert Einstein College of Medicine and Montefiore Hospital, Bronx, NY

59 Quality over Quantity: A New Approach to Diagnose Specific Antibody Deficiency Using a Complement Fixation Assay
Charles A. Fillion, MD, FRCPC, Paul J. Maglione, MD, PhD, Lin Radigan and Charlotte Cunningham-Rundles, MD, PhD, Icahn School of Medicine at Mount Sinai, New York, NY

60 Common Variable Immunodeficiency in Two Adult Patients Diagnosed after Lymphoma As First Presentation.
Maria G Kaniari2, Sofia Tantou1, Marianna Tzanoudaki1, Marina Siakantari2 and Angelos Pefanis1, 1Agia Sofia' Children’s Hospital, Athens, Greece, 2National and Kapodistrian University of Athens, Athens, Greece

61 T Cell Abnormalities in Patients with Common Variable Immunodeficiency
Adrian M Kahn, MD, FAAPAAL1, 2Gabriela Luque1, Gerardo M Gatti3, 3Brenda Ricchi1, Juan J Garcia1, 2Eduardo Cuestas1, 1Ana L Basquivi1 and Virginia E Rivero1, 1Hospital Privado Universitario, Cordoba, Argentina, 2Instituto Universitario de Ciencias Biomédicas de Cordoba, Cordoba, Argentina, 3Fundación para el Progreso de la Medicina, Laboratorio de Alfa Complejidad, Córdoba, Argentina

62 Recurrent Septic Arthritis with CVID and MGUS: A Chicken and Egg Conundrum
Evan M. Atkinson, MD, Prathyusha Savjani, MD and Laurianne G. Wild, MD, FAAPAAL, Tulane University, New Orleans, LA

63 Neurologic Complications of Common Variable Immunodeficiency: A Case Report and Review of the Literature
Jenna T. Nguyen, MD and Katherine E. Gundling, MD, UCSF, San Francisco, CA

64 A Case of Severe Pneumococcal Pneumonia Requiring Ventilator-Support in a Hypogammaglobulinemia Patient on IVIG Infusion Therapy Despite Adequate IgG troughs
Amnara G. Ahmed, DO and Kholoud Wishah, MD, Case Western’s MetroHealth Medical Center, Cleveland, OH

65 A Case of Inflammatory Bowel Disease and Common Variable Immunodeficiency
Shahab Virani, MD and Praveen Govender, MD, Boston University Medical Center

66 Two New Mutations in TACI Identified to be Causing Disease in Patients with Common Variable Immunodeficiency
Roula Dahi, MD, Detroit Medical Center, Detroit, MI; Children's Hospital of Michigan, Detroit, MI; Elizabeth A. Secord, MD, FAAPAAL, Children’s Hospital of Michigan Department of Allergy Immunology, Detroit, MI; Wayne State University School of Medicine, Detroit, MI and Pavaee Poowatikul, MD, Pediatrics-Allergy/Immunology Division, Children’s Hospital of Michigan, Detroit, MI; Pediatrics-Allergy/Immunology Division, Wayne State University School of Medicine, Detroit, MI

67 Relationship of Specific IgM Responses with Infection and Lymphoproliferative Disease in Common Variable Immunodeficiency
Tukisa D. Smith, MD, MS, Paul J. Maglione, MD, PhD and Charlotte Cunningham-Rundles, MD, PhD, Icahn School of Medicine at Mount Sinai, New York, NY

68 Treatment with Azathioprine and Rituximab in a Pediatric Patient with CVID and Granulomatous Liver Disease
Tammy Pung, MD1, Luisa Wozniak1, Bita V Naini1 and Maria Garcia-Llort, MD, FAAPAAL1, 1Division of Allergy and Immunology, Department of Pediatrics, David Geffen School of Medicine at UCLA, Los Angeles, CA, 2Division of Gastroenterology, Department of Pediatrics David Geffen School of Medicine, 1Department of Pathology, David Geffen School of Medicine at UCLA, Los Angeles

69 Adult-Diagnosed Chronic Granulomatous Disease
Derek M. Smith, MD1, Charles N. Webb, MD1 and G. William Palmer, MD, FAAPAAL2, 1Wilford Hall Ambulatory Surgical Center, San Antonio, TX, 2Boise Valley Asthma and Allergy Clinic, Boise, ID

70 Abnormal Newborn SCID Screen and Lymphopenia in an Infant Exposed to in Utero Follicinex Chemotherapy
Daniel H Petroni, MD, PhD1, Kathey Mohan, ARNP2, Andrew Coveler, MD2, Troy R. Torgerson, MD, PhD2 and Suzanne Skoda-Smith, MD1, 1Seattle Children’s Hospital, Seattle, WA, 2Seattle Cancer Care Alliance, 3Seattle Children’s Hospital Research Institute, Seattle, WA

71 A Case of Acquired CI Esterase Inhibitor (CI-INH) Deficiency As the Presenting Manifestation of Common Variable Immune Deficiency (CVID)
Andrew Parker, MD1, David Hagen, MD1, Summer E. Monforte, MD2, Andrew G. Ayars, MD1 and Matthew C. Altman, MD1

1University of Washington, Seattle, WA, 2St. Peter’s Medical Group, Helena, MT

72 Advancement in Allergic Diseases

BCI

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Allergen Exposure Increases Triggering Receptor Expressed on Myeloid Cell (TREM)-2 Expression on Lung Dendritic Cell Subsets in a Murine Model of Asthma
Sanneke C. Hall, Department of Biomedical Sciences, Creighton University, Omaha, NE and Devendra K. Agrawal, Department of Biomedical Sciences and Center for Clinical and Translational Science, Creighton University School of Medicine, Omaha, NE
73 Cinnamon-Induced Contact Stomatitis: A Propos of Two Cases
Ekaterini I. Syrigou, PhD1, Photis Psaras2, Maria Zende1, Nikolaos K Syrigos1, Maria Vasiou1, Athanasios Sianiotis1 and Konstantinos Syrigos1, 1Department of Allergy, Sotiria General Hospital, Athens, Greece, 2Department of Allergy, Athens Naval Hospital, Greece, 3Athens School of Medicine, Greece

74 A Promising Technology for Characterizing Proteins, Antigens and Allergens in Extracts and Source Materials
Jack D. Kelly, Greer Laboratories

75 Molecular Reference Materials for Standardization of Allergen Measurements
Sabina Wunschmann, PhD, Kristin N Prtorich, Cathy Minichino, Heaven Cerritos, Lisa D. Vailles and Martin D. Chapman, PhD, FAAAAI, INDOOR Biotechnologies Inc., Charlottesville, VA

76 A Study of Immunogenic Associations with Peanut Allergy Utilizing a Novel DNA Repository
Jonathan A. Hemler, MD1, Elizabeth S. Marston, MD2, Jason H. Karnes, PhD3, Andrew M. Glazer, PhD3, Elizabeth J. Phillips, MD4,5, Simon A. Mallal, MBBS6,7 and Peggy L. Kendall, MD1,7, 1Vanderbilt University School of Medicine, Division of Allergy, Pulmonary, and Critical Care Medicine, Department of Medicine, Nashville, TN, 2Vanderbilt University School of Medicine, Monroe Carrell, Jr. Children’s Hospital Pediatric Residency Program, Nashville, TN, 3Vanderbilt University School of Medicine, Division of Clinical Pharmacology, Department of Medicine, Nashville, TN, 4Institute for Immunology & Infectious Diseases, Murdoch University, Murdoch, Australia, 5Vanderbilt University School of Medicine, Division of Infectious Diseases, Department of Medicine, Nashville, TN, 6Vanderbilt University School of Medicine, Center for Translational Immunology and Infectious Diseases, Nashville, TN, 7Vanderbilt University School of Medicine, Department of Pathology, Microbiology and Immunology, Nashville, TN

77 The Role of Human Dendritic Cells in Cutaneous Allergy Recognition and Immune Activation
Anna R. Wolfson, MD, Caroline L. Sokol, MD, PhD and Andrew D. Luster, MD, PhD, Massachusetts General Hospital, Boston, MA

78 Tacrolimus: A Heart Pill to Swallow
Tara V. Saco, MD1, Dennis K Ledford, MD2, Sweta Shah, MD3, Elinmar Perez-Colon, MD4 and Lacey Harrington, MS-I, 1Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL, 2University of South Florida and the James A. Haley VA Hospital, Tampa, FL, 3University of South Florida College of Medicine

79 Averting Danger: A Case of Anaphylaxis to Rabavert®
Sarah W. Spriet, DO, Taylor A. Banks, MD and Cecilia Mikita, MD, MPH, FAAAAI, Walter Reed National Military Medical Center, Bethesda, MD

80 Reduction in Corticosteroid Use Among Patients Receiving Onaluzumab in Real World Settings: A Systematic Literature Review of Non-Randomized Studies
Reynold A Panettieri, MD1, Jonathan Corren, MD2, Susan Gabriel, MSc3, Kimberly M. Ruiz, EdM4, Bethany Sasschyn, PharmD5, Jennifer A. Colby, PharmD6 and Meryl Mendelson, MD3, 1University of Pennsylvania, Perelman School of Medicine, Philadelphia, PA, 2David Geffen School of Medicine at UCLA, Los Angeles, CA, 3Novartis Pharmaceuticals, East Hanover, NJ, 5Xcenda, Palm Harbor, FL

81 Defining the Percentage of T Helper 17 Cells in Patients with Eczema and Allergic Disease
Runjeet Minocha, MD, John M. Routes, MD, FAAAAI, Mary Hintermeyer, APNP, Trivikram Dasu, PhD, Erin Hamelev, Tucker Keuter, Aniko Szabo, PhD and James W. Verbsky, MD, PhD, Medical College of Wisconsin, Milwaukee, WI

82 Prevalence of Atopic Diseases in Patients with Humoral Primary Immunodeficiency: A Comparison of a Single Center and the US Immunodeficiency Network (USIDNET)
Alice S. Chau, MD1, Artemio M. Jongco III, MD, PhD, MPH2,3, Laura Helfoor, MD4, James C. Fagin, MD3 and Vincent R. Bonagura, MD, FAAAAI2,5, 1Department of Medicine, Hofstra North Shore-LIJ School of Medicine, Manhasset, NY, 2Feinstein Institute for Medical Research, Manhasset, NY, 3Division of Allergy & Immunology Hofstra North Shore-LIJ School of Medicine, Great Neck, NY, 4Division of Allergy Immunology & Immunology, Departments of Medicine and Pediatrics, Hofstra North Shore-LIJ School of Medicine, Great Neck, NY, 5Allergy & Clinical Immunology, Division of ProHEALTH Care Associates, New Hyde, NY, 6Division of Allergy and Immunology at North Shore Long Island Jewish Health System, Great Neck, NY

83 Evaluation of Antibody, Cytokine and Mirnas in Patients with Ige-Mediated and Non-Ige Mediated Rhinitis in Brazilian Subjects Triggered By House Dust Allergen Exposure
Ernesto A Taketomi1, Juliana S Miranda2, Jair Cunha-Junior, PhD2 and Ana CAM Pagnab2, 1Federal University of Uberlândia, Uberlandia, Brazil, 2Federal University of Uberlândia, Uberlandia, Brazil

84 Inhibition of Inflammation and Mucus Production by Bordeletella Pertussis Whole-Cell Vaccine in a Murine Model of Allergic Rhinitis
Marcelo Vivotlo Aun, MD1, Fernanda Arantes-Costa2, Francine Maria Almeida2, Thaysa Regina Brüggermann2, Beatriz Manguica Sarravaino Romanholo3,4, Isabella S. Genaro3,5, Milan Arruda Martins, MD, PhD2, Jorge Kauli, MD1, PhD1 and Pedro Giovanini Bianchi, MD1, 1Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil, 2Department of Internal Medicine, University of Sao Paulo School of Medicine, Sao Paulo, Brazil, 3Hospital Public Employee of Sao Paulo (IAMSPE), Sao Paulo, Brazil, 4University City of Sao Paulo (UNICID), Sao Paulo, Brazil

85 Usefulness of Component-Resolved Diagnosis (CRD) in Patients with Pet Allergy
Wolfgang Hemmer, PhD, Gabrielle Sesztak-Greinecker, MD, Felicity Wanke, MD, FAAAAI and Stefan Woehr, MD, MSc, FAAAAI, Floridsdorf Allergy Center, Vienna, Austria

86 B Cell Isotype Switching Is Dependent upon the Duration of B Cell Activation and Dose of Antigen
Tae Kwan Lee1, Se Jin An1, Ji-Mok Kim1 and Jae Ho Lee, MD, PhD2, 1Chungnam National University Hospital, Daejeon, South Korea, 2Department of Pediatrics, Chungnam National University, Daejeon, South Korea

Indoor Allergens and Fungi

EORD

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Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

87 Vascular Serine Protease Major Allergen of Fusarium Proliferatum
Hong-Der Shen, Hsiao-Yun Tai, Chang-Ching Yeh and Keh-Gong Wu, Taipei Veterans General Hospital, Taipei, Taiwan

88 Relationship of Der f 1 and Der p 1 Levels in House Dust in the Midwestern US
Charles S. Barnes, PhD1, Freddy Pacheco, MS1 and Jay M. Portnoy, MD, FAAAAI2, 1Children’s Mercy Hospital, Kansas City, MO, 2Division of Allergy & Immunology, Children’s Mercy Hospitals and Clinics, Kansas City, MO

89 An Exploratory Proof of Concept Study to Quantify the Major Cat Allergens, Fel d 1 and Fel d 4 from Domestic House Cats
William H. Yang, MD1, Suzanne Kelly, PhD2, Nate Stepner, D.Litt1, Douglass Boecht, DVM2, Jacob Karsh, MD1 and
90 Modulatory Effects of Aspergillus Colonization and Abpa on Blood and Sputum Granulocytes in CF

91 Mobility of Aeroallergens in Home: Effect of Location of Air Sampling and Implication for Evaluation of Patient Exposure.
Julian Gordon, PhD, Paul Dejien, MD, Andrea Wachter and Prasanthi Gandhi, MBA, MPH.

92 Homes Assessed As a Result of Physician Referral Have Higher Fungal Burden
Jill R. Hansson, MD, Charles S. Barnes, PhD and Jay M. Portnoy, MD, FAAAAI, Children's Mercy Hospital, Kansas City, MO, Division of Allergy & Immunology, Children's Mercy Hospitals and Clinics, Kansas City, MO

93 Prevalence of Sensitization to Mold Allergens in Patients with Respiratory Allergy
Barbara Elizondo-Villarreal, Sandra N. Gonzalez-Diaz, MD, PhD, FAAAAI, Alfredo Arias-Cruz, MD, FAAAAI, Lucia Leal-Villarreal, Maria Del Carmen Zarate-Hernandez, MD, Dulce M Rivero-Arias, Olga P Monge Ortega Jr. and Jesus A Ibarra-Chavez, UANL

94 Association of Aspergillus Monosensitization with Asthma and Rhinosinusitis
Julie T. Abraham, MD, Cleveland Clinic, Cleveland, OH, Maria A. Barcena Blanch, MD, Cleveland Clinic Foundation, Cleveland, OH and Roxana I. Siles, MD, Cleveland Clinic

95 Is There a Temporal Relationship Between Outdoor Alternaria alternata Spore Counts and Specific IgE Alternaria alternata Levels?
Hani Hadil, MD, Jay M. Portnoy, MD, FAAAAI, Charles S. Barnes, PhD and Vincent Stagg, PhD, Division of Allergy & Immunology, Children's Mercy Hospitals and Clinics, Kansas City, MO, Children's Mercy Hospitals and Clinics, Kansas City, MO

96 Aerobiology of Yeasts: Viable Colonies and Molecular Identification from Burkard Samples
Josh D. McCloud, MS and Estelle Levetin, PhD, FAAAAI, University of Tulsa, Tulsa, OK

97 Raining Mold?
James J. Anderson, MLT, Environmental Allergy, London, ON, Canada; Environmental Allergy/OHS TECHNINC, London, ON, Canada and G. Daniel Brooks, MD, FAAAAI, The Asthma & Allergy Center, Omaha, NE

SUNDAY

98 Exposures, Asthma and Allergic Diseases

EORD

2206 Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

Role of Cadmium and Folate Levels in Risks of Allergic and Respiratory Diseases of Early Childhood: The Mothers and Children's Environmental Health Study
Ja Heong Kim, MD. University of Ulsan College of Medicine, Ulsan University Hospital, Ulsan, Eun-Hee Ha, MD, Department of Preventive Medicine, School of Medicine, Ewha Womans University, Seoul, South Korea, Hye sook Park, MD, Department of Preventive Medicine, School of Medicine, Ewha Womans University, Cheonan, South Korea, Min Ha, MD, Department of Preventive Medicine, Dankook University College of Medicine, Seoul, Yun-Chul Hong, MD, Department of Preventive Medicine, Seoul National University College of Medicine, Seoul, South Korea, Jin-A Jung, MD, Dong-A University College of Medicine, Busan, South Korea and Yangho Kim, MD, Department of Occupational and Environmental Medicine, University of Ulsan College of Medicine, Ulsan University Hospital, Ulsan, South Korea

99 Prevalence of Respiratory Viruses in Patients with Acute Respiratory Infections in Korea
Jin-sung Park, Hee-Dong Jung, Hyang-Min Jung, Sung-Soon Kim and Chung-Keun Kim, MD, FAAAAI, Asthma & Allergy Center, Inje University Sanggye Paik Hospital, Seoul, South Korea, Korea Centers for Disease Control and Prevention, Osong, South Korea

100 Prescription of Adrenaline Injector to Outdoor Workers Who Had Experienced an Anaphylactic Reaction after a Hymenoptera Sting in Japan
Masamitsu Tatemaki, Dokkyo Medical University Koshigaya Hospital, Saitama, Japan

Natasha Gordon, PhD, Luke O'Shaughnessy, PhD, David Fitzpatrick, PhD, Sean Doyle, PhD and Bruce Mitchell, MD, airmid healthgroup Ltd, Dublin, Ireland, Mayo University, Mayo, Ireland

102 Delay in Asthma Diagnosis and Risk of Common Respiratory Infection in Young Children
Mir Ali, Elzabeth Krusemark, Chuong L. Wi, MD, Sunghwan Sohn, PhD, Hongfang Lin, PhD, Fujijung Ryu, PhD and Young J. Juhn, MD, MPH, Sanford Children's Hospital, Sioux Falls, SD, Dept of Pediatric and Adolescent Medicine, Mayo Clinic, Rochester, MN, Mayo Clinic, Rochester, MN

103 Prevalence of Sensitization to Airborne Allergens Among Elderly Population
Adile Borna Dursun, Ilitz Mercantepe and Vebbi Ayhan, Reecep Tayyip Erdogan University, School of Medicine, Rize, Turkey, Reecep Tayyip Erdogan University School of Medicine, Rize, Turkey

104 Eosinophilic Bronchitis Caused By Exposure to Wheat Flour in the Workplace
Olga Vega Matute, MD, Marta M. Ferrer, MD, PhD, FAAAAI, Carmen M. Danelis, MD, Amelia Bernad, MD, Roselle Catherine Yu Madambo and Gabriel Gastaminza, MD, PhD, Department of Allergy and Clinical Immunology Clinica Universidad de Navarra, Spain

105 Supplementation with the Antioxidant Sulforaphane Does Not Protect Airway Epithelium Against O3-Induced Injury In Vivo
Michelle L. Hernandez, MD, Katherine Mills, BA, Allison J. Barbank, Matthew J Kesic, PhD, Charity Duran, PhD and David B. Peden, MD, MS, FAAAAI, University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, NC, University of North Carolina Chapel Hill School of Medicine, Chapel Hill, NC, UNC School of Medicine, Chapel Hill, NC, Methodist University, Fayetteville, NC, Office 6544, Campus Box 7310, University of North Carolina at Chapel Hill School Medicine, NC

106 The Relevance of Residual Environmental to Atopy Prevalence Based on Skin Prick Test in Rural Community Cohort in Korea
Eun-Jin Kim, PhD, Division of Allergy and Chronic Respiratory Diseases, Department of Biomedical Sciences, Korea National Institute of Health, Osong Health Technology Administration Complex, Osong, South Korea, Danyou Yoon, Korea Institute of Health, South Korea, Hye-Sun Lim, Korea National Institute of Health, South Korea, Jeon-Kyu Lee, Korea National Institute of Health, South Korea, Jeon-Kyu Lee, Korea National Institute of Health, South Korea, Jeon-Kyu Lee, Korea National Institute of Health, South Korea, Jeon-Kyu Lee, Korea National Institute of Health, South Korea, Jeon-Kyu Lee.
Health, South Korea and Joo Shil Lee, PhD, National Institute of Health, Seoul

107 Ultraviolet Index Is Associated with the Prevalence of Eczema in Boys

Koichi Yoshida, MD1; Mari Sasaki, MD1; Yuichi Adachi, MD, PhD2; Emi Kawaguchi, MD3; Masayuki Akashi, MD4; Yukihiro Ohya, MD, PhD5; Hiroshi Odajima, MD, PhD6 and Akira Akasawa, MD, PhD7. 1Division of Allergy, Tokyo Metropolitan Children’s Medical Center, Tokyo, Japan; 2Department of Pediatrics, University of Toyama, Toyama, Japan; 3Clinical Research Support Center, Tokyo Metropolitan Children’s Medical Center, Tokyo, Japan; 4Department of Pediatrics, Saitama City Hospital, Saitama, Japan; 5Division of Allergy, National Center for Child Health and Development, Japan; 6Fukuoka National Hospital, Fukuoka, Japan

108 Occupational Contact Urticaria to Cow’s Milk in the Absence of Cow’s Milk Allergy in a Cheese-maker

Claire Mailhol, Department of Pulmonology and Allergology, Toulouse Cedex 9, France. Anne Marie Rabain, Department of Pulmonology and Allergology, Julie Herry, Department of Occupational Medicine, Fabienne Canteille-Mathab, Cabinet medical 4 boulevard Pierre Benoît, Rodez, France and Alain Didier, MD, PhD, Larrey Hospital, CHU, Toulouse, France

109 Hymenoptera Venom-Induced Anaphylaxis in Acute Care Settings

Stephanie Eng, MD1,2 and Magee L. DeFelice, MD1,2,1 Thomas Jefferson University Hospital, Philadelphia, PA; 2Nemours/A.I duPont Hospital for Children, Wilmington, DE

110 Observational Study in Patients with Hymenoptera Allergy: Role of Occupational Exposure, Allergen Immunotherapy, and Indications for Prevention

Alessandra Teletoni1, Susanna Voltoolini, MD2, Donatella Bignardi2, Paola Minale2, Costantino Troise, MD2, Giovanni Passalacqua, MD2, Guglielmo Dinì1, Emanuela Massal1, Alessio Signori1 and Paolo Durando2. 1Department of Health Sciences, Postgraduate School in Occupational Medicine, Genoa, Italy; 2Allergy Unit, Genoa, Italy. 3Allergy Unit, Genova, Italy. 4Allergy and Respiratory Diseases, IRCCS San Martino Hospital-IST-University of Genova, Italy. 5Department of Health Sciences, Istatistics Unit, Genova, Italy

Drug Allergy Diagnosis and Management

FADDA

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111 Value of Basophil Activation Test for Evaluating Immediate Reactions to Proton Pump Inhibitors

Maria Salas, MD, PhD1; Esther Barrionuevo, MD, PhD2; Immaculada Doña, MD, PhD3; Oliver Muñoz-Duga4; Francisca Gómez, MD, PhD5; Tahia D. Fernandez, PhD6; Adriana Ariza, PhD2; Maria Isabel Montañéz, PhD6, Cristina Mayorga, PhD1,2; Miguel Blanco, MD, PhD2,3 and María José Torres, MD, PhD7. 1Allergy Unit, IBIMA-Regional University Hospital of Malaga, Malaga, Spain; 2Malaga, Spain; 3Allergy Unit, IMIB, Regional University Hospital of Malaga, UMA, Malaga, Spain; 4IMABIS Foundation, Malaga, Spain; 5Allergy Unit, Regional University Hospital of Malaga-IBIMA, UMA, Malaga, Spain; 6Research Laboratory, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain; 7BIONAND-Andalusian Centre for Nanomedicine and Biotechnology, Spain. 8Allergy Unit, IMIB-University Hospital of Malaga, Málaga, Spain; 9Allergy Service, Carlos Haya Hospital, Málaga, Spain; 10Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain

112 Evaluated the Diagnostic Utility of Interferon-Gamma Enzyme-Linked Immunospot (ELISPOT) Assays in 117 Patients with Non-Immediate Drug Hypersensitivity Reactions

Suda Punnit1,2, Patarawat Thanitvorasit, MSc3, Pungjai Mongkolpathumrat4 and Jettanong Khawongsak, MDM;5,1 Division of Allergy and Clinical Immunology, Department of Medicine, Faculty of Medicine, Allergy and Clinical Immunology Research Group, Chulalongkorn University, Bangkok, Thailand; 2Queen Saovabha Memorial Institute, The Thai Red Cross Society, Bangkok, Thailand; 3King Chulalongkorn Memorial Hospital, The Thai Red Cross Society, Bangkok, Thailand; 4Chulalongkorn University, Faculty of Medicine, Department of Medicine, Division of Allergy and Clinical Immunology, Chulalongkorn Allergy and Clinical Immunology Research Group, Bangkok, Thailand; 5King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Thailand

113 Diagnostic Tests in Hypersensitivity to Oxaliplatin Beyond Clinical History

Paula Lopez-Gonzalez, MD, Ricardo Madrigal-Buragalet, MD, Pilar Berges-Gimeno, PhD, Emilio Solano-Solares, MD, Laura Carpio-Escalona, MD and Emilio Alvarez-Cuesta, MD, PhD, Ramon y Cajal University Hospital, Madrid, Spain

114 Determining Non-Irritating Concentration for Intradermal Skin Test with Commonly Prescribed Antibiotics in Korean Adults

Ha Kyeeong Won1,2, Min-Suk Yang, MD, PhD1,2, Woo-Jun Song, MD1,2, Yoon-Seok Chang, MD, PhD1,2, Sang Heon Cho, MD, PhD1,2, Heung-Woo Park, MD, PhD1,2 and Kyung-Up Min, MD, PhD1,2. 1Department of Internal Medicine, Seoul National University College of Medicine, Seoul, South Korea; 2Institute of Allergy and Clinical Immunology, Seoul National University Medical Research Center. Seoul, South Korea; 3SMG-SNU Boramae Medical Center, Seoul, South Korea. 4Department of Internal Medicine, Seoul National University Bundang Hospital, Seongnam, South Korea

115 The Effect of Penicillin Allergy Testing on Future Healthcare Utilization and Morbidity: A Case-Control Study

Eric M. Macy, MD, FAAAAI, SCMPG Department of Allergy and Yu-Hsiang Shu, MS PhD, Kaiser Permanente Southern California

116 The Effect of a Penicillin Allergy Algorithm on Perioperative Antibiotic Choice

Joseph A. Grillo, MD, Nemours A.I. du Pont Hospital for Children, Wilmington, DE, Karen Ravin, MD, Nemours/A.I. duPont Hospital for Children and Magee L. DeFelice, MD, Nemours/A.I. duPont Hospital for Children, Wilmington, DE

117 Safety of Two-Step Graded Challenges to Beta-Lactams Using a Single-Blinded Placebo-Controlled Protocol

Melissa Iannatone, MD1,2,3, Denise Ferarosa, MD, MSC2,3, Santiago Alvarez Arango, MD1,2,3, Niharka Thota, MD2, Ayobami Akenroye, MD2, MPH2 and Elina Jerschow, MD, MSC1,2. 1Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY; 2Albert Einstein/Montefiore Medical College, Bronx, NY, 3Albert Einstein College of Medicine, Bronx, NY

118 Aminocillin Challenges in Marine Recruits Reporting Penicillin Allergy

Jeremy D. Waldram, MD, Scripps Clinic, San Diego, CA and Mark H. Tucker, MD, Naval Branch Health Clinic, Bonita, CA

119 Outcomes and Safety of Single-Step and Multi-Step Antibiotic Drug Challenges

Stephanie L. Mawhirt, DO1, Luz S. Fonacier, MD, FAAAAI1, Rose Calixte, PhD2, Mark A. Davis-Lorton, MD, FAAAAI1 and Marcela R. Aquino, MD, FAAAAI1. 1Winthrop University Hospital, Allergy & Immunology, Mineola, NY; 2Winthrop University Hospital, Mineola, NY
120 Graded Escalating Doses of Trimethoprim-Sulfamethoxazole in Immunocompetent Patients with Previous History of Delayed Rash to Sulfon Antimicrobials

Vuong A. Nayima, DO, University of Alabama - Birmingham, Birmingham, AL and John T. Anderson, MD, University of Alabama at Birmingham, Birmingham, AL

121 Evaluating Risk Factors for a Positive Oral Challenge Despite Negative Penicillin Skin Testing

Megan S. Motosu, MD,1 Sara M. May, MD,1 Jay Jin, MD, PhD1 and Miguel A. Park, MD,2,1 Mayo Clinic, Rochester, MN, 1Department of Internal Medicine: Division of Allergic Diseases, Mayo Clinic. Rochester, MN

122 A Case of Urticaria to Lansoprazole, Confirmed By Challenge

Anita N. Wanas, MD, Allergy and Asthma Center, Landsdowne, VA and Anil Nanda, MD, Ashma and Allergy Center, Lewisville, TX; UT-Southwestern Medical Center, Dallas, TX

123 Reaction Doses in Aspirin Desensitization for Aspirin-Exacerbated Respiratory Disease

Charles Schuler, MD, University of Michigan, Dept of Internal Medicine, Ann Arbor, MI, James L. Baldwin, MD, FAAAAI, University of Michigan Allergy Immunology Specialty Clinic, Ann Arbor, MI and Alan P. Baptista, MD, MPH, FAAAAI, University of Michigan, Division of Allergy and Clinical Immunology, Ann Arbor, MI

124 AERD: A Composite Symptom Score to Identify Positive Aspirin/NSAID Challenges

Kevin A. Cook, MD,1 Nathan Wineinger, PhD2, Kristen M Duzy, MD,1 Katharine M. Woessner, MD, FAAAAI,1 Ronald A. Simon, MD, FAAAAI1 and Andrew White, MD, FAAAAI1, 1Scripps Clinic, San Diego, CA, 2Scripps Translational Science Institute, San Diego, CA

125 The Investigation of Suspected Beta-Lactam Allergy in Children: Comparison of Contemporary Clinical Practice By International Specialists

Ruxin M. Foong1, Kirsty Logan1, Michael Perkin1 and George Du Toit, MD, FAAAAI2, 1Department of Paediatric Allergy, London, United Kingdom, 2St Thomas’ Hospital, London, United Kingdom

126 Hypersensitivity Reactions to Rituximab: 53 Successful Desensitizations in 7 Patients with Severe, Near-Fatal Reactions

Yuval Tal, MD, PhD1, Dina Ben Yehuda, MD,2 Meir Shaltit, MD, FAAAAI and Eyal Lebel, MD,3,4 Allergy and Clinical Immunology Unit, Department of Medicine, Hadassah Hebrew University Medical Center, Jerusalem, Israel, 3Department of Hematology, Hadassah-Hebrew University Medical Center, Jerusalem, Israel

127 Experience with Desensitizations to Taxanes in an Allergy Department in Madrid (Spain)

Mercedes Sánchez de Santa Maria, MD, Gabriela Zambrano, MD, Maria L. Baeza, MD, PhD, Sonsoles Infante, MD, Alberto Alvarez-Pereira, MD and Pilar Tornero, MD, Hospital General Universitario Gregorio Marañón, Allergy Department, Madrid, Spain

128 Anaphylactic Shock Caused By Moxidectin without Cross-Reactivity to Other Fluoroquinolones

Rung-chi Li, DO, PhD, Department of Internal medicine, The Christ Hospital, Cincinnati, OH and Jonathan A. Bernstein, MD, University of Cincinnati College of Medicine, Cincinnati, OH; University of Cincinnati College of Medicine, Cincinnati, OH

129 Descriptive Analysis of Patients with Allergic Reactions to Fluoroquinolones

Esther Barrionuevo, MD, PhD1, Immaculada Doia, MD, PhD2, Francisca Gómez, MD, PhD3, Oliver Muñoz-Daga4, Arturo Ruiz, MD5, Antonio Guzmán5, María Auxiliadora Guerrero5, María Dolores Ruiz6, Rosa García6, Miguel Blanca, MD, PhD6 and María José Torres, MD, PhD6, 1Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Málaga, Spain, 2Allergy Service, IBIMA-Regional University Hospital of Malaga-UMA, Málaga, Spain, 3Allergy Unit, IBIMA-Regional University Hospital of Malaga, Málaga, Spain, 4Allergy Unit, Regional University Hospital of Malaga-IBIMA, UMA, Málaga, Spain, 5Allergy Unit, Regional University Hospital of Málaga-IBIMA, UMA, Málaga, Spain, 6Allergy Service, IBIMA-Regional University Hospital of Malaga, Málaga, Spain, 7Allergy Service- Carlos Haya hospital. Spain, Malaga, Spain, 8Allergy Unit, Regional University Hospital of Malaga-IBIMA, UMA, Málaga, Spain

130 Effectiveness of Premedication and Rapid Desensitization in Hypersensitivity to L-Asparaginase

Jin-Tack Kim, MD, PhD, Department of Pediatrics, Uijeongbu St. Mary’s Hospital, The Catholic University of Korea, College of Medicine, Uijeongbu, Gyeonggi-Do, South Korea, Hwan Soo Kim, MD, Dept of Pediatrics, College of Medicine, The Catholic University of Korea, Yoon Hong Chun, MD, Dept. of Pediatrics, College of Medicine, The Catholic University of Korea, Jong-seo Yoon, MD, PhD, Dept. of Pediatrics, The Catholic University of Korea and Hyun Hee Kim, MD, Department of Pediatrics, The Catholic University of Korea College of Medicine, Bucheon-si, South Korea

131 An Adolescent Male Presenting with Nonpigmenting Fixed Drug Eruption to Ceftriaxone

Adam Byrne, MSc, MD, McGill University; Montreal Children’s Hospital and Moshe Ben-Shoshan, MD, MSc, The Research Institute of the McGill University Health Centre, Meakins-Christie Laboratories. Division of Paediatric Allergy and Clinical Immunology, Department of Pediatrics, Montreal Children’s Hospital, Montreal, QC, Canada

132 Diagnosis and Management of Infusion-Related Hypersensitivity Reactions to Enzyme Replacement Therapy for Lysosomal Diseases: The Role of Desensitization

Carolino Sanchez Aranda1, Luis Felipe C. Ensinia, MD2, Inês Camelo Nunes2, Marcia Mallozi, MD1, Ana Maria Martins3 and Direceu Sole, MD, PhD, FAAAAI1, 1Federal University of São Paulo, São Paulo, Brazil, 2Universidade Federal de São Paulo, São Paulo, Brazil, 3Federal University of São Paulo

133 The Role of Carbapenems and Cephalosporines in Patients with Confirmed Penicillin Allergy

Monu Sulaiman Al-Ahmad, MD, Department of Microbiology, Faculty of Medicine, Kuwait University, Kuwait and Tito Rodriguez Bouza, Drug Allergy Unit, Department of Allergy, Al-Rashed Allergy Center, Kuwait, Kuwait

134 A Case Report of Dress with Prolonged Latency Period Related to Zonisamide in a Child

Fatima Khan, Newbath Israeli Medical Center, NJ and Joel Mendelson, MD, Newbath Israeli Medical Center

135 Retrospective Review of Beta Lactam Allergy Prevalence in a Referral Population

Andrew Wakeman, BSc(Hon), University College Dublin, Alexander Singer, MB, BaO, BCh, CCFP, University of Manitoba, Department of Family Medicine, Manitoba Primary Care Research Network, Winnipeg, MB, Canada, Eilis Marie Amling, MD, FRCP, University of Manitoba, Department of Paediatrics and Child Health, Section of Allergy and Immunology, Winnipeg, MB, Canada and Thomas V. Gerster, MD, FRCP, University of Manitoba, Department of Paediatrics and Child Health, Section of Allergy and Immunology

136 Perioperative Use of Cefazolin in Patients with Reported Penicillin Allergy

Allison Ramsey, MD, Mary Staicu, PharmD and Leanna Liu, PharmD, Rochester General Hospital

137 Patients Taking Amoxicillin-Clavulanic Can Become Simultaneously Sensitized to Both Drugs

Adriana Ariza, PhD1, Tahia D. Fernandez, PhD1, Cristobalina Mayorga, PhD2, María Salas, MD, PhD, Nekane Barbero, PhD2, María Isabel Montañés, PhD2, Ángela Martín-Serrano1, Ruben Fernandez2, Luisa Galindo, RN1, Miguel Blanca, MD, PhD2 and
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Maria José Torres, MD, PhD, Research Laboratory, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain, *Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Málaga, Spain, 1BIONAND-Andalusian Centre for Nanomedicine and Biotechnology; Department of Organic Chemistry, IBIMA, UMA, Malaga, Spain, *Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, *Allergy Service, IBIMA-Regional University Hospital of Malaga-UMA, Málaga, Spain.

138 Morbidity in Pregnant Women with Group-B Streptococcus Infection and Unverified Penicillin Allergy
Shilpa Desai, MD,1 Qiaoqiong Chen, MS,2 Michael S. Kaplan, MD, FAAAI,3 Scott Rasgon, MD,4 and Eric M. Macy, MD, FAAAI,4 1Kaiser Permanente Los Angeles Medical Center, Los Angeles, CA, 2Kaiser Permanente Department of Research and Evaluation, Pasadena, CA, 3Kaiser Permanente Los Angeles Medical Center, 4Kaiser Permanente Health Care Program, Department of Research and Evaluation, Pasadena, CA.

139 Hypersensitivity to Butyrlcopolamine: A Case Report
Francisco Javier Iglesias-Souto, Allergy Department, Olga Arbazagotia, Allergy Department and Jacob Rosquete, Internal Medicine Department, Hospitien Sur, Tenerife, Spain.

140 Immune-Mediated Reactions to Vancomycin: A Systematic Review
Jasmit S. Minhas, MD,1 Paige G. Wickner, MD, MPH,2 Aidan A. Long, MD, FAAAI,3 Aleena Banerji, MD,4 and Kimberly G Blumenthal, MD,5 1Lahey Hospital & Medical Center, Tufts University School of Medicine, Burlington, MA, 2Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Chestnut Hill, MA, 3Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, 4Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, MA.

141 Peer Survey of Alert Fatigue in Physicians in a Large Inner City Training Hospital: Does It Affect Drug Allergy Surveillance?
Adam El Schamy, MD,1,2 Naureen Kabani, MD,1 Amanda Nussdorf, BS,3 YiFeng Chen, MD,4 and Rauno Joks, MD,5,6 1Department of Medicine, 2Center for Allergy and Asthma Research, 3College of Medicine, SUNY Downstate Medical Center, Brooklyn, NY, 4Department of Medicine at SUNY Downstate Medical Center, Brooklyn, NY, 5Center for Allergy and Asthma Research, Brooklyn, NY, 6Department of Medicine, SUNY Downstate Medical Center, Brooklyn, NY.

142 Fixed Drug Eruption to Arylpropionic Acids
Abdonias Rodriguez Gamboa, MD,1 Dasha Roa Medellin, MD,2 Margarita Acevedo Matos, MD,3 Blanca Noguerado, MD,4 Patricia Rojas, MD5 and Manuel De Barrio, MD,6 1Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain, 2Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain, 3Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain, 4Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain, 5Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain, 6Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain.

143 Etioles and Clinical Characteristics of 97 Patients Diagnosed with Severe Cutaneous Adverse Reactions from Six Tertiary Medical Centers in Thailand
Jettawong Klaewsongkram, MD,1,2 Pawinee Rerknimitr, MD,3,7 Ticha Rerkpattanapiphat, MD,4 Kumutna Champraph, MD,4 Papapat Tuchinda, MD,4 Leena Chudatvanamontri, MD,4 Napatra Tovanabutra, MD,5 Warapirote Disphanurat, MD,5 Panlop Chakkavitutthong, MD,6 Chuttika Srisuttiyakorn, MD,7 Pattarawat Thanitwongsri, MD,8 Chonlaphat Sukasem, B. Pharm, PhD,9 and Yuttana Sirinouplprasert, MD, PhD,2 1Division of Allergy and Clinical Immunology, Department of Medicine, Faculty of Medicine, Allergy and Clinical Immunology Research Group, Chulalongkorn University, Bangkok, Thailand, 2King Chulalongkorn Memorial Hospital, Thai Red Cross Society, Bangkok, Thailand, 3Division of Dermatology, Department of Medicine, Faculty of Medicine, Chulalongkorn University, 4Allergy Immunology and Rheumatology Division, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, 5Division of Dermatology, Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, 6Division of Dermatology, Faculty of Medicine, Siriraj Hospital, Mahidol University, 7Department of Dermatology, Faculty of Medicine, Siriraj Hospital, Mahidol University, 8Department of Internal Medicine, Chiang Mai University, 9Dermatology Unit, Department of Medicine, Faculty of Medicine, Thammasat University, 10Division of Dermatology, Department of Medicine, Phramongkutklao Hospital, 11Division of Pharmacogenomics and Personalized Medicine, 12Department of Immunology, Faculty of Medicine Siriraj Hospital, Mahidol University.

144 Epidemiology and Incidence of ACE Inhibitor Angioedema Utilizing a Large Electronic Health Record
Aleena Banerji, MD, Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, MA, Kimberly G Blumenthal, MD, Allergy and Immunology, Division of Rheumatology, Allergy, and Immunology, Medical Practice Evaluation Center, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, Kenneth H Lai, MA, Partners HealthCare System, Boston, MA and Li Zhou, MD, PhD, Harvard Medical School, Boston, MA

145 The Low Expression of Tim-3 in Patients with Maculopapular Exanthema (EMP) Induced by Drugs Can Impaired Disease Control
Tabitha D. Fernandez, PhD,1 Francisca Palomares, PhD,1 Maria Salas, MD, PhD,2 Immaculada Doña, MD, PhD,3 Esther Barrios, MD, PhD,4 Adriana Ariza, PhD,5 Raquel Jurado, MD,6 Miguel Blanca, MD, PhD,6 Cristobalina Mayorga, PhD,7 and Maria José Torres, MD, PhD,5 1Research Laboratory, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain, 2Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 3Allergy Unit, Regional University Hospital of Malaga-IBIMA-UMA, Málaga, Spain, 4Allergy Unit, IBIMA-University Hospital of Malaga, Malaga, Spain

146 Allergy to Benznidazole: Cross-Reactivity with Other Nitroimidazoles
Blanca Noguerado, MD, Allergy Department. Hospital General Universitario Gregorio Marañon, Madrid, Spain, Patricia Rojas, MD, Hospital General Universitario Gregorio Marañon, Department of Allergy, Madrid, Spain, Maria Calderon, MD, Internal Medicine Department. Hospital General Universitario Gregorio Marañon, Cristina Morales, MD, Department of Allergy, Gregorio Marañon University Hospital, Madrid, Spain and Pilar Torrento, MD, Allergy Department. Hospital General Universitario Gregorio Marañon

147 Allergy to Iparparin
Francisco Javier Ruano Pérez, MD,1 Diana Perez Alzate, MD,2 Natalia Blanca Lopez, MD, PhD,3 Maria Luisa Somoza, MD,4 Maria Vazquez De La Torre, MD,5 Maria Isabel Garciamarin, MD,6 Elisa Haroun, MD,7 and Gabriela Canto, MD, PhD,7 1Infanta Leonor - University Hospital, Madrid, Spain, 2Allergy Unit. Infanta Leonor University Hospital, Madrid, Spain, 3Infanta Leonor University Hospital, Madrid, Spain, 4Infanta Leonor University Hospital, Madrid, Spain

148 Allergy Patterns in a Tertiary Care Referral Center
Maria A. Barcena Blanch, MD, Cleveland Clinic Foundation, Cleveland, OH, Julie T. Abraham, MD, Cleveland Clinic, Cleveland, OH and David M. Lang, MD, FAAAI, 9500 Euclid Avenue - A90, Cleveland Clinic, Cleveland, OH

149 Allergic Reactions to Dipyrone: Immediate and Non-Immediate Responses
Immaculada Doña, MD, PhD,1 Francisca Gómez, MD, PhD,2 Tabitha D. Fernandez, PhD,3 Adriana Ariza, PhD,4 Arturo Ruiz, MD,4
**Anaphylaxis and Venom Immunotherapy**

**FADDA**

Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

**152 Systemic Reactions to Aeroallergen Immunotherapy: A Retrospective Review of Our Practice**

Matthew T. Tallar, MD,1 Leslie M. Gimenez, MD, FAAAI,2 Heidi T. V. Zafra, MD, FAAAAP,2 and Asrani M. Chiu, MD, FAAAAP,2 1Medical College of Wisconsin, 2Medical College of Wisconsin, Milwaukee, WI.

**153 Safety and Efficacy of Hymenoptera and Fire Ant Rash Immunotherapy in Children**

Wiparat Manuyakorn, MD, PhD, Swatit Benjaponpitak, MD, Wasu Kamchaisathan, MD, Cherapat Sasissukpor, BSc, and Wanlapa Teawsomboonkit, RN, Division of Pediatric Allergy and Immunology, Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand.

**154 Analysis of Venom Hypersensitivity Reactions and Subsequent Preventative Management in VA Patient Population**

Priya J. Patel, MD, Rutgers - New Jersey Medical School, Newark, NJ and Alan H. Wolff, MD, Rutgers New Jersey Medical Center, Newark, NJ.

**155 Platelet Activating Factor Acetylhydrolase Levels at Baseline and during Allergic Reactions**

Jacob D. Kattan, MD,1 Thomas Kraus, PhD,2 Thomas Morin, PhD,2 and Hugh A. Sampson, MD, FAAAAI,1 1Icahn School of Medicine at Mount Sinai, New York, NY, 2Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY, USA.

**156 Baseline CD63 Expression in Patients with Exercise Induced Anaphylaxis (EIA)**

Liat Nachshon, MD1, Moshe Appel, PhD1, Michael R Goldberg, MD, PhD,2 Arnon Elizur, MD1,2 and Yitzhak Katz, MD, FAAAAI1,2, 1Assaf Harofeh Medical Center, Zerifin, Israel, 2Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel.

**157 Exercise-Induced Anaphylaxis Successfully Treated with Hydroxychloroquine**

Aaron K. Kobernick, MD, MPH, University of North Carolina, Chapel Hill, NC and Maya R. Jerath, MD, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC.

**158 Wheat-Dependent, Exercise-Induced Anaphylaxis Can Be Elicited without Exercise (And With Other Co-factors)**

Morten J. Christiansen, MD,1,2, Ebene Eiller, MSc, PhD,1,2, Charlotte G Moriz, MD, PhD,1,2, Knut Brokow, MD,1,2 and Carsten Bindslev-Jensen, MD, PhD, DMSc, FAAAAP,1,2 1Department of Dermatology and Allergy Center, Odense University Hospital, Odense, Denmark, 2Odense Research Center for Anaphylaxis (ORCA), Odense, Denmark.

**159 Pretreatment with Ibrutinib, a Bruton’s Tyrosine Kinase Inhibitor, Reduces Passive Systemic Anaphylaxis in a Murine Model**

Jennifer A. Regan, MD, PhD, Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, IL, Rebecca Kriker-Burris, MS, Northwestern University, Jeremy O’Sullivan, PhD, Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Paul Bryce, PhD, Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL and Bruce S. Bochner, MD, FAAAAI, Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL.

**160 Optimal Needle Length of Epinephrine Prefilled Syringe in Thai Infants**

Bunlita Bamrungmuangkasem, MD,1 Wiparat Manuyakorn, MD, PhD,1 Nichanan Ruangwanataapiitarn, MD,2 Swatit Benjaponpitak, MD,3 and Wasu Kamchaisathan, MD,1 1Division of Pediatric Allergy and Immunology, Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand, 2Department of Radiology, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand.

**161 Effects of Intramuscular Epinephrine on Cardiovascular Parameters during IgE-Mediated Allergic Reactions to Peanut Monica Ruiz-Garcia, MD,1 Carl Hayward, MD, PhD,2 Alistair Tang, BSc,2 Andrew Clark, MRCPCH MD,3 Isabel J. Skyplata, PhD, RD,4 Stephen R. Durham, MA, MD, FRCP,5 Alexander R Lyon, PhD, FRCP,6 Robert J. Boyle, MBChB PhD,7 and Paul J. Turner, FRACP, PhD,8 1Imperial College London, United Kingdom, 2National Heart and Lung Institute, Imperial College London, United Kingdom, 3Department of Medicine, University of Cambridge, Cambridge, United Kingdom, 4Royal Brompton and Harefield NHS Foundation Trust, London, United Kingdom, 5Section of Paediatrics, Imperial College London, United Kingdom, 6University of Sydney, Australia.

**162 Correct Use of Epinephrine Autoinjectors in Relation to Health Literacy in Patients with Food Allergies**

Maureen Egan, MD and Julie Wang, MD, FAAAAI, Icahn School of Medicine at Mount Sinai, New York, NY.

**163 When Is Epinephrine Used in Anaphylaxis?**

Alberto Alvarez-Perea, MD, Margarita Tomás-Pérez, MD, Beatriz Ameiro, MD, Patricia Martínez-Leganza, MD, Gabriela Zambraño, MD and Maria L. Baera, MD, PhD, Hospital General Universitario Gregorio Marañón, Allergy Department, Madrid, Spain.

**164 Prescription of Epinephrine Autoinjectors to Children with Food Allergies in a General Pediatric Clinic**

Tamar Weinberger,1 Ari Zelig, MD2, Allison Gauld, MD1 and Julie Wang, MD, FAAAAI1,1 Icahn School of Medicine at Mount Sinai, New York, NY, 2Albert Einstein College of Medicine, Bronx, NY.
165 Epinephrine Use in the New York City Public School District Elizabeth Feille, MD,1 Cheryl Lawrence,2 Caroline Vele1, Scott H. Sieherer, MD, FAAAAI,4 and Julie Wang, MD, FAAAAI,1
1Icahn School of Medicine at Mount Sinai, New York, NY, 2Office of School Health, New York City Department of Health and Mental Hygiene, New York, NY, 3Mailman School of Public Health, Columbia University, 4Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY, New York, NY

166 Epinephrine Use in Schools for Food-Induced Anaphylaxis Angela Tsang, MD, MSc,2 Haidi Demain2, Kathleen Patrick, RN,2 Michael Pistorier, MD, MMSc4 and Julie Wang, MD, FAAAAI,1
1The Icahn School of Medicine at Mount Sinai, New York, NY, 2Founder and Medical Director of Allergy Safe Kids, Inc, Denver, CO, 3Assistant Director of Health & Wellness, Colorado Department of Education, Denver, CO, 4Harvard Vanguard Medical Associates, Boston, MA

167 EPIPENSCHOOLS® Survey Combined Analysis: Prevalence and Triggers of Anaphylactic Events Martha V. White, MD, CPI, Suyapa Silvia, PhD2, Kelly Hollis, MBA3, Margaret J. Woodrell, PhD, MBA4, Diana Goss, BS5, Dawn Odom, MS6, Jennifer Bartsch, MStat2 and Susan L. Hogue, PharmD, MPH2, 1Institute for Asthma & Allergy, Wheaton, MD, 2RTI International, Research Triangle Park, NC, 3Mylan Specialty, Canonsburg, PA

168 EPIPENSCHOOLS® Survey Combined Analysis: Staff Training and Use of Epinephrine Auto-Injectors Susan L. Hogue, PharmD, MPH, Suyapa Silvia, PhD2, Kelly Hollis, MBA1, Margaret J. Woodrell, PhD, MBA4, Diana Goss, BS3, Dawn Odom, MS6, Darryl Cooney, MS1 and Martha V. White, MD, CPI1, RTI International, Research Triangle Park, NC, 3Mylan Specialty, Canonsburg, PA, 4Institute for Asthma & Allergy, Wheaton, MD

169 Likelihood of Having Self-Injectable Epinephrine in Adult and Pediatric Patients Presenting for Evaluation of Food Allergy Carolyn H. Baloh, MD,1 Daniel Winger, MS2, Tan Shankar, MD3, Merritt L. Fajt, MD1 and Todd David Green, MD, FAAAAI,1 1Children’s Hospital of Pittsburgh of UPMC, Pittsburgh, PA, 2UPMC, 3University of Pittsburgh Medical Center, Division of Pulmonology, Allergy and Critical Care Medicine, Pittsburgh, PA

170 Recurrent Idiopathic Anaphylaxis in a Woman after Suspected Food Poisoning Carl B. Lauter, MD, FAAAAI, Beaumont Health System, Royal Oak, MI

171 An Interdisciplinary Approach to Perioperative Anaphylaxis: A Tertiary Pediatric Center Experience Atossa Kouroush, MD, MPH, Karen Thursday S. Tuano, MD, Dipika Patel, MD, Nicholas Rider, DO, Sara Anwari, MD, Lenora M. Norski, MD, MPH, Kristin H. Dillard, MD and Filiz O. Seeborg, MD, MPH, Baylor College of Medicine and Texas Children’s Hospital, Department of Pediatrics, Section of Immunology, Allergy and Rheumatology, Houston, TX

172 Increasing Trends in the Nationwide Incidence of Anaphylaxis Visiting Emergency Room in Korea from 2007 to 2013 Young Min Ahn, MD, Eulji University School of Medicine, South Korea; Department of Pediatrics, South Korea, Eun-Hee Chung, Department of Pediatrics, National Medical Center, Seoul, South Korea, Yoon Kyung Won, National Medical Center, South Korea and Yoo Mi Chung, National medical center, South Korea

173 Analysis of Anaphylaxis Trigger Factors and Treatment during a Five Year Period in a Vilnius University Hospital Audra Blazien1, Neringa Buterleviciute2, Viktoria Paltarackiene2 and Lawrence M. DuBuske, MD, FAAAAI1,4, 1Vilnius University Medical School, Lithuania, 2Vilnius University Faculty of Medicine, Vilnius, Lithuania, 3George Washington University School of Medicine, Washington, DC, 4Immuno nitrogen Research Institute of New England, Gardner, MA

174 Accuracy of ICD-10 Coding for Anaphylaxis Monthida Udhairat, MD,1 Teeranai Sukalchit, MD2 and Pasurse Sangsupawanich, MD, PhD3, 1Prince of Songkla University, Hat-yai, Thailand, 2Prince of Songkla University, Hat-yai, Thailand

175 The Incidence of Anaphylaxis in a Large Health Maintenance Organization: A Review of International Classification of Diseases Coding and Epinephrine Auto-Injector Prescribing Deena Pourang, MD,1 Javed Sheikh, MD, FAAAAI,2 Shafali A. Samant, MD,1 Michael Bateh5 and Michael S. Kaplan, MD, FAAAAI,1,2Kaiser Permanente Los Angeles Medical Center, 2Kaiser Permanente Department of Research and Evaluation

176 Alpha-Gal Hypersensitivity: A Case Series from Good Ol’ Rocky Top Tennesse Mike Tankersley, MD, FAAAAI,1 Alan DeJarnatt, MD2 and Russ DeJarnatt,1 University of Tennessee Health Science Center, 2Allergy and Asthma Care

177 A Case of Idiopathic Systemic Capillary Leak Syndrome: Masquerader of Anaphylaxis – an Emblematic Case from a Cohort of 21 Patients Maddalena A. Wu1, Marta Mansi, MD2, Andrea Zanichelli1, Aver Reshef, MD2 and Marco Cicard1, 1Department of Biomedical and Clinical Sciences “Luigi Sacco”, University of Milan, Luigi Sacco Hospital, Milan, Italy, 2Allergy, Clinical Immunology & Angiocoedema Unit, Chaim Sheba Medical Center, Tel Hashomer, Israel

178 Comparison of Pediatric Anaphylaxis at Montreal Children’s Hospital and British Columbia Children’s Hospital: Rate, Clinical Characteristics, Triggers and Management Alison YM Lee, MD, Pediatric Residency Program, Department of Pediatrics, University of British Columbia, Vancouver, BC, Canada., Paul Enarson, MD, PhD, Division of Emergency Medicine, Department of Pediatrics, University of British Columbia, Vancouver, BC, Canada., Ann Clarke, MD, MSc, Division of Rheumatology, Department of Medicine, University of Calgary, Calgary, AB, Canada; Sebastian La Vieille, MD, Health Canada, Ottawa, ON, Canada; Food Directorate, Ottawa, ON, Canada, Harley Eiseman, MD, Emergency Department, Department of Pediatrics, Montreal Children’s Hospital, Montreal, QC, Canada, Edmond S. Chan, MD, FAAAAI, Division of Allergy & Immunology, Department of Pediatrics, Faculty of Medicine, University of British Columbia, BC Children’s Hospital, Vancouver, BC, Canada, Christopher Mill, BSc, MPH, University of British Columbia, Vancouver, BC, Canada, Lawrence Joseph, PhD, Division of Clinical Epidemiology, Department of Medicine, McGill University Health Center, Montreal, QC, Canada and Moshe Ben-Shoshan, Division of Allergy and Clinical Immunology, Department of Pediatrics, Montreal Children’s Hospital, Montreal, QC, Canada.

179 A Law Is Not Enough: Geographical Disparities in Stock Epinephrine Access in Kansas Marissa A. Love, MD, Madison Breeden, BS, Kyle Dack, BA, Alyssa Miller, BA, Andrew C. Rorie, MD and Selina A. Gierer, DO, University of Kansas Medical Center, Kansas City, KS

180 Anaphylaxis Cases Treated by out-of-Hospital EMS in Western Quebec Magdalena J. Grzyb, MD, Division of Pediatric Allergy & Clinical Immunology, McGill University, Montreal, QC, Canada, Ann Clarke, MD, MSc, Division of Rheumatology, Department of Medicine, University of Calgary, Calgary, AB, Canada, Nofar Kimchi, Technion American Medical Students Program, Israel, Colette Lachaine, Direction adjointe de services hôpitaux d’urgence, MSSS, Quebec, Canada, QC, Canada, Sebastian La Vieille, MD, Food Directorate, Ottawa, ON, Canada, Lawrence Joseph, PhD, McGill University, Montreal, QC, Canada, Christopher Mill, BSc, MPH, School of Population and Public Health, University of British Columbia, Vancouver, BC and Moshe Ben-Shoshan, MD, MSc, The Research Institute of the McGill
Innovations in the Prediction and Treatment of Allergic Diseases

HEDQ

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Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

184 The Economic Burden of Food Allergic Patients Managing at a Tertiary Care Center

Narissara Surattamnon, MD. Panida Swangsak, Janurchit Ngamphalawan, MD and Panpita Chatchatee, MD. Division of Allergy and Immunology, Department of Pediatrics, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

185 The Effect of Vitamin D Levels on Pediatric Allergic Diseases: A Nationwide Population-Based Study

Hea-Kyoung Yang1,2, Jaehee Choi1,2, Woo Kyung Kim3, So-Young Lee, MD4, Yong Mean Park5, Man-Yong Han, MD5, Hyung-II Hahn1, Yooni Chae1, Hye-young Kim1,2, Kang Mo Ahn, MD3,4, Ho-Jang Kwon, MD, PhD1,3,4,5, and Jihyun Kim, MD1,6,7. 1Department of Pediatrics, Samsung Medical Center, Sungkyunkwan University School of Medicine, 2Environmental Health Center for Atopic Diseases, Samsung Medical Center, Seoul, Korea, 3Environmental Health Center for Atopic Diseases, Samsung Medical Center, Seoul, Korea, 4Department of Pediatrics, Samsung Medical Center, Seoul, Korea, 5Department of Pediatrics, Inje University College of Medicine, Seoul, Korea, 6Department of Pediatrics, Hallym University Sacred Heart Hospital, Hallym University College of Medicine, 7Department of Pediatrics, Hallym University Sacred Heart Hospital, Anyang, South Korea, 8Kunkuk University Hospital, South Korea, 9CH A University Bundang Medical Center, Seongnam, South Korea, 10Department of Health Administration and Management, College of Medical Science, Soonchunhyang University, Asan, Korea, 11Department of Occupational and Environmental Medicine, College of Medicine, Dankook University, 12Department of Pediatrics, Pusan National University School of Medicine, Busan, Korea, 13Department of Pediatrics, Sungkyunkwan University School of Medicine, Seoul, Korea, 14Preventive Medicine, Dankook University College of Medicine, Cheonan, South Korea, 15Dankook University, Cheonan, 16Environmental Health Center for Atopic Diseases, Seoul, South Korea, 17Department of Pediatrics, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea

186 Clinical and Epidemiological Differences in Patients with Acute Urticaria and Chronic Urticaria

Mehtap Hakan Gubul, MD1, Fuat Orhan2, Zekiye Ilke Kilic Topcu2, Taner Karakas2 and Ali Baki3. 1Karadeniz Technical University Faculty of Medicine Department of Pediatric Immunology and Allergy, Trabzon, Turkey, 2Karadeniz Technical University Faculty of Medicine Department of Pediatric Immunology and Allergy, 3Karadeniz Technical University Faculty of Medicine Department of Pediatric Pulmonology

187 Gender- and Genetic-Dependent Sunlight Exposure Effects on the Cumulative Incidence of Atopic Dermatitis during Infancy

Miwa Shinohara, MD, PhD. Department of pediatrics, Ehime University Hospital, Ehime, Toon, Japan; Department of Pediatrics, Kochi University, Kochi, Nagumo, Japan, Eichi Ishii, Department of Pediatrics, Ehime University Graduated School of Medicine, Toon, Japan and Kenji Masumoto, MD, PhD, Department of Allergy and Clinical Immunology, National Research Institute for Child Health and Development, Tokyo, Japan

188 Creating a System to Track Allergic Reactions in Schools

Ruchi Gupta, MD, MPH1, Marjorie Yarbrough, MPH2, and Bridget Smith, PhD2,3. 1Northwestern University Feinberg School of Medicine, Chicago, IL, 2Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 3Northwestern School of Medicine, Northwestern University, Edward J. Hines Jr. VA Hospital, Chicago, IL

189 Impact of Maternal Oral Contraceptive Pills on Wheeze and Allergic Outcomes in 5-Year-Olds: A Prospective Birth Cohort Study in Japan.

Kiwako Yamamoto-Hanada, MD1, Linlin Yang2, Tetsuo Shoda, MD, PhD3, Osamu Natsume, MD, Masami Narita, MD, PhD3 and Yukihito Oishi, MD, PhD3. 1Division of Allergy, National Center for Child Health and Development, Tokyo, Japan, 2Division of Allergy, National Center for Child Health and Development, Japan

190 Determination of the Accurate Food Allergy Prevalence and Correction of Unnecessary Food Elimination

Yuki Okada, MD, Niijima Clinic, Tokyo, Japan; Department of General Pediatrics,Tokyo Metropolitan Childrens Medical Center, Tokyo, Japan, Takumi Yamashita, Shikinokuma Clinic, Tokyo Metropolitan Bokuchu Hospital, Hidemi Kumagai, Department of Pediatrics, Jichi Medical University, Tochigi, Japan, Yashiko Morikawa, Clinical Research Support Center, Tokyo Metropolitan Childrens Medical Center and Akira Akasawa, MD, PhD, Division of Allergy, Tokyo Metropolitan Childrens Medical Center

191 Relationship of Influenza Virus Infection and Complications from Viral/Bacterial Infections in a Community Based Setting

Yitzchok M. Norowitz, BS4, Tamra A. Smith-Norowitz, PhD5 and Stephan Kohlhoff, MD1. 1Department of Pediatrics, State University of New York Downstate Medical Center, Brooklyn, NY, 2Department of Pediatrics, SUNY Downstate Medical Center, Brooklyn, NY

192 The Association Between Maternal Depression and Child Allergic Disease

Ju-Suk Lee, MD, PhD. Samsung Changwon hospital; Sungkyunkwan university, Changwon, South Korea, Cheol Hong Kim, MD, International St. Mary Hospital and Jin-A Jung, MD, Dong-A University College of Medicine, Busan, South Korea
The Passive Smoking Is an Important Risk Factor of Allergic Diseases in Korean Adolescents
Kyung Suk Lee, MD, PhD, Department of Pediatrics, CHA University Bundang Medical Center, Seongnam, South Korea, Man-Yong Han, MD, CHA University Bundang Medical Center, Seongnam, South Korea, Jun-Hyak Song, MD, Department of Pediatrics, Myongji Hospital, Gyeonggi-si, South Korea, Sun Hee Choi, MD, PhD, Kyung Hee University Hospital at Gangdong, Seoul, South Korea and Yoong-Ho Rha, MD, PhD, Kyung Hee University Hospital, Seoul, South Korea

No Association Between Atopic Outcomes and Pertussis Vaccine Given in Children Born on the Isle of Wight 2001-2
Carina Venter, PhD, RD, BA (Hons)1, Julia Stowe, BA (Hons)2, Nick Andrews, PhD3, Elizabeth Miller, FRCPb and Paul J. Turner, FRACP, PhDc, 1Division of Allergy and Immunology, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, University of Cincinnati, Cincinnati, Ohio, USA; Cincinnati, OH, 2University of Portsmouth, United Kingdom, 3Public Health England, United Kingdom, 4Section of Paediatrics, Imperial College London, United Kingdom, 5Imperial College London, United Kingdom

Immunotherapy, Anaphylaxis
IRSO
2210
Saturday, March 5th, 2016, 9:45 AM - 10:45 AM
Epit Prevents from the Induction of Anaphylaxis to Further Allergens: Role of Naive Tregs
Lucie Mondoulet, PhD1, Vincent Dioszeghy, PhD1, Emilie Pautem1, Mélanie Ligois1, Véronique Dheiti1, Camille Plaquer1, Christophe Dupont, MD, PhD2 and Pierre-Henri Benhamou, MD1, 1DBV Technologies, Bagneux, France, 2Hospital Necker Enfants Malades, Paris, France
Altered Serum IgE and IgG4 Response to Dermatophagoides Pteronyssinus Allergens during Specific Immunotherapy
Baoqing Sun, MHA, The First Affiliated Hospital of Guangzhou, Guangzhou, China and Zheng Peiyian, State Key Laboratory of Respiratory Disease, National Clinical Center for Respiratory Diseases, Guangzhou Institute of Respiratory Diseases, First Affiliated Hospital, Guangzhou Medical University, Guangzhou, China
Conjunctival Provocation Test in Daily Practice: Four Ocular Symptoms Vs Ocular Pruritus Score System
Carmen Rondon, MD, PhD1, Paloma Campo, MD, PhD2, Esther Barriumeo, MD, PhD2, Ana Prieto del Prado, MD2, Gador Bogas, MD1, Arturo Ruiz, MD1, Maria Auxiliadora Guerrero1, Leticia Herrero1, Pedro A Galindo1, Diana Perez-Azate1, MD2 and Miguel Blanco, MD, PhD1, 1Allergy Unit, Regional University Hospital of Malaga-BIMMA, UMA, Malaga, Spain, 2Allergy Unit. IBIMMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 3Pediatric Area. Health Center Don José Molina Diaz. Alhaurin de la Torre, Malaga, Spain, 4Allergy Service, General University Hospital of Ciudad Real, Ciudad Real, Spain, 5Allergy Service, University Hospital Infanta Leonor, Madrid, Madrid, Spain, 6Allergy Unit, Regional University Hospital of Malaga-BIMMA, UMA, Malaga, Spain
Does Having Prior Turbinate Surgery Influence SITT Compliance
Jessica Tattersall, MBBS(Hons), Rhinology and Skull Base research group, Darlinghurst, Australia
House Dust Mite-Associated Allergic Rhinitis: Efficacy of STG-320 Sublingual Tablets of House Dust Mite Allergen Extracts
Michel Roux, MD, Hélène Nguyen, PharmD, Agnès Viatte and Robert K. Zeldin, MD, StAllergenes SAS, Antony, France
A Complication of Eosinophilic Esophagitis from Sublingual Immunotherapy
Charmi Patel, Baton Rouge General/Tulane University School of Medicine, Baton Rouge, LA and Prem K. Menon, MD, FAAAAI, Asthma, Allergy and Immunology Center, Baton Rouge, LA; Tulane University School of Medicine
Intralymphatic Pollen-Specific Immunotherapy for Nasal Allergy: Clinical Efficacy and Effects on the Induction of Pollen-Specific Antibody
Tetsuya Terada, Syuji Omura, Yusuke Kikukawa, Megumi Yoshida, Manabu Suzuki, Shinya Ichihara, Takahiro Ichihara, Takaki Imui and Ryo Kawata, Osaka Medical College
Evaluation of SQ-House Dust Mite Sublingual Immunotherapy Tablet One Year After Completion of a 24-Week Treatment Period
Petra U. Ziegelmayer, MD1, Hendrik Nolte, MD, PhD2, Harold S. Nelson, MD, FAAAAI3, David I. Bernstein, MD, FAAAAI4, Amarjit Kaur, PhD2, Ziliang Li, PhD2, Rene Ziegelmayer1, Rene Schmutz, MD1, Patrick Lemell, PhD1 and Friedrich Horak, MD1, 1Vienna Challenge Chamber, Vienna, Austria, 2Merck & Co., Inc., Kenilworth, NJ, 3National Jewish Health, Denver, CO, 4Bernstein Allergy Group, Cincinnati, OH
Efficacy of Sublingual Immunotherapy to Dust Mites: Real-Life Study Comparing Adults and Children
Carla Irani, MD, FAAAAI; University of Alberta, Edmonton, AB, Canada; Hotel Dieu de France Hospital St Joseph University, Beirut, Lebanon and Albert Semaan, Hotel Dieu de France hospital, St Joseph University, Beirut, Lebanon
Eosinophilic Esophagitis Induced by Aeroallergen Sublingual Immunotherapy in an Enteral Feeding Tube Dependent Pediatric Patient
Cindy S. Bauer, MD1, Michaela M Tyrdlik2 and Shaun Schroeder, MD1, 1Phoenix Children’s Hospital, Phoenix, AZ, 2Creighton University School of Medicine, Omaha, NE
Efficacy of 3000IR 5-Grass Pollen Sublingual Tablet in the Treatment of Rhinitis Symptoms in Poly sensitized Subjects with Grass Pollen-Induced Allergic Rhinoconjunctivitis
Robert K. Zeldin, MD, Yann Amistani, MSc, Josiane Cognet-Sicé, PharmD and Kathy Abiteboul, PharmD, StAllergenes SAS, Antony, France
Evaluation of Pediatric and Adult Systemic Reactions to Subcutaneous Immunotherapy (SCIT): Interim Analysis of a Retrospective Chart Review
Chen Lim, MD, Department of Pediatrics, Cohen Children’s Medical Center, North Shore-LIJ Health System, New Hyde Park, NY, Cristina Sison, PhD, Feinstein Institute for Medical Research, Biostatistics Unit, North Shore-LIJ Health System, Manhasset, NY and Punita Ponda, MD, Allergy and Immunology, Department of Pediatrics, Division of Allergy & Immunology, Hofstra-North Shore-LIJ School of Medicine, Great Neck, NY
Fel d 1 Peptide Immunotherapy Ameliorates Both Cat and Ovalbumin Responses, in a Dual Allergen Murine Model of Allergic Airways Disease
Daniel M. Moldaver1,2, Mantej S. Bharhuni1,2, Christopher D Rudulier, PhD1, Jennifer Wattie1,2, Mark D. Inman, MD, PhD1,2 and Mark Larché, PhD1,2, 1Firestone Institute for Respiratory Health, Hamilton, ON, Canada, 2McMaster University, Hamilton, ON, Canada, 3University of Saskatchewan, Saskatoon, SK, Canada
Endometrial Anaphylaxis Due to Subcutaneous Immunotherapy (SCIT): A Case Series
Manideep Nandigam1, Frank J. Eidelman, MD, FAAAAI2 and Ves Dimov, MD2, 1Cleveland Clinic Florida, 2Cleveland Clinic Florida, Weston, FL
215 New Model of Murine Allergic Rhinosinusitis Induced Cockroach Allergens
Bethany L. Lussier, MD and Daniel G. Remick, MD, Boston University School of Medicine

216 Wnt Signaling in Nasal Polyp
Ji-Hun Mo, Dankook University College of Medicine, Cheonan, South Korea, Young-Jun Chung, Department of Otorhinolaryngology, Dankook University College of Medicine, Cheonan, South Korea and Yun-Hee Rhee, Beckman Laser Institute Korea, Dankook University, Cheonan, South Korea

217 Prolonged Allergen Exposure Causes TSLP-Mediated Th2-Skewing in Mouse Models of Chronic Rhinosinusitis
Dong-Kyu Kim, MD,1 Kyung Mi Eun,2 Hong Ryul Jin, MD,2 Seung Ho Cho, MD, FAANA1 and Dae Woo Kim, MD,2 1Chunchon Sacred Heart Hospital, Hallym University College of Medicine, South Korea, 2Seoul National University Hospital and Boramae Medical Center, South Korea, 3University of South Florida, College of Medicine, Tampa, FL

218 Effect of IL-10 Expression on Pathogenesis of Nasal Polyposis in the Patients with Chronic Rhinosinusitis with Nasal Polyp Yong Min Kim, Chungnam National University School of Medicine, Daejeon, South Korea

219 Fidararest Decrease Allergic Sinus Congestion
Walter C. Spear, MSc, Kerry/Anne K. Belanger, BSc, Spotswood Miller, BSc, Igor Pariiko, PhD, Massoud Motamedi, PhD, Kota V Ramana, PhD, Satish Srinivasta, PhD and Bill T. Ameredes, PhD, University of Texas Medical Branch, Galveston, TX

Cytokines, Chemokines and Innate Mechanisms

MAAI

221 ATPS811 Deficiency Enhances Hypoxia-Induced Lipid Oxidation and Apoptotic Response in Lung Epithelial Cells
Andrew J. Cooke, MD, Division of Allergy and Immunology, Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL, Junaru Fukumoto, MD and PhD, Morsani College of Medicine, University of South Florida, Tampa, FL, Lee C Tan, University of South Florida, Richard F. Lockey, MD, Division of Allergy and Immunology, Department of Internal Medicine, University of South Florida, Morsani College of Medicine, Tampa, FL, and Narasiah Kollipati, PhD, Internal Medicine, Division of Allergy and Immunology, Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL

222 Modulation of Lung Inflammation and Airway Hyperreactivity by the Toll-like Receptor 4 (TLR4) Agonist Glucopyranosyl Lipid a (GLA) in a Mouse Model of Airway Allergy

223 In Vitro and In Vivo Transglutaminase 2 Expression in Asthma and COPD
Gyu-Young Hur, Jae Youn Oh, Jae-Kyeom Sin, Kyung Hoon Min, Sang-Yong Lee, Jae-Jeong Shim and Kyung-Ho Kang, Korea University College of Medicine, South Korea
224 Anti-Interleukin (IL)-9 Antibody Increases Induction of Oral Tolerance in Murine Allergic Rhinitis
Soo Whan Kim, The Catholic University of Korea and Jihyun SHIN, The Catholic University Of Korea, Seoul, Korea

225 Reduced Nasal Brain Derived Neurotrophic Factor in Aspirin Exacerbated Respiratory Disease
Michele Pham, MD, Rachel Baum, BS, David Broide, MB, ChB, FAAAAl, Andrew White, MD, FAAAAl and Taylor Doherty, MD, FAAAAl, 1University of California San Diego, La Jolla, CA, 2Scripps Clinic, Division of Allergy, Asthma and Immunology, San Diego, CA

226 Autolysosomal Formation Is Required for Autophagy-Dependent IL-18 Release from Airway Epithelial Cells
Hiroki Murai, MD, PhD, Shintaro Okazaki, MD, Hisako Hayashi, MD, PhD, Akiko Kawakita, MD, Motoko Yasutomi, MD, PhD, Sanjiv Sar, MD and Yasue Ohshima, MD, PhD, 1University of Fukui, Fukui, Japan, 2University of Texas Medical Branch, Galveston, TX

227 MD2 Facilitates Pollen and Cat Dander-Induced Inate and Allergic Airway Inflammation
Koa Hosoki, MD, PhD, Toshiko Itazawa, MD, PhD, Istvan Boldogh, PhD and Sanjiv Sur, MD, University of Texas Medical Branch, Galveston, TX

228 The Role of Autophagy in Allergic Inflammation: A New Target for Severe Asthma
Yoo Shin, MD, PhD, Jang-Nan Liu, Youngwooo Choi and Hae-Sim Park, 1Aju University School of Medicine, Suwon, South Korea, 2Department of Allergy and Clinical Immunology, Aju University School of Medicine, Suwon, South Korea

229 Cat Dander Extract Requires Myd88 to Induce Innate Neutrophil Recruitment, and Allergic Sensitization and Allergic Airway Inflammation.
Toshiko Itazawa, MD, PhD, Koa Hosoki, MD, PhD, Istvan Boldogh, PhD and Sanjiv Sur, MD, University of Texas Medical Branch, Galveston, TX

230 Cockroach Protease Induces Allergic Airway Inflammation Via IL-33 and TSLP Secretion By Epithelial Cells
Navee Arora, PhD, Sagar Laxman Kale, Konal Agrawal and Shailendra N. Gaur, MD, FAAAAl, 1CSIR-Institute of Genomics and Integrative Biology, Delhi, India, 2University Of Delhi, Delhi, India

231 Anti-type-2 Antibodies Specifically Inhibit Murine Asthma Features Induced By Intrasinal Application of IL-5 and IL-13
Hendrik Beckert, Helen Meyer-Martin, Stephanie Korn, Sebastian Reuter and Roland Bahlf, 1Pulmonary Department, University Hospital, Johannes Gutenberg-University Mainz, Mainz, Germany, 2Pulmonary Department, University Hospital, Johannes Gutenberg-University, Mainz, Germany

232 Peanut Allergulin Is a Novel Receptor for Dendritic Cell-Specific Intercellular Adhesion Molecule-3-Grabbing Non-Integrin (DC-SIGN)
Madan Misalmani, MD, Mohanpriya Kamakalakn, MSc, Lisa Chang, BS, Galina Grishina, MSc and Hugh A. Sampson, MD, FAAAAI, Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY

233 IL-25 Causes Airway Hyper-Responsiveness of Human Precision Cut Lung Slices from Donors with Asthma.
Jordan Heath, MD, PhD, Richard Kurten, PhD, Suzanne E House, James D Sikes, Megan Kurten, Stacie M. Jones, MD and Josh L. Kennedy, MD, 1University of Arkansas for Medical Sciences, Little Rock, AR, 2University of Arkansas for Medical Sciences, Little Rock, AR, 3University of Arkansas for Medical Sciences, Little Rock, AR, 4University of Arkansas for Medical Sciences, Little Rock, AR, 5University of Arkansas for Medical Sciences, Little Rock, AR, 6University of Arkansas for Medical Sciences, Little Rock, AR, 7University of Arkansas for Medical Sciences, Little Rock, AR, 8University of Arkansas for Medical Sciences, Little Rock, AR, 9University of Arkansas for Medical Sciences, Little Rock, AR

234 Cytokine Profiles in Breast Milk in Relation with Atopic Manifestations of Mothers and Infants: Study in Asian Population, Sirapassorn Soraphiphaphong, MD, Pantipa Chatchatee, MD, Jarunghet Ngamphaiboon, MD, Siriruch Chomtho, Nattaya Hirankarn and Narissara Suratmon, MD, 1Division of Allergy and Immunology, Department of Pediatrics, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand, 2Division of Nutrition, Department of Pediatrics, Faculty of Medicine, Chulalongkorn University, 3Division of Immunology, Department of Biotechnology, Faculty of Medicine, Chulalongkorn University, Thailand, Bangkok, Thailand

235 Individual and Synergic Effects of IL-5 and IL-13 on Trans-Compartmental Activation and Migration of Eosinophils and Murine Asthma Features
Sebastian Reuter, Helen Meyer-Martin, Hendrik Beckert, Stephanie Korn and Roland Bahlf, 1Pulmonary Department, University Hospital, Johannes Gutenberg-University Mainz, Mainz, Germany, 2Pulmonary Department, University Hospital, Johannes Gutenberg-University, Mainz, Germany

236 Cardiolipin Provides a Platform for Caspase-1 Activation and NLRP3 Inflammasome Assembly
Susanne L. Cassel, MD, FAAAAI, Eric Elliott, Shankar S. Iyer, PhD and Fuyazz Sutterwala, MD, PhD, University of Iowa

237 Myd88-Mediated Innate Immune Response in a Single Cat Dander Extract Challenge
John P. Kelley, MD, Koa Hosoki, MD, PhD and Sanjiv Sur, MD, University of Texas Medical Branch, Galveston, TX

238 Dust Mite-Induced Allergic Pulmonary Inflammation Is Differentially Regulated By Il13-/- and Il11r1-/- Dendritic Cells.
Min Jung Lee, MD, Eri Yoshihito, Li Li, Yoshihishi Kanaoka, MD, PhD and Nora A. Barrett, MD, FAAAAI, Brigham and Women's Hospital, Division of Rheumatology, Immunology and Allergy, Boston, MA

239 Human Hemopoietic Progenitor Cell Toll-like and Thymic Stromal Lymphopoietin Receptor Expression and Function in Allergic Asthmatic Subjects
Damian Tworek, MD, PhD, Department of Medicine, McMaster University, Hamilton, ON, Canada, Delia Heroux, BSc, Division of Clinical Immunology & Allergy, McMaster University, Hamilton, ON, Canada, Seamus O’Byrne, MAAP, Department of Medicine, McMaster University, Paul M. O’Byrne, MB, FRCP, FRSC, Department of Medicine, Cardio-Renal Research Group, McMaster University, Hamilton, ON, Canada and Judith A. Denburg, MD, FRCP, FAAAAI, Division of Clinical Immunology and Allergy, Department of Medicine, McMaster University, Hamilton, ON, Canada

240 CCR8 Mediated Cell Migration Controls Th2 Differentiation
Caroline L. Socol, MD, PhD, Ryan Camire, Michael Jones and Andrew D. Luster, MD, PhD, 1Massachusetts General Hospital, Boston, MA, 2University of Massachusetts Medical School

241 The Effect of Vitamin D Supplementation on Mucosal Il-5, Mmp9 and Cathelicidin after Nasal Allergen Challenge with Grass Pollen
Natasha C. Gunawardana, MBBS, MA (Cantab), MRCP, Gaynor Campbell, PhD, Sarah Linsley, Elizabeth E Mann, Peter J. O’Leary, MBBS, PhD, FRCP, 1Imperial College London, London, United Kingdom, 2Imperial College NHS Trust, 3King’s College London, 4Imperial College School of Medicine, 5St. Mary’s Hospital, London, United Kingdom, 6MRC and Asthma UK Centre for Allergic Mechanisms of Asthma, King’s College London, London, United Kingdom, 7St. Mary’s Hospital, London, United Kingdom

242 Group 2 Innate Lymphoid Cells: New Players in Peanut Allergy
Elsavet Nativ, Paul J. Turner, FRACP, PhD, Robert J. Boyle, MBChB, 1Atkinson Clark, MRCPCH, MD, 2Abigail R O Robb, BSc, 3Stephen R. Durham, MA, MD, FRCP, 2Mohamed H.
SATURDAY

Mast Cells and Basophils

MAAI

2213

Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

243 Profiling the Immune Response to Peanut Using Mass Cytometry
Leticia Tordesillas, PhD1, Adee H. Rahman, PhD2,3, Hugh A. Sampson, MD, FAAAAI1 and M. Cecilia Berin, PhD3, 1Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY. 2Human Immunology Laboratory, Icahn School of Medicine at Mount Sinai, New York, NY

244 A Case of Neupathic Pain in Monoclonal Mast Cell Activation Syndrome
Jeanne L. Bay, DO, Kaye E. Sedarsky, MD and Maureen M. Petersen, MD, Walter Reed National Military Medical Center, Bethesda, MD

245 Acidic Conditions Regulate Mast Cell Migration and Fc Epsilon RI-Mediated Cytokine Production
Yosuke Kamide, MD, PhD1, Tamotsu Ishiuika, MD, PhD2, Hiroaki Hayashi, MD1, Chihiko Mitsui, MD1, Akio Morii, MD, PhD1, Takeshi Hisada, MD, PhD1, Kunio Dobashi, MD, PhD2, Fumikazu Okajima1, Masanobu Yamada, MD, PhD3 and Masami Taniguchi, MD, PhD1, 1Clinical Research Center for Allergy and Rheumatology, Nagahara National Hospital, Nagahara, Japan. 2Third Department of Internal Medicine, Faculty of Medical Sciences, University of Fukuoka, Fukuoka, Japan. 3Department of Medicine and Molecular Science, Gunma University Graduate School of Medicine, Maebashi, Japan

246 Regulation of IL-4 Gene Expression by SIRT1 in Human Mast Cell
Yuii Nakamura, Department of Otolaryngology-Head and Neck Surgery, Hokkaido University, Sapporo, Japan. Dai Takagi, hokkaido university, sapporo, Japan and Satoshi Fukuda, hokkaido university

247 Hereditary Angioedema Is Associated with Neuropathic Pain, Systemic Lupus Erythematosus and Systemic Mastocytosis in an Analysis of a Health Analytics Claims Database
Chris Stevens1, Joseph C. Biedenkapp1, Robert Mensah2,3, Yung H. Chyang4 and Burt Adelman1, 1Dyax Corp., Burlington, MA, 2Dyax Corp.

248 Anti-Apoptosis and Cell Survival Gene Expression Profile in LAD2 Cells
Arnold S Kirshenbaum, MD, FAAAAI1, Maureen Leerkes, PhD2, Avantii Desai, MS1 and Dean D. Metcalfe, MD1, 1Laboratory of Allergic Diseases, NIAID, NIH, Bethesda, MD, 2Bioinformatics and Computational Biosciences Branch, NIAID, NIH, Bethesda, MD

249 Transglutaminase 2 over-expressed by Interaction of Mast Cells and Oligodendrocytes Induces Demyelination in the Experimental Autoimmune Encephalomyelitis
Gwan Ui Hong1, Young Min Ahn, MD1,2 and Jai Youl Ro, PhD1,4, 1Sungkyunkwan University School of Medicine, 2Eulji University School of Medicine, South Korea, 3Department of Pediatrics, South Korea, 4Sungkyunkwan University School of Medicine, suwon, South Korea

250 Inhibition of IgE-Mediated Allergic Reaction By Pharmacologically Targeting the Circadian Clock
Yuki Nakamura, PhD. Department of Immunology, Faculty of Medicine, University of Yamanashi, Chuo, Yamanashi, Japan. Atsuhiro Nakao, Department of Immunology, Faculty of Medicine, University of Yamanashi, Yamanashi, Japan and Shigenobu Shibuta, Department of Physiology and Pharmacology, School of Advanced Science and Engineering, Waseda University

251 IL-33 Induces Functional CCR7 Expression in Human Mast Cells
Maiko Emi-Sugie, PhD, Department of Allergy and Immunology, National Institute for Child Health and Development, Tokyo, Japan

252 Effect of ONO-4053 on Fe Epsilon RI Stimulated-Mast Cell Activation
Shinsuke Yamaguchi, Yutaka Okada, Yoko Matsunaga and Fumio Nambu, Ono Pharmaceutical Co., Ltd.

253 Desensitization of Different Subsets of Mast Cells Associated with Different Manifestations of Food Allergy
Sara Benede, PhD. Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY and M. Cecilia Berin, PhD, Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY

254 The Role of the Mast Cell in the Anti-Viral Immune Response
Ruben Raychaudhuri, Brian T. Kelly, MD, MA, Jennifer L. Santoro, BS and Mitchell H. Grayson, MD, FAAAAI, Medical College of Wisconsin, Milwaukee, WI

255 Airway Basophils Are Activated and Associated with Eosinophilic Inflammation in Asthmatic Patients
Yoshitomo Suzuki, MD, Keiko Wakahara, MD, PhD, Tomoko Nishio, MD, Satoru Ito, MD, PhD and Yoshinori Hasegawa, MD, PhD, Nagoya University Graduate School of Medicine, Nagoya, Japan

256 Generation of Mast Cells in Co-Culture with Multiple Cell Types within an Advanced Allergy Tissue Model
Isherpoint Derakhshan, Rudra Bhowmick, James H. Meinhold and Heather Gappa-Fahlenkamp, Oklahoma State University, Stillwater, OK

257 Enhanced Development of Functional Murine Mast Cells in Human Stem Cell Factor Transgenic Immune-Deficient Mice
Kshitij Gupta, PhD, Harilal Subramanian, PhD and Hydar Ali, PhD, School of Dental Medicine, University of Pennsylvania, Philadelphia, PA

Allied Health Saturday Poster Session

Allied Health

2214

Saturday, March 5th, 2016, 9:45 AM - 10:45 AM

258 Peanut-Containing Products in Children’s Hospitals: Putting Pediatric Patients at Risk
Laura A. Fletche, Tammy Pham, Maguire Herriman, Bridget Klely, Ruth Milanski and Gregory A. Rooser, MD1, 1North Shore-LIJ Cohen Children’s Medical Center of NY. Lake Success, NY, 2 Hofstra North Shore-LIJ School of Medicine, New York, NY

259 Hyperimmunoglobulin E Syndrome like Presentation in a Patient after Hemodialysis
Tanveer Singh, Resident Physician1, Brigni Amante1,2, David Regelmann, Attending Physician1 and Noopreet Dhawan1,
Incidence of Delayed Systemic Reactions to Subcutaneous Immunotherapy

Carolyn M Ford, RN1, Elizabeth A. Leyvas, LVN1, Jill Waalen, MD, MPH2 and Andrew A. White, MD, FAAAAI3, 4, Scripps Clinic, San Diego, CA, 5Scripps Translational Science Institute, La Jolla, CA, 6Scripps Clinic, Division of Allergy, Asthma and Immunology, San Diego, CA, 8Scripps Clinic Medical Group, San Diego, CA

Pilot Study Identifies Obesity, Outdoor Air Pollution, and Tobacco Smoke Exposure As Contributors to High Estimated Prevalence of Risk of Asthma in Inner-City Schoolchildren from Pittsburgh Region

Tricia Morpeth, MSc1, Jennifer Paden Elliott, PharmD2, Paige E. Dewhurst, MPH2, Nicole Peskovec, BS1, Erica Butler, BS, CCRC2, David P. Skoner, MD1, 2, Deborah A. Gentile, MD1, 2, 3Morpeth Consulting, LLC, Manhattan Beach, CA, 4Duquesne University, Pittsburgh, 5Allegheny Singer Research Institute, Pittsburgh, 6American Lung Association, 7Allegheny Health Network, Pittsburgh, PA, 8Department of Medicine, Allegheny General Hospital, Pittsburgh, PA

Characterization of Environmental Risk Factors Among Inner-City Schoolchildren with Physician Diagnosed Asthma from the Pittsburgh Region

Paige E. Dewhurst, MPH1, Jennifer Paden Elliott, PharmD2, Albert Presto, PhD1, Tricia Morpeth, MSc3, 4Erica Butler, BS, CCRC5, Nicole Peskovec, BS3, 6David P. Skoner, MD1, 3, 2Deborah A. Gentile, MD1, 2, 3American Lung Association, 4Duquesne University, Pittsburgh, 5Carnegie Mellon University, 6Morpeth Consulting, LLC, CA, 7Allegheny Singer Research Institute, Pittsburgh, PA, 8Allegheny Health Network, Pittsburgh, PA, 9Department of Medicine, Allegheny General Hospital, Pittsburgh, PA

Rate of Food Introduction after a Negative Oral Food Challenge in the Pediatric Population

Jessica Gan, NP, CRC6, Sally A. Noone, RN, MSN2, Zara Atal1, Jaime Ross, RN, MSN1, Jennifer Fishman, RN, BSN1, Beth D. Strong, RN, CCRC8, Carly Ehrich, RN, MSN1 and Julie Wang, MD, FAAAAI1, 2Mt Sinai School Medicine, New York, NY, 3Icahn School of Medicine at Mount Sinai, New York, NY, 4Icahn School of Medicine at Mount Sinai, New York, NY, 5Icahn School of Medicine at Mount Sinai, New York, NY, 6Icahn School of Medicine, New York, NY

Slit Adhesion in Brazilian People

Fernando M. Aarestrup, MD, PhD1, Beatrix Aarestrup2, Tamara A de Freitas2, Glaciele M M Rezende3, Nathalie J Guimaraes e Silva4 and Raisa A M Cabrera5, 1Universidade Federal de Juiz de Fora - MG- Brazil, Juiz de Fora, Brazil, 2Universidade Federal de Juiz de Fora- MG - Brazil, Brazil, 5SUPREMA

Idiopathic Angioedema: Difficult Cases and Uncommon Findings

Laura E. Noonan, MSN, FNP-C, O&O Alpan, LLC, Fairfax, VA, Oral Alpan, MD, Amerimume, LLC, VA; O&O ALPAN, LLC, Denise Loizou, RN, O&O Alpan, Fairfax, VA and Ozlem Gokce-Arpan, MD, O&O ALPAN, Fairfax, VA

Specific Anti_A/B Immunofluorinity Chromatography Step Reduces Isoagglutinin Levels in an Intravenous Immunoglobulin Product

Alphonse P. Hubsh, Annette Gaida, Ibrahim El Menyawi, Sandra Wymann, Adriano Marques A., Nicole Spiegel, Thomas Roten and Eleonora Widmer, CSl, Behring AG, Berne, Switzerland

Food Allergen Labeling and Purchasing Habits in the US and Canada

Mary Jane Marchisotto1, Laurie Harada, BA2, Opal Kamdar, MD3, Bridget Smith, PhD4, Kemrani Khan5, Scott H. Sicherer, MD, FAAAAI6, Stephen L. Taylor, PhD7, Veronica LaFemina8, Maria Antonella Muro, MD8, PhD, Susan Waserman, MD, FAAAAI8 and Ruchi Gupta, MD, MPH8, 9FARE, 2Anaphylaxis Canada, Toronto, ON, Canada, 3Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, 4Edward J. Hines Jr. VA Hospital, Chicago, IL, 5Northwestern University Feinberg School of Medicine, Chicago, IL, 6Food Allergy Canada, 7Icahn School of Medicine at Mount Sinai, New York, NY, 8University of Nebraska, Lincoln, NE, 9University Hospital of Padua, Padua, Italy, 10Department of Medicine, McMaster University, Hamilton, ON, Canada, 11Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL

High Rate of Uncontrolled Asthma Among Inner-City Schoolchildren from Pittsburgh Region

Erica Butler, BS, CCRC1, Nicole Peskovec, BS1, Jennifer Paden Elliott, PharmD2, Paige E. Dewhurst, MPH1, 2Tricia Morpeth, MSc3, 4David P. Skoner, MD1, 2and Deborah A. Gentile, MD1, 2, 3Allegheny Singer Research Institute, Pittsburgh, PA, 4Duquesne University, Pittsburgh, 5American Lung Association, 6Morpeth Consulting, LLC, Manhattan Beach, CA, 7Allegheny Health Network, Pittsburgh, PA, 8Department of Medicine, Allegheny General Hospital, Pittsburgh, PA

Characterizing Pediatricians’ Management of Food Allergy to Improve Care Coordination

Alana Otto, MD1, Ashley Dyer, MPH2, 3Bridget Smith, PhD4, 4and Ruchi Gupta, MD, MPH5, 6, 1Ann & Robert H. Lurie Children’s Hospital of Chicago, 2Ann and Robert H. Lurie Children’s Hospital of Chicago, 3Northwestern University Feinberg School of Medicine, Chicago, IL, 4Edward J. Hines Jr. VA Hospital, Chicago, IL, 5Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL

Comparative Effectiveness of Mepolizumab and Omalizumab in Severe Asthma: An Indirect Comparison

Gillian Stynes1, Sarah Cockle, Neecdet Gunsoy, PhD2, Daniel C Park3, Jaro Weg4, Jenny Wilson5, Eric Bradford, MD5, Frank C. Albers, MD, PhD2 and Rafael Alfonso-Cristancho, MD, PhD, MSc3, 4GlxosmithKline, Value Evidence and Outcomes, Stockley Park, United Kingdom, 5GlxosmithKline, Clinical Statistics, Stockley Park, United Kingdom, 6GlxosmithKline, Value Evidence Analytics, Philadelphia, PA, 7Pharmarchitecture, London, United Kingdom, 8GlxosmithKline, Respiratory R&D, Research Triangle Park, NC, 9GlxosmithKline, Respiratory Medical Franchise, Research Triangle Park, NC

Multiple Selective Responders Should Not Be Confounded with Cross-Intolerance to NSAIDs

Natalia Blanca-Lopez, MD, PhD1, Diana Perez-Alzate, MD, 2Inmaculada Donia, MD, PhD2, Maria Luisa Soomma, MD2, Cristobalina Mayorga, PhD, 2Maria José Torres, MD, PhD, 3Jose A Cornejo-Garcia, PhD, 2Miguel Blanca, MD, PhD2 and Gabriela Canto, MD, PhD2, 4Allergy Service, Infanta Leonor Hospital, Madrid, Spain, 5Allergy Service, University Hospital Infanta Leonor, Madrid, Madrid, Spain, 6Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 7Allergy Unit, Infanta Leonor University Hospital, Madrid, Spain, 8Research Laboratory, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain, 9Allergy Unit, IBIMA-Regional University Hospital of Malaga, Malaga, Spain, 10Málaga, Spain, 11Research Laboratory, IBIMA-Regional University Hospital of Malaga, UMA, Malaga, Spain, 12Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 13IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain

Epidemiology of Clinical Oral Food Challenges (OCF) at Baylor College of Medicine/Texas Children’s Hospital’s (TCH) Food Allergy Program: A Retrospective Chart Review

Kwei Akuebe, MD, MPH1, Danielle Guffey, MS2, Charles G Minard, PhD2, Maria G. Buhéis, MD2, Kristin H. Dillard, MD1, 3Celine Hanson, MD, FAAAAI4, Lenora M. Noroski, MD, MPH3, Fitz O. Seeborg, MD, MPH3 and Carla M. Davis, MD, 3Baylor College of Medicine and Texas Children’s Hospital, Department of Pediatrics Section of Immunology, Allergy and Rheumatology,
Allied Health Saturday Oral Abstract Session

Allied Health

2411
Saturday, March 5th, 2016, 12:15 PM - 1:45 PM

Association Between Outdoor Air Pollution and Acute Exacerbations of Respiratory Diseases in Pittsburgh
Nicole Pleskovic, BS1, Arvind Venkat, MD2, Albert Presto, PhD3, Gujannan Hedge, PhD7, Jennifer Shang, PhD5, Sunde Klok4, Paige E. Dewhurst, MPH1 and Deborah A. Gentile, MD5. 1Allegheny Singer Research Institute; Pittsburgh, PA. 2Allegheny Health Network. 3Carnegie Mellon University. 4University of Pittsburgh. 5Allegheny Health Network, Pittsburgh, PA.

Patient Use Online Resources and Social Media for Food Allergy Information
Beth D. Strong, RN, CCRC1, Jaime Ross, RN, MSN2, Jennifer Fishman, RN, BSN1, Sally A. Noone, RN, MSN3, Zara Atal4, Carly Ehriz, RN, MSN5, Jessica Gau, NP, CRC6 and Julie Wang, MD, FAAAAI, 1Icahn School of Medicine at Mount Sinai, New York, NY. 2The Icahn School of Medicine at Mount Sinai, New York, NY. 3Ichan School of Medicine at Mount Sinai, New York, NY. 4Ichan School of Medicine at Mount Sinai, New York, NY. 5Icahn School of Medicine at Mt. Sinai, Mt. Sinai School Medicine, New York, NY.

Food Allergy Education Session Improves Nurses’ Knowledge, Confidence, and Attitudes Towards Managing Food Allergic Children in a School Environment
Zara Atal, Icahn School of Medicine at Mt. Sinai, Haidi Demain, Founder and Medical Director of Allergy Safe Kids, Inc., Denver, CO. Kathleen Patrick, RN, Assistant Director of Health & Wellness, Colorado Department of Education, Denver, CO and Julie Wang, MD, FAAAAI, Icahn School of Medicine at Mount Sinai, New York, NY.

Long-Term Follow up after Peanut Immunotherapy
Kim Mudd, RN, MSN, CCRP. Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD, Shannon Seepaul, MPH, Johns Hopkins University School of Medicine, Baltimore, MD, Satya Narisety, MD, Rutgers University, New Jersey Medical School, Newark, NJ, Corrine Keet, MD, PhD, Division of Pediatric Allergy Immunology, Johns Hopkins School of Medicine, Baltimore, MD and Robert A. Wood, MD, FAAAAI, Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA.

Improving Asthma Outcomes through Systems Change: The Breathe Initiative

Asthma Featured Biologics

ADT

2601
Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

Suppression of Lipid Mediators By the Humanized Anti-IgE Antibody Omalizumab in Aspirin-Exacerbated Respiratory Disease
Hiroyuki Hayashi, MD1,2, Chihito Mitsui, MD1, Yuma Fukutomi, MD1, Kenichi Kaijawa, BS1, Kentaro Watai, MD1, Arisa Kinosita, MD1, Yosuke Kamide, MD1, Kiyoshi Sekiya, MD1, Takahiro Tsutsumi, MD1, PhD1, Akio Mori, MD1, PhD1, Kazuo Akiyama, MD1, Yoshinori Hasegawa, MD, PhD1 and Masami Taniuchi, MD, PhD1. 1Clinical Research Center for Allergy and Rheumatology, Sagamihara National Hospital, Sagamihara, Japan. 2Department of Respiratory Medicine, Nagoya University Graduate School of Medicine, Nagoya, Japan.

Efficiency of Reslizumab with Asthma, Chronic Sinusitis with Nasal Polyps and Elevated Blood Eosinophils
Steven F. Weinstein, MD, FAAAAI, Allergy and Asthma Specialists Medical Group and Research Center, CA, Matthew Germinaro, Teva Pharmaceuticals, PA, Philip Bardin, Monash University and Medical Centre, Stephanie Korn, University Medical Center, Johannes Gutenberg University of Mainz, Germany and Eric Doon Bateman, MD, University of Cape Town, South Africa.

Efficacy of Reslizumab in Older Patients (≥65 years) with Asthma and Elevated Blood Eosinophils: Results from a Pooled Analysis of Two Phase 3, Placebo-Controlled Trials
David I. Bernstein, MD, FAAAAI1, Lyndon Mansfield2, James Zangrilli3 and Margaret Gunir3, 1University of Cincinnati College of Medicine, Cincinnati, OH. 2Western Sky Medical Research, TX. 3Teva Pharmaceuticals, PA.

Exploratory Analysis of the Roles of Multiple Biomarkers in Predicting Response to Omalizumab in Allergic Asthma
William W. Russe, MD, FAAAAI1, Karin Rosén, MD, PhD2, Volkan Manga, MD1, Benjamin Trzaskoma, MS2 and Theodore A. O macht, MD, MBA2. 1University of Wisconsin School of Medicine and Public Health, Madison, WI. 2Genentech, Inc., South San Francisco, CA. 3Novartis.
From the Bench to the Bedside: When Clinical and Basic Science Research Advance Clinical Care

BCI

2602 Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

Nasal Influenza Immunisation with LAIV (FluMist) Is Safe in Egg-Allergic Children with Asthma or Recurrent Wheeze: Data from the Sniffle-2 Study
Paul J. Turner, FRACP, PhD1,2, Jo Southern, PhD, MFPH1, Nick Andrews, PhD3, Elizabeth Miller, FRCPath4 and Michel Erlewyn-Lajeunesse, FRCPCH, DM5, 1Section of Paediatrics, Imperial College London, United Kingdom, 2Imperial College London, United Kingdom, 3Public Health England, United Kingdom, 4University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom

Maternal DNA Methylation of TH17 Cytokine Genes in Second Half of Pregnancy Changes With Parity
Orpita Nkemere1, Gabrielle A. Lockett, PhD2, Sabrina Iqbal3, John W. Holloway, PhD2, Syed H. Arefah, DM, FRCP2,3, Hongmei Zhang, PhD4 and Wilfried Karmass, MD, Dr.med, MPH1, 1University of Memphis, Memphis, TN, 2University of Southampton, Southampton, United Kingdom, 3University Of Memphis, Memphis, TN, 4University Of Southampton, Southampton, United Kingdom, 5Division of Epidemiology, Biostatistics, and Environmental Health, School of Public Health, University of Memphis, Memphis, TN

Epicutaneous Immunotherapy Using Plasma-Derived Factor VIII Reduces the Inhibitory Immune Response to Therapeutic Factor VIII inExperimental Hemophilia a
Sébastien Lacroix-Desmazes1, Adeline Porcheric2, Sandrine Delignat1, Mathieu Ing1, Pierre-Henri Benhamou, MD2 and Lucie Mondoulet, PhD2, 1Centre de Recherche des Cordeliers - Equipe 16 INSERM UMR5113, Paris, France, 2DBV Technologies, Bagnieux, France

Antiviral Cytotoxic T Lymphocytes Can Be Rapidly Generated Against an Extended Spectrum of Viruses
Michael Keller, MD1, Patrick Hanley, PhD2, Haili Lang3 and Catherine Bollard, MD3, 1Children’s National Medical Center, Washington, DC, 2Children’s National Medical Center

Siglec-Engaging Tolerance-Inducing Antigenic Liposomes (STALs) in the Prevention of Peanut Allergy
Kelly Orgel, BS1, Shiyong Daun, BS2, James C. Paulson, PhD3, A. Wesley Burks, MD, FAAAAI1, Brian P. Vicker, MD, FAAAAI1, Michael D. Kulis Jr, PhD4 and Matthew S Macauley, PhD5, 1University of North Carolina at Chapel Hill, Chapel Hill, NC, 2The Scripps Research Institute, La Jolla, CA, 3University of North Carolina School of Medicine, Chapel Hill, NC

Respiratory Viruses, Illness and Asthma

EORD

2603 Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

Upper Respiratory Infections during Infancy and Childhood Aeroallergen Sensitization and Asthma
Lilianne Perez Ramirez, MD, MS1, Heepke Wendroth2, Jocelyn Biagini-Myers, PhD3, Grace K. LeMasters, PhD2, Patrick Ryan, PhD2, James E. Lockey, MD, MS, FAAAAI2, David I. Bernstein, MD1 and Gurjit K. Khurana Hershey, MD, PhD, FAAAAI1, 1Cincinnati Children’s Hospital, Cincinnati, OH, 2University of Cincinnati College of Medicine, Cincinnati, OH, 3Division of Immunology, University of Cincinnati, Cincinnati, OH

Rhinovirus C Targets Ciliated Respiratory Epithelial Cells
Theodor F Griggs, PhD1, Yury A. Bochkov, PhD2, Thomas R Pasic, MD1, Rebecca A. Brockman-Schneider, MS2, Ann C. Palmenberg, PhD3 and James E. Gern, MD, FAAAAI1, 1University of Wisconsin, 2University of Wisconsin-Madison, Madison, WI, 3University of Wisconsin, Madison, WI

Rhinovirus Infection Results in Increased and More Persistent Dysregulation of Gene Expression
Huyen-Tran Nguyen, MD1, Peter W. Heymann, MD2, Mark Lindsey2, Umasundari Sivaprasad, PhD3, Mario Medvedovic, PhD3, Naim Malhi4, Thomas A.E. Platts-Mills, MD, PhD, FAAAAI1, Ronald B. Turner, MD2, John W. Steinke, PhD, FAAAAI1, Judith A. Woodfolk, MBCChB, PhD, FAAAAI2, Larry Borish, MD, FAAAAI and Gurjit K. Khurana Hershey, MD, PhD, FAAAAI1, 1Cincinnati Children’s Hospital Medical Center, Division of Allergy and Immunology, Cincinnati, OH, 2Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA, 3Cincinnati Children’s Hospital Medical Center, Division of Asthma Research, Cincinnati, OH, 4University of Cincinnati, Department of Environmental Health, Cincinnati, OH, 5University of Virginia Health System, Division of Infectious Diseases, Charlottesville, VA, 6Asthma and Allergic Disease Center, Carter Center for Immunology Research, University of Virginia, Charlottesville, VA, 7Cincinnati Children’s Hospital, Cincinnati, OH

TSLP Neutralization Inhibits IL-22 Activation Induced By Multiple Pathogenic Clinical Isolates of RSV
Matthew T. Siler, BS1, Shinji Toki, PhD2, Dawn C. Newcomb, PhD2, Melissa H. Bloodworth, BS1, Tina V. Hartert, MD, MPH1,2, Martin L. Moore, PhD2 and R. Stokes Peebles, MD3, 1Department of Pathology, Microbiology, and Immunology, Vanderbilt University, Nashville, TN, 2Division of Allergy, Pulmonar,
AB306 Abstracts

FEBRUARY 2016

and Critical Care Medicine, Vanderbilt University, Nashville, TN; 3Center for Asthma Research, Vanderbilt University, Nashville, TN; 4Department of Pediatrics, Emory University, GA

296 Interrogation of the Effects of Rhinovirus on Th2 Promoting Pathways in Allergic Asthma
Rachana Agrawal, PhD1, Peter W. Heymann, MD2, Thomas A.E. Platts-Mills, MD, PhD, FAAAAI, FRS1 and Judith A. Woodfolk, MBChB, PhD, FAAAAI1, 1Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA; 2University of Virginia Asthma and Allergic Diseases Center and the Department of Pediatrics Division of Respiratory Medicine, Charlottesville, VA

Drug Allergy Diagnosis and Management

FADDA

2604
Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

297 Beneficial Outcomes of an Inpatient Penicillin Allergy Testing Protocol
Justin R Chen, MD1, Scott A Tarver, Pharm.D2, Kristen S Alvarez, Pharm.D3, Trang Tran, PharmD2 and David A. Khan, MD, FAAAAI4; 1University of Texas Southwestern Medical Center, Dallas, TX; 2Parkland Health and Hospital System, Dallas, TX

298 Oralizumab Inhibits Aspirin-Induced Respiratory Reactivity in Patients with Aspirin Exacerbated Respiratory Disease
David M Lang, MD1, Mark A. Aronica, MD2, Elizabeth Maierson, BA, RR2, Xiaofeng F Wang, PhD2, Dorothy C. Vasas, RN4 and Stanley Huzen, MD, PhD5; 1Cleveland Clinic, Respiratory Institute, Department of Allergy and Clinical Immunology, Cleveland, OH; 2Cleveland Clinic, Cleveland, OH; 3Quantitative Health Sciences, Cleveland Clinic, Cleveland, OH; 4Cleveland Clinic Foundation, Cleveland, OH

299 Intravenous Iron Hypersensitivity Evaluation and Desensitization
Joyce T Hsu, MD, Brigham and Women’s Hospital, Boston, MA; Grace Y. Chan, MD, Tan Tock Seng Hospital, Singapore, Donna-Marie Lynch, NP, Brigham and Women’s Hospital, Boston, MA and Mariana C. Castells, MD, PhD, FAAAAI, Division of Rhematology, Allergy and Immunology, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

300 Desensitization to Platinum: Our Experience with 153 Desensitizations
Meaghan R. Misiasz, MD1,2, Jessica W. Hui, MD3, Mahboobeh Mahdavinia, MD, PhD1,2 and Mary C. Tobin, MD1,2; 1Department of Immunology and Microbiology, Allergy/Immunology Section, Rush University Medical Center, Chicago, IL; 2Department of Pediatrics, Division of Allergy and Immunology, John H. Stroger, Jr. Hospital of Cook County, Chicago, IL; 3Department of Pediatrics, Internal Medicine/Pediatrics Division, Rush University Medical Center, Chicago, IL

301 Increased Risk of Antituberculosis Drugs-Induced Maculopapular Eruption in Patients with Superoxide Dismutase 1 Gene Mutation
Sang-Hoon Kim1, Sang-Hoon Kim2, Ji-Yong Moon1, Dong Won Park1, Jang Won Sohn1, Ho Joo Yoon, MD, PhD1, Suk-II Chang3 and Young-Koo Jee, MD, PhD4; 1Department of Internal Medicine, Hanyang University College of Medicine, Seoul, South Korea; 2Department of Internal Medicine, Eulji University School of Medicine, Seoul, South Korea; 3Department of Internal Medicine, Sang法人 General Hospital, Seoul, South Korea; 4Department of Internal Medicine, Dankook University College of Medicine, Cheonan, South Korea

Mind the Education Gaps!

HEDQ

2605
Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

302 Comparison of Food Allergy Awareness and Self-Management Among College Students at 3 Large US Universities
Marilyn R. Karam, MD, University of Michigan, Division of Allergy and Clinical Immunology, Ann Arbor, MI; Rebecca Scherzer, MD, FAAAAI, Nationwide Children’s Hospital, Columbus, OH; Princess U. Ogougu, MD, FAAAAI, Wexner Medical Center at the Ohio State University, Columbus, OH; Todd David Green, MD, FAAAAI, Children’s Hospital of Pittsburgh of UPMC, Pittsburgh, PA and Matthew J. Greenhow, MD, MBA, MSc, Department of Internal Medicine, The University of Michigan Medical School, Division of Allergy and Clinical Immunology, Ann Arbor, MI

303 Quality of Facebook Pages on Food Allergy: Many Food Ingredient Alerts and Event Announcements but Little Research News and Patient Education
Mosaab Mohamed1, Ves Dimov, MD2 and Frank J. Eidelberg, MD, FAAAAI3; 1Cleveland Clinic Florida, 2Cleveland Clinic Florida, West Palm, FL

304 Level of Knowledge, Concerns and Healthcare Practices Among Physicians Regarding E-Cigarettes
Venkatikiran Kanchustambham, MD1, Jonathan Rodrigues, Fellow-in-Training2, Abhishek Krishna, Fellow in training3 and Sadasiv Santosh, Assistant professor4; 1Saint Louis University School of Medicine, St. Louis, MO; 2Saint Louis University School of Medicine, Saint Louis, MO; 3Saint Louis University School of Medicine, Saint Louis, MO; 4Saint Louis University, Saint Louis, MO

305 Educational Needs Assessment of US Allergy/Immunology Fellowship Programs: Assessment Methods for Determining Competency of Fellows in Training
Lily C. Pien, MD, MPH, FAAAAI, Erica J. Glancy, MD, Katrina Zell and Colleen Y Colbert, PhD, Cleveland Clinic, Cleveland, OH

306 Immunotherapy Guide Increases Dosing Accuracy
Jared I. Darveaux, MD1, Sameer K. Mathur, MD, PhD, FAAAAI2, Suji Anakakose, MD2 and Diane Dierdorf, CHT1; 1Gundersen Health System, Onalaska, WI; 2University of Wisconsin School of Medicine and Public Health, Madison, WI

Rhinitis, Immunotherapy

IRSO

2606
Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

307 A Randomized Placebo-Controlled Trial of Intradermal Grass Pollen Immunotherapy for Seasonal Allergic Rhinitis
Anna D. Stoevick, MRCS, DOHNS, MBBS, BSc1; Abdel Douiri, PhD2, Rachel Muir, PhD2, Andrea Guerra, MD2, Kostas Tsiaous, MD2, Evie Haya, BSc3, Emily Lam, MSc3, Joanna Kelly1, Janet Peaceock, PhD1, Ying, S, MD, PhD1, Mohamed H. Shami, BSc, MSc, PhD, FAAAAI3, David Cousins, PhD1, Stephen R. Durham, MA, MD, FRCPath and Stephen Tilt, MD, PhD1; 1King’s College London, London, United Kingdom; 2GSTM, London, United Kingdom; 3MRC & Asthma UK Centre in Allergic Mechanisms of
Asthma, London, United Kingdom, National Heart and Lung Institute, Imperial College London, United Kingdom

Vitamin D Level in Allergic Rhinitis: A Systemic Review and Meta-Analysis
Yoon Hee Kim, Min Jung Kim, MD, In Suk Sol, Seo Hee Yoon, Young A Park, MD, Kyung Won Kim, Myung Hyun Sohn, MD, PhD and Kyu-Earim Kim, MD, PhD, Department of Pediatrics, Severance Hospital, Institute of Allergy, Brain Korea 21 PLUS Project for Medical Science, Yonsei University College of Medicine, Seoul, South Korea

Nasal Challenge with Rugweed Pollen Extract (RWPE) Increases the Level of Forfiiin in Nasal Lavage Fluid from Subjects with Allergic Rhinitis
Julia W Trippe, MD, Koa Hosoki, MD, PhD, Istvan Boldogh, PhD, David Rogers Redding, MD, Sanjiv Sur, MD and Ken Fuji-se, MD, University of Texas Medical Branch, Galveston, TX, Redding Allergy and Asthma Center, Atlanta, GA

IL-2 Mediates Generalized Tfh Downregulation during Allergy-Specific Immunosuppression
Véronique M. Schulten, PhD, Shane Crotty, PhD, Alessandro Sette, Dr Biol. Sci, Bjorn Peters, PhD, La Jolla Institute for Allergy and Immunology, La Jolla, CA, La Jolla Institute for Allergy & Immunology, La Jolla, CA

A New Digital Tool to Assess Allergic Rhinitis Symptom Control
Jean Bouquet, MD, PhD, David Price, MD, FRCPG, MRCGP, DRCOG, Sarah Acaster, BSc, Anna Bedbrook, BSc, Davide Calmin, MD and Claus Bachtet, MD, SMCVCA-LR, Contres les Maladies Chronique pour un Veiisseurement Actif en Languedoc Roussillon, EIP on AHA, France, University Hospital, Montpellier, France, Research In Real Life, Cambridge, United Kingdom, University of Aberdeen, Aberdeen, United Kingdom, Acaster Consulting, London, United Kingdom, MRCVCA-LR, Contres les Maladies Chronique pour un Veiisseurement Actif en Languedoc Roussillon, EIP on AHA Reference Site, France, Division of ENT Diseases, Karolinska Institute, Stockholm, Sweden, Upper Airway Research Laboratory (URL), Ghent University Hospital, Ghent, Belgium

Microbiome

MAAI

2607

Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

Monitoring Circulating Virus-Specific CD4+ T Cells and Probiotic Effect in an Experimental Rhinovirus Challenge Model
Lyndsey M. Mueling, MS, Ronald B. Turner, MD, Rachana Agrawal, PhD, Paul W. Wright, BS, James T. Patric, MS, Sampo J. Lahtinen, PhD, Markus J. Lehminen, PhD, William W. Kwock, PhD and Judith A. Woodfolk, MBCHB, PhD, FAAAAI, University of Virginia, Charlottesville, VA, DuPONT Nutrition and Health, Kantvik, Finland, Benaroya Research Institute at Virginia Mason, Seattle, WA

Viral Infections and Their Impact on the Respiratory Microbiome in Pediatric Patients with Cystic Fibrosis
Gina T. Coscia, MD, Paul Planet, MD, PhD, Hannah Smith and Melanie Harasym, Columbia University Medical Center, New York, NY

A Prospective Microbiome-Wide Association Study of Childhood Food Sensitization and Allergy
Jessica Rabe Savage, MD, MHS, Jeanne Sordillo, ScD, Erica Sodergren, George Weinstock, Diane R. Gold, MD, MPH, Scott T. Weiss, MD, MS and Augusto A. Litonjua, MD, MPH, Brigham and Women's Hospital, Division of Rheumatology, Immunology and Allergy, Boston, MA, Channing Division of Network Medicine, Brigham & Women's Hospital, Harvard Medical School, Boston, MA, Jackson Laboratory, Channing Laboratory, Brigham and Women's Hospital, Boston, MA, Channing Laboratory, Harvard Medical School, Boston, MA

Features of the Bronchial Bacterial Microbiome Associated with Allergy and MILD Asthma
Juliana Durack, PhD, Susan V. Lynch, PhD, Avraham Beigelman, MD, MSC, FAAAAI, Mario Castro, MD, MPH, Elliot Israel, MD, FAAAAI, Monica Kraft, MD, David Mauger, PhD, Richard Martin, MD, Snehal Nariya, B.S., Steven R. White, MD, Homer A. Bousshey Jr., MD and Yvonne Huang, MD, University of California San Francisco, San Francisco, CA, Washington University, Saint Louis, MO, Brigham and Women's Hospital, Boston, MA, University of Arizona, Tucson, AZ, Penn State University College of Medicine, Hershey, PA, National Jewish Health, Denver, CO, University of Michigan, Ann Arbor, MI, University of Chicago, Chicago, IL

New Approaches to Disease Modification and Prevention

Clinical Science Workgroup

2608

Saturday, March 5th, 2016, 2:00 PM - 3:15 PM

The Clinical and Immunological Effects of Pru p 3 Silt on Peach and Peanut Tolerance in Patients with Systemic Allergic Reactions
Francisca Gómez, MD, PhD, Gador Boga, MD, Miguel González, Paloma Campo, MD, PhD, María Salas, MD, PhD, JA Huertas, Araceli Díaz-Perales, PhD, Prof, Domingo Barber, MD, María J Rodríguez, Miguel Blanca, MD, PhD, Cristina Mayorga, PhD and María José Torres, MD, PhD, Allergy Unit, IBIMA-Regional University Hospital of Malaga, Malaga, Spain, Málaga, Spain, Allergy Unit, Regional University Hospital of Málaga-IBIMA, UMA, Málaga, Spain, Research Laboratory, IBIMA-Regional University Hospital of Malaga, Malaga, Spain, Malaga, Spain, Centre for Plant Biotechnology and Genomics (UPM-INIA), Campus de Montegancedo, Pozuelo de Alarcón, Madrid, Spain, Madrid, Spain, Universidad San Pablo-CEU, Madrid, Spain, Allergy Service, IBIMA-Regional University Hospital of Malaga-UMA, Málaga, Spain, Research Laboratory, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain, Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Málaga, Spain

Immune Tolerance Induction Following AIT Is Associated with Induction of Circulating CD4+CXCR5+PD-1+FoxP3+ T Follicular Regulatory Cells
Hj Hanisah Hj Aq Sharif, BSc, MSc, Rebecca Parkin, BSc, Constance Ito, MSc, Guy Scadding, MRCP, Stephen R. Darham, MA, MD, FRCP and Mohamed H. Shamji, BSc, MSc, PhD, FAAAAI, Immunomodulation and Tolerence Group, Immune Tolerance Network (ITN) Distributed Centre of Excellence for Allergy & Asthma, Allergy & Clinical Immunology
Inflammation, Repair and Development, National Heart & Lung Institute, Imperial College London, United Kingdom, MRC & Asthma UK Centre in Allergic Mechanisms of Asthma, London, United Kingdom

319 Early Introduction of Egg for Infants with Atopic Dermatitis to Prevent Egg Allergy: A Double-Blind Placebo-Controlled Randomized Clinical Trial
Osamu Natsume, MD,1 Shigenori Kabashima, MD, PhD,2 Junko Nakasato, MD, PhD,1 Kiwako Yamamoto-Hanauda, MD,1 Masami Narita, MD, PhD,1 Mai Kondo, MD,1 Mayako Saito, MD,1 Ai Kishino, MD,1 Eiisa Inoue, PhD,2 Wakoaki Shinahara, PhD,3 Hiroshi Kido, MD, PhD,1 Hiroshi Saito, MD, PhD4 and Yukihiro Ohyama, MD, PhD,1,2 Division of Allergy, National Center for Child Health and Development, Tokyo, Japan, 1National Center for Child Health and Development, Tokyo, Japan, The University of Tokushima, Japan, 3Department of Allergy and Clinical Immunology, National Research Institute for Child Health and Development, Tokyo, Japan

320 Farm Exposure Is Associated with Reduced Rates of Viral Respiratory Illnesses in Early Life
James R. Castillo, MD,1 Christine M. Seroogy, MD, FAAPA1, Matt Keifer, MPH, MD,3 Iris A. Reyes, MPH,2 Jeffrey Van Wormer, PhD,2 Jennifer Meece, PhD,2 Michael D. Evans, MS2 and James E. Gern, MD, FAAAAI1,1University of Wisconsin School of Medicine and Public Health, Madison, WI, 2National Farm Medicine Center, Marshfield Clinic Research Foundation, Marshfield, WI, 3University of Wisconsin-Madison, Madison, WI

321 Could Allergen Immunotherapy be a Therapeutic Intervention in Eosinophilic Oesophagitis?
Moises A. Calderon, MD, PhD, Imperial College London, London, United Kingdom

Asthma Genotypes, Phenotypes and Management

ADT

3201
Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

322 Adolescent Asthmatics’ Use of the Internet and Other Management Strategies
Ani Thakor Phillip, MD,1 Alexis Hawkins Jones, PhD,2 Howard Zeitz, MD3 and Joseph S. Yosin, MD, FAAAAI1,1VA Greater Los Angeles Health Care System, Los Angeles, CA, 2University of Illinois College of Medicine, Rockford, IL, 3University of Illinois College of Medicine, Los Angeles, CA

323 Relationship of Adherence Estimator TM Scores to Exhaled Nitric Oxide Levels in Pediatric Asthma Patients
Suzanne Burke-McGovern, MD,1 Yan Yan,2 Haesoon Lee3 and Rauno Joks, MD,1 SUNY-Downstate Medical Center, Brooklyn, NY, 2Downstate Medical Center, Brooklyn, NY, 3Department of Medicine at SUNY Downstate Medical Center, Brooklyn, NY

324 Developing and Pilot Testing an Algorithmic Software Tool to Help Manage Asthma (ASTHMA)-Educator
Sunit P. Jarwala, MD, Albert Einstein/Montefiore Medical Center, Bronx, NY

325 Level of Knowledge, Concerns and Adherence to Asthma Management Guideline Recommendations Among Healthcare Providers in Midwestern USA
Jonathan M. Rodrigues, MD, Carrie N. Caruthers, MD, Josiah Moulton, DO, Venkatkiran Kanchastambham, MD, Roua Azmeh, MD, Anthony Kruse, MD, Roula Altisbehe, MD, Christopher Sutton, DO, Mark S. Dykewicz, MD, FAAAAA1 and Raymond Slavin, MD, FAAAAA1, Saint Louis University School of Medicine, St. Louis, MO

326 School Nurses’ Perspectives on Barriers to Implementing School-Based Asthma Management Plans
Margie Louisias, MD, Boston Children’s Hospital, Boston, MA; Brigham and Women’s Hospital, Boston, MA, Donald Goldmann, Boston Children’s Hospital and Wanda Phipatanakul, MD, MS, Division of Pediatric Allergy/Immunology, Boston Children’s Hospital, Harvard University School of Medicine, Boston, MA

327 Utilization and Outcomes Associated with Mobile-Based Asthma Action Plans Compared to Paper Asthma Action Plans Among Adolescents
Tamara T. Perry, MD1,2,3 Mallickarjuna R. Retiguntiti, PhD1,2, Jiang Bian, PhD,3 Chunqiao Luo, MS1,3, Dennis E. Schellhuse, MD1,3, Sherman M. Randle, MS2, Ritu H. Brown, BA1,4, Ariel Berhinski, MD1,4 and Sarah A. Marshall, PhD2,1University of Arkansas for Medical Sciences, Little Rock, AR, 2Arkansas Children’s Hospital Research Institute, Little Rock, AR, 3University of Florida, Gainesville, FL, 4Arkansas Children’s Hospital, Little Rock, AR

328 Developing a Tool to Evaluate Patient-Provider Communication & Patient Satisfaction in Adult Asthma Management
Chloe L. Russo, MD,1 Todd Lasch2, Alana Steffen2, Susan Corbridge, PhD, APN3 and Sharmilee M. Nynhuis, MD, FAAAAI1, 1University of Illinois at Chicago College of Medicine, Chicago, IL, 2University of Illinois at Chicago College of Nursing, Chicago, IL, 3University of Illinois Hospital and Health Sciences System, Chicago, IL

329 Evaluation of the Efficacy of a Web-Based Work-Related Asthma Educational Tool
Joshua C. Lipszyc, BA1, Simeon Gosev, BSc2, Jack Scarborough2, Carly M. Liss, MD, MS, FRCPCH3,4, Sanir Gapa, MD, MSc, FRCPCH3 and Susan M. Turko, MBBS FAAAAI1,2, 1University of Toronto, Thornhill, ON, Canada, 2University of Toronto, 3University of Toronto, Toronto, ON, Canada, 4Ontario Ministry of Labour, Toronto, ON, Canada, 5Toronto Western Hospital, Toronto, ON, Canada

330 Comparison of Clinical Characteristics and Pathophysiology of Cough Predominant Asthma and Noncough Predominant Asthma
Kefang Lai, State Key Lab. of Respiratory Disease, Guangzhou, China

331 Four Different Phenotypes of Blr Changing Pattern in School Children and Its Risk Factors
Young-Ho Kim, MD1, Eun Lee2, Song-I Yang3, Hyun-Ju Cho, MD4, Hyung-Young Kim1, Ji-Won Kwon, MD5, Young Ho Jung, MD1, Byoung-Ju Kim1, Ju-Hee Seo, MD6, Hyo-Bin Kim, MD, PhD7, So-Young Lee8, Ho-Jang Kwon, MD, PhD9 and Soo-Jong Hong, MD, PhD7, 1Department of Pediatrics, Childhood Asthma Atopy Center, Environmental Health Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 2Department of Pediatrics, Pediatrics, Childhood Asthma Atopy Center, Environmental Health Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 3Department of Pediatrics, Pediatrics, Childhood Asthma Atopy Center, Environmental Health Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 4Department of Pediatrics, Pediatrics, Childhood Asthma Atopy Center, Environmental Health Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 5Department of Pediatrics, Pediatrics, Childhood Asthma Atopy Center, Environmental Health Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 6Department of Pediatrics, Pediatric, Changgung University Medical Center, Gunpo, South Korea, 7University of Cincinnati, 8Department of Pediatrics, Medicine, Korea Cancer Center Hospital, Seoul, South Korea, 9Department of Pediatrics, Pediatrics, Inje University Sanggye Paik Hospital, Seoul, South Korea, 10Department of Pediatrics, Hallym University Sacred Heart Hospital, Anyang, South Korea, 11Department of Pediatrics, Pusan National University Yangsan Hospital, Yangsan, 12Department of Pediatrics, Sejong National University Bundang Hospital, South Korea, 13Department of Pediatrics, Bundang CHA Medical Center, CHA University College of Medicine, Seongnam, South Korea, 14University of Cincinnati, 15Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, 16Department of Pediatrics, Inje University Sanggye Paik Hospital, Seoul, South Korea, 17Department of Pediatrics, Hallym University Sacred Heart Hospital, Anyang, South Korea, 18Preventive Medicine, Dankook University College of Medicine, Cheonan, South Korea

A Phenotype of Atopy in Schoolchildren Is Associated with New Development of Allergic Rhinitis and Asthma in a Prospective Study
Si Hyeon Lee1, Eun Lee2, Hyun-Ju Cho, MD3, Ji-Won Kwon, MD4, Young Ho Kim, MD5, Yeon Jung Cho3, Song-I Yang3, Young
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Asthma-COPD Overlap Syndrome- An Underdiagnosed Phenotype in Heavy Smokers
Miren Guenechea-Sola, MD, BS, BS1, Sarah Dalton, BS1, Jeroen Geerts, BS1, Siyang Zeng, BA2 and Mehrdad Arjomandi, MD, BS1, 2San Francisco Veteran Affairs, San Francisco, CA, 2University of California San Francisco

Levels of Allergy Cluster with Asthma Severity in Inner-City Children.
Edward M. Zoratti, MD, FAAAAI, Rebecca A. Zabel, MS2, Denise C. Babineau, PhD, Jacqueline A. Pongracic, MD, FAAAAI, George T. O’Connor, MD, Robert A. Wood, MD, FAAAAI, Gurjit K. Khurana Hershey, MD, PhD, FAAAAI, Carolyn Kerecsman, MD, BS, Rebecca S. Gruchalla, MD, PhD, FAAAAI, Meyer Kattan, MD, Stephen J. Teach, MD, Samuel J. Arbbs Jr, 2, Cynthia Visnew, PhD, MPH1, William W. Busse, MD, FAAAAI, 2, Peter J. Ger gen, MD, MPH1, Alkis Togias, MD, FAAAAI, 2, and Andrew H Liu, MD, FAAAAI1, 2, 1Henry Ford Health System, Detroit, MI, 2Rho Federal Systems Division Inc, Chapel Hill, NC, 2Ann and Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 1Boston University School of Medicine, Boston, MA, 2Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA, 4Cincinnati Children’s Hospital, Cincinnati, OH, 5UT Southwestern Medical Center, Dallas, TX, 6NewYork-Presbyterian/Columbia, New York, NY, 7Children’s National Health System, Washington, DC, 8University of Wisconsin School of Medicine and Public Health, Madison, WI, 9NIH/NIAID/NIH, Bethesda, MD, 10National Jewish Health, Denver, CO, 11Children’s Hospital Colorado, Aurora, CO

The Identification and Description of Severe Asthma Patients in a Cross-Sectional Study—the Ideal Study
Robert Y. Suruki, ScD, GlaxoSmithKline, Worldwide Epidemiology, Research Triangle Park, NC, Necedet Gunsoy, PhD, GlaxoSmithKline, Clinical Statistics, Stockley Park, United Kingdom, Ji-Yeon Shin, GlaxoSmithKline, South Korea, Jonas Daugherty, PAREXEL, Value Outcomes and Epidemiology, Research Triangle Park, NC, Linda Nelsen, GlaxoSmithKline, King of Prussia, PA, Eric Bradford, MD, GlaxoSmithKline, Respiratory R&D, Research Triangle Park, NC, and Frank C. Albers, MD, PhD, GlaxoSmithKline, Respiratory Medical Franchise, Research Triangle Park, NC

The C159T Polymorphism of the CD14 Gene in Adult Patients with Corticosteroid-Sensitive and Refractory Bronchial Asthma in Crimea, Ukraine
Yuri Bisyuk, 1, Andrei I. Kurchenko, 1, A.I. Dubovyi, 1, Ganna V. Bisyuk, 1 and Lawrence M. DuBuske, MD, FAAAAI, 1, 2Bogomolets National Medical University, Kiev, Ukraine, 2Crimean State Medical University, Simferopol, Ukraine, 3George Washington University School of Medicine, Washington, DC, 4Immunology Research Institute of New England, Gardner, MA

New Associations Between ILA Genotypes and Asthma Phenotypes
Priscila Megumi Takejima, Rosana C. Agondi, MD, PhD, Helcio Rodrigues, Marcelo Vivolo Aun, MD, Jorge Kaill, MD, PhD, and Pedro Giavina-Bianchi, MD, PhD, 1Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil, 2University of Sao Paulo

The Dietary Effects of Methyl Donors on Asthma and Allergic Sensitization Is Influenced by the MTHFR C677T Polymorphism
Yean Jung Choi, Hye Lim Shin, Sung-Ok Kwon, Eun Lee, Hyun-Ju Cho, Young-Ho Kim, Young Ho Jung, Ji-Won Kwon, Hyung Young Kim, Ju-Hee Seo, Byoung-Ju Kim, Hyo Bin Kim, Ho-Jang Kwon, Se-Young Oh and Soo-Jong Hong, 1Department of Pediatrics, Childhood Asthma Atryp Center, Environmental Health Center, Asan Medical Center, University of Ulsan College of Medicine, 2Asan Institute for Life Sciences, University of Ulsan College of Medicine, 3Department of Pediatrics, Hallym University Sacred Heart Hospital, College of Medicine, Hallym University, 4Department of Pediatrics, Hallym University Sacred Heart Hospital, Hallym University College of Medicine, 5Department of Food and Nutrition, College of Human Ecology, Kyung Hee University, 6Department of Pediatrics, CHA University School of Medicine, 7Department of Pediatrics, Seoul National University Bundang Hospital, 8Department of Pediatrics, Pusan National University Yangsan Hospital, 9Department of Pediatrics, Korea Cancer Center Hospital, 10Department of Environmental Health, University of Cincinnati College of Medicine, 11Department of Pediatrics, Sanggye Paik Hospital, Inje University College of Medicine, 12Department of Preventive Medicine, Dankook University College of Medicine

ZNF248 Is Associated with Elder-Onset Asthma in African Americans
Leyao Wang, Yasminn D. Salinas and Andrew T. DeWan, Department of Chronic Disease Epidemiology, Yale University School of Public Health, New Haven, CT

Gene Expression Networks of Allergic Asthma As Characterized By IgE Levels Among Costa Rican Children
Yamini Virkut, MD, MA, MPH, Department of Allergy and Immunology, Massachusetts General Hospital, Boston, MA, Damien C. Croteau-Chonka, PhD, Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, Scott T. Weiss, MD, MS, Channing Laboratory, Harvard Medical School, Boston, MA and Jessica Lasky-Su, Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital, Boston, MA

Asthma Infection, Biomarkers and Inflammation

ADT
3202 Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

IL-27 Administration Via Nasal Improves OVA-Induced Airway Inflammation By GADD45a but Not STAT1 Pathway
Zhihong Chen, Xiaojiong Su, MD, PhD, Xiangdong Wang and Nian Dong, Zhongshan Hospital, Fudan University

323 Ill.33 May Modulate Longitudinal Changes of Spirometric Indicators in Chinese Children with Asthma
Ting Fan Leung, MD, FRCPCH, FAAAAI, Bing Yee Ye, PhD, Man Fung Tang, BSc, Wilson Wai-san Tam, PhD, Wa Cheong Chan, PhD, and Chung Yi Li, MPhil, 1Department of Paediatrics, The Chinese University of Hong Kong, Hong Kong, 2Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, Singapore
344 The Effect of 12/15-Lipoxygenase on Expression of Selected Genes during Dermatophagoides Pteronyssinus Induced Airway Inflammation in Mice
Krzysztof Kowal, MD, PhD, Pawel Bernatowicz, Paweł Bielecki, Ewa Sacharzewska, Lech Chyczewski, MD, PhD, Jackiw Niklinski and Otylia Kowal-Bielecka, Medical University of Białystok, Poland

345 Clinical Characteristics of Interferon-Gamma-Inducible Protein 10 in Children with Wheezing
Jong-seo Yoon, MD, PhD1, Hwan Soo Kim, MD, MD2, Yoon Hong Chun, MD, MD3, Hyun Hee Kim, MD, MD4, Jin-Tack Kim, MD, PhD4, and Joou Sung Lee, MD, PhD5, 1Dept of Pediatrics, The Catholic University of Korea, 2The Catholic University of Korea, 3Dept of Pediatrics, College of Medicine, The Catholic University of Korea, 4Dept of Pediatrics, Uijeongbu St Mary’s Hospital, The Catholic University of Korea, College of Medicine, Uijeongbu, Gyeonggi-Do, South Korea

346 Abrogation of Glucocorticoid Signaling By Exhaled Breath Condensate (EBC) from Mild Persistent Asthmatics
Jennifer McCracken, MD, UTMB, Galveston, TX, Lata Kaphalia, PhD, University of Texas Medical Branch and William J. Calhoun, MD, FAAAAI, Allergy And Immunology, University of Texas Medical Branch, Galveston, TX

347 Serum Cytokine Profiles in Acute Exacerbation of Asthma Subtypes Measured By Cha Method
Zhihui Min, Zhihong Chen, Xiaoqing Song, Chun Liu, Du Xiangdong, Wang, Zhejiang Hospital, Fudan University

348 Serum IgE Levels in Obese and Non-Obese Asthmatics
Marla Paula Hena, Penn State, Milton S. Hershey Medical Center, Hershey, PA, Faund T. Ishmael, MD, PhD, FAAAAI, Penn State University, Hershey, PA and Effren L. Roel, MD, FAAAAI, Allergy/Immunology, Penn State University College of Medicine, Hershey, PA

349 Fractional Exhaled Nitric Oxide (FENO) is Negatively Associated with Percent-Predicted FEV1 in Inner-City Minority Asthma Patients
Sherlyana Surja, MD, Christopher D. Codispoti, MD, PhD1, and James N. Moyer, MD, PhD1, 1John H. Stroger Hospital of Cook County, Chicago, IL, 2Rush University Medical Center, Chicago, IL, 3Department of Immunology and Microbiology, Allergy/Immunology Section, Rush University Medical Center, Chicago, IL

350 Is There Any Basophil Activation in Peripheral Blood in AERD Patients?
Chihiro Mitsu, MD, Eniko Ono, MD, Keiji Kajiwara, BSc1, Hiroki Hayashi, MD, MD2, Yusuke Kamide, MD, PhD3, Kentaro Watai, MD, Arisa Kinoshita, MD, Yuma Fukunomi, MD, PhD1, Kiyoji Sekiya, MD1, Takahiro Tsuburai, MD, PhD3, Akio Mori, MD, PhD1 and Masami Taniguchi, MD, PhD1, 1Clinical Research Center for Allergy and Rheumatology, Sagamihara National Hospital, Sagamihara, Japan, 2Clinical Research Center for Allergy and Rheumatology Sagamihara National Hospital, Kanagawa, Japan, 3Department of Respiratory Medicine, Nagoya University Graduate School of Medicine, Nagoya, Japan

351 Type 2 Biomarkers Define a Prevalent Phenotype in Moderate-to-Severe, Uncontrolled Asthma Patients: A Pooled Analysis from Lebrikizumab All-Comers Phase 2 Trials
Phillip E. Korenblat, MD, FAAAAI1, Nicola A. Hanania, MD2, Jonathan Corren, MD3, Julie K. Olsen, MD, MS1, Nikhil Kamath, MD3, Sarah Gray, PhD1, Nicolas Martin2, Cecile T.J. Holweg, PhD1, John G. Matthews, MB, BS, MRCGP1, John L. Limb, MD1 and Stephan Korom1, 1The Clinical Research Center LLC, St. Louis, MO, 2Pulmonary, Critical Care and Sleep Medicine, Baylor College of Medicine, Houston, TX, 3Asthma and Allergy Research Foundation, Los Angeles, CA, 4Genentech Inc. (a member of the Roche Group), South San Francisco, CA, 5Roche Products Limited, Welwyn Garden City, United Kingdom, 6Genentech, Inc. (a member of the Roche Group), South San Francisco, CA, 7F Hoffmann-La Roche Ltd, Basel, Switzerland

352 Serum Metabolomic Analysis Identifies Potential Biomarkers for Aspirin-Exacerbated Respiratory Disease
G. Young Ban, MD1, Kumsun Cho2, Seung-Hyun Kim, PhD3, Moon Kyoung Yoon4, Chang Gyu Jung5, Ji-Ho Lee6, Sohee Lee4, Jie Hye Kim, MD, Shin Yoo Seob5, Ye Young-Min6, Dong-Ho Nahm7, Joo-Yoon Cho2 and Hae-Sim Park, MD, FAAAAI4, 1Department of Allergy & Clinical Immunology, Ajou University School of Medicine, Suwon, South Korea, 2Department of Pharmacology and Biomedical sciences, Seoul National University College of Medicine, Seoul 110-799, Korea, 3Aju University, Suwon, 4Department of Allergy and Clinical Immunology, Ajou University School of Medicine, Suwon, Korea, 5Department of Internal Medicine, Uijeongbu St Mary’s Hospital, Suwon, Korea, 6Department of Internal Medicine, The Armed Forces Cherry Home Hospital, 7Ajou University School of Medicine, Suwon, South Korea

353 Nasal and Pharyngeal Eosinophil Peroxidase Levels Represent Surrogate Biomarkers for the Presence of Lower Airway Eosinophils in Adults with Poorly Controlled Asthma
Matthew A. Rank, MD1, Serge I. Ochkur, PhD1, John C. Lewis, MD2, Harry G. Teaford, MD1, Lewis J. Wesselius, MD1, Richard A. Helmers, MD1, Nancy A. Lee, PhD3, Parameswaran K. Nair, MD, PhD, FRCP FRCP(C)2 and James J. Lee, PhD1, 1Mayo Clinic Arizona, Scottsdale, AZ, 2Firestone Institute for Respiratory Health, Hamilton, ON, Canada

354 Viral Induced Disease in Mild Atopic Asthmatics: Dynamics of Pulmonary Function, Speed of Symptom Onset and Implications for Drug Intervention in HRV Inoculated Volunteers
Alex Mann1, Ganesh Balaraman1, June Gunter2, Pawel Rucki2, Chris Pol1, Martin Johnson1 and Tony Lockert1, 1IVIVO Services Ltd, 2IVIVO Services Ltd (at the time of the study)

355 Assessment of Wheezing Frequency and Viral Etiology on Childhood and Adolescent Asthma Risk
Halie M. Anderson, MD1, Robert F. Lemanske Jr., MD, FAAAAI2, Michael D. Evans, MS2, Ronald E. Gangnon, PhD3, James E. Cern, MD, FAAAAI1 and Daniel J. Jackson, MD1, 1University of Wisconsin, Madison, WI, 2University of Wisconsin School of Medicine and Public Health, Madison, WI, 3University of Wisconsin-Madison, Madison, WI, 4Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI

356 Cytokine Profiles and Eosinophil Activation in Sensitive and Nonsensitive Cases of Virus-Induced Acute Exacerbations of Childhood Wheezing/Asthma
Maeako Kato, MD, PhD, FAAAAI1, Kazuo Suzuki, MD, Yoh-iaki Yunada, MD, PhD2, Kouichi Murayama, MD, PhD2 and Hirokiwaka Mochizuki, MD, PhD2, 1Department of Pediatrics, Tokai University School of Medicine, Isehara, Kanagawa, Japan, 2Gunma Children’s Medical Center, Shibukawa, Gunma, Japan, 3Clinical Predictors of Chest Radiographic Abnormalities in Children Admitted with Bronchiolitis: A Single Center Study
Yoon Ho Shin, MD1, Ga Ram Kim2, Kyung Suk Lee, MD, PhD, Young-Ho Jung2, Hye Mi Jee, MD2 and Man-Yong Han, MD3, 1Department of Pediatrics, CHA Gangnam Medical Center, CHA University School of Medicine, Seoul, Korea, 2Department of Pediatrics, CHA University Bundang Medical Center, Seongnam, South Korea, 3CHA University Bundang Medical Center, Seongnam, South Korea

357 Rhinovirus C Infections Are Associated with Treatment Failure in Preschool Children with Recurrent Wheezing
Alafia W. Berry, MD1, David Mauger, PhD2, Leonard B. Buchurier, MD, FAAAAI3, Theresa W. Gillibert, MD, MS2, Fernando D. Martinez, MD3, Kristine Ginivil3, Tressa Pappas, BS2, James E. Gern, MD, FAAAAI4, Robert F. Lemanske Jr., MD, FAAAAI5 and Daniel J. Jackson, MD1, 1University of Wisconsin School of Medicine and Public Health, 2Penn State University College of
Molecular Mechanism of Immunological Diseases

BCI

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363 Characterization of Th2 Induced Bronchial Associated Lymphoid Tissue (BALT) in a Mouse Model of Asthma
David M. Kemény, BSc, PhD, FRCPath, Yen L. Chu, BSc, MSc, Chiung-Hui Huang, PhD, Ka Hang Liong, Kenneth Wong, Sophie Q Zhou, Yafang Tang, Michelle CP Low, Yongliang Zhang, and Fred WS Wong, National University of Singapore, Singapore, Singapore, Department of Paediatrics, National University of Singapore, Singapore, National University of Singapore, Singapore, Duke-NUS, National University of Singapore

364 Lymphocyte Activation and Bone Turnover in HIV-Infected Young Adults; A Sub-Study of Adolescent Medicine Trials Network Protocol 061
Lorena R Wilson, MD, Ruth Gakpo, Bernard Fischer, DVM, PhD, Bret Rudy, MD, Maureen Goodenow, PhD, Grace Aldrovandi, MD, and John Sleiman, MD, Duke University Medical Center, Durham, NC, New York University Langone Medical Center, New York, NY, University of Florida College of Medicine, Gainesville, FL, Children’s Hospital of Los Angeles, Los Angeles, CA

365 T-Cell Function Declines before CD4+ T-Cell Count Reaches Critical Level in Patients with Perinatal Acquired HIV
Naveen Nannapaneni, MD, Pavadee Poowutikul, MD, and Elizabeth A. Secord, MD, FAAPA, Children’s Hospital of Michigan Department of Allergy & Immunology, Detroit, MI, Children’s Hospital of Michigan Department of Allergy Immunology, Detroit, MI

366 The Immunomodulatory Role of Vitamin D in HIV-Infected Children
Yasmin Hamzavi Abedi, MD, and David W. Rosenthal, DO, PhD, Division of Allergy and Immunology, Departments of Medicine and Pediatrics, North Shore-LIJ Health System, Great Neck, NY, Departments of Medicine and Pediatrics, Hofstra North Shore-LIJ School of Medicine, Hempstead, NY

367 Targeting IRF5 Activation for the Treatment of Lupus
Steven M. Draulicewicz, MD, Saurav De, Eugene Capitle, MD, and Betsy Barnes, PhD, Rutgers New Jersey Medical School, Newark, NJ, Rutgers-New Jersey Medical School, Newark, NJ

368 Cyclical Seminal Plasma Sensitivity in a Woman with Progestosterone Autoimmune Dermatitis
Erin H. Penn, MD, MS, Brigham and Women’s Hospital, Division of Internal Medicine, Boston, MA, Paige G. Wickner, MD, MPH, Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Chestnut Hill, MA and Marianna C. Castells, MD, PhD, FAAPAI, Division of Rheumatology, Allergy and Immunology, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

369 CMV-Specific T Cells in a Good’s Syndrome Patient with Recurrent CMV Infection
Ponpan Matangkasombut, MD, Department of Microbiology, Faculty of Science, Mahidol University, Bangkok, Thailand, Division of Allergy, Immunology and Rheumatology, Department of Internal Medicine, Faculty of Medicine, Ramathibodi hospital, Mahidol University, Bangkok, Thailand, Sapanart Srirasai, Research center, Faculty of Medicine Ramathibodi hospital Mahidol University, Bangkok, Thailand, Wannada Laisuan, MD, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand and Nopporn Apiwattanakul, Division of Infectious Disease, Department of Pediatric Faculty of Medicine, Ramathibodi hospital, Mahidol University, Bangkok, Thailand

370 Assessment of HLA Antigens and Serum Cytokine Levels to Predict Disease Progression and Treatment Responses in Children with Chronic Glomerulonephritis
G.N. Dronnik, Bogomolots National Medical University, Kiev, Ukraine, V. Driianska, National Academy of Medical Sciences of Ukraine, Kiev, Ukraine and Lawrence M. Dubuske, MD, FAAPA, George Washington University School of Medicine, Washington, DC, Immunology Research Institute of New England, Gardner, MA

371 Serum TNF-Alpha, IL-12, IL-8 in Patients with Oral Mucosal Lichen Planus
Andrey I. Kurchenko, George N. Dronnik, R. A. Rehuretska, and Lawrence M. Dubuske, MD, FAAPA, Bogomolots National Medical University, Kiev, Ukraine, George Washington University School of Medicine, Washington, DC, Immunology Research Institute of New England, Gardner, MA

372 A Case Series of Measles Vaccination Failure in Healthcare Workers
YiFeng Chen, MD, MD, Hadaya Hegde, MD and Rauno Joks, MD, Department of Medicine at SUNY Downstate Medical Center, Brooklyn, NY, Center for Allergy and Asthma Research, Brooklyn, NY, Kings County Hospital Center, Brooklyn, NY
Immunodeficiency Associated with Other Diseases

BCI

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Title: Hypersensitivity Pneumonitis in an Autosomal Recessive Chronic Granulomatous Disease Carrier
Joel L. Gallagher, MD, James W. Verbsky, MD, PhD, John M. Routes, MD, FAAAAI, Mary Hintermeyer, APNP, Monica Thakur, MD and Sara Szabo, MD, PhD, Medical College of Wisconsin, Milwaukee, WI.

Ectodactylly, Ectodermal Dysplasia, and Cleft Lip/Palate Syndrome with Concomitant Lymphopenia: A Novel TP63 Mutation
Adeeb A. Bulkihi, MD1, Tara V. Sao, MD2, Richard F. Lockey, MD3 and Mark C. Clauw, MD, PhD, FAAAAI1, Division of Allergy and Immunology, Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL, 2Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL, 3James Haley Veterans’ Hospital, Tampa, FL

A Case of Mohr-Trainbjaerg Syndrome Diagnosed in a Patient with X-Linked Agammaglobulinemia
Marcus S. Shuker, MD, MS, FAAAAI. Dartmouth-Hitchcock Medical Center, Lebanon, NH, TingJia H Lorigiano, Geisel School of Medicine, Hanover, NH and Anusha Vallamudi, MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH.

Conorobility of Allergic Disorders in Patients with Rheumatoid Arthritis
Kyoiko Yoshihiro, MD, Shigeru Yoshizawa, MD, Reiko Kishihawa, MD, Tenfumi Shimoda, MD and Tomoaki Iwamaga, MD, The National Hospital Organization Fukuoka Hospital, Fukuoka, Japan

Kabuki Syndrome with T Cell Dysfunction
Osman C. Dokmei, MD, Duke University School of Medicine, Durham, NC

Varicella Zoster Virus Meningitis As a Complication of Cyclosporine Therapy in a Patient with Atopic Dermatitis
Carlos A. Morales-Mateuluna, MD, FAAAAI, Universitätsklinik Basel, Basel, Switzerland, Felix Schwarz, MD, Ostalb-Klinikum Aalen, Aalen, Germany and Joachim Freihorst, MD, Ostalb-Klinikum, Aalen, Germany

A Patient with Kabuki (Nikawa-Kuroki) Syndrome, Common Variable Immune Deficiency and Immune-Mediated Neutropenia Found to Have a Novel Mutation in the KMT2D Gene.
Neha Dunn, MD2, Rohit Katial, MD, FAAAAI and Jenny Stitt, MD1, National Jewish Health, Denver, CO, 2University of Colorado Hospitals, Aurora, CO, UC Denver

Granulomatous and Lymphoctic Interstitial Lung Disease (GILD) Associated with KMT2D Gene Mutation in Kabuki Syndrome
Juan A. Adams, MD, Joel L. Gallagher, MD, Mary Hintermeyer, APNP, James W. Verbsky, MD, PhD and John M. Routes, MD, FAAAAI, Medical College of Wisconsin, Milwaukee, WI

A Novel Mutation in the CYBB Gene, Thr343Lys, in a Male Infant with X-Linked Chronic Granulomatous Disease with a Rare Presentation of Bilateral Parotiditis
Wei Te Lei, MD, Division of Allergy, Immunology, Rheumatology Disease, Department of Pediatrics, Mackay Memorial Hospital, Hsinchu, Taiwan, Hsinchu, Taiwan

B Cell Function in Immunodeficiency with Normal Immunoglobulins
Hillary Gordon, MD2, Stacey Galowicz, DO1, Kishore Alugapalli, PhD3, Gregory Dickinson, PhD3 and Stephen J. McGeary, MD, FAAAAI1, 1Thomas Jefferson University Hospital, Philadelphia, PA, 2Nemours/AI du Pont Hospital for Children, Wilmington, DE

Sema4C Expression Characterization and Downstream Signaling in HEK Cells and B Cell Lines
David Wu, McGill University, Montreal, QC, Canada

Impact of an H3/4 Receptor Antagonist on Chemokine and Cytochrome Synthesis By PBMC and Dendritic Cells Derived from PBMC
Roman Khanferyan, MD, PhD1, V. Evstratova1, N. Rieger1 and Lawrence M. DuBuske, MD, FAAAAI2, 1Institute of Nutrition, Moscow, Russia, 2Immunology Research Institute of New England, Gardner, MA, 3George Washington University School of Medicine, Washington, DC

Expression Pattern of Peripheral Blood Mononuclear Leucocyte GABA Receptors and Calcium Signaling Genes
Leonid P. Tivol, MD, PhD1, A. B. Kapitan1, K. I. Pavlov1, I. M. Goloenko1 and Lawrence M. DuBuske, MD, FAAAAI2, 1Republican Research and Practical Center for Epidemiology and Microbiology, Minsk, Belarus, 2Immunology Research Institute of New England, Gardner, MA, 3George Washington University School of Medicine, Washington, DC

II-1Beta Levels in Patients with Refractory Recurrent Pericarditis
Rushita Mehta, MD and Arje Rubinstein, MD, Albert Einstein College of Medicine and Montefiore Hospital, Bronx, NY

Pollen

EORD

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Rapid Molecular Identification and Quantification of Allergenic Pollen By Real-Time PCR
Michael Teng, PhD, Division of Allergy and Immunology, Department of Internal Medicine, and the Joy McCann Culverhouse...
Food Allergy: Diagnosis and Management

FADDA

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Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

Oral Immunotherapy for Sesame Food Allergy: Interim Analysis
Michael R Goldberg, MD, PhD, Michael B. Levy, MD, FAAAAI1, Michael Y Appel, PhD, Liat Nachshon, MD, Kerem Golobov, BScN PeS RDi, Arnon Elizur, MD, MSc, Hadas Yechiam-Caspil and Yitzhak Katz, MD, FAAAAI1,2, Assaf Harofeh Medical Center, Zerifin, Israel, 3Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

Comparison of Diagnostic Tests for Sesame Food Allergy
Michael Y Appel, PhD, Michael R Goldberg, MD, PhD, Liat Nachshon, MD and Yitzhak Katz, MD, FAAAAI1,2, Assaf Harofeh Medical Center, Zerifin, Israel, 3Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

Abstracts AB313

SUNDAY
410 Analysis of Oral Food Challenges for Almond Hypersensitivity
Paul E. Hesterberg, MD, Yamin Virkud, MD, MA, MPH, Caroline Southwick, Alexandra R. Alejos, Elisabeth S. Stieb, RN, Wayne Shreffler, MD, PhD, Massachusetts General Hospital, Boston, MA, Department of Allergy and Immunology, Massachusetts General Hospital, Boston, MA, Division of Allergy and Immunology, Department of Pediatrics, Massachusetts General Hospital and Harvard Medical School, Boston, MA

411 Mild Ocular and Nasal Symptoms Are Not Indicative of Reactions during Open Oral Food Challenges
Katherine S. L. Tuttle, MD, Elisabeth S. Stieb, RN, Wayne Shreffler, MD, PhD, and Yamin Virkud, MD, MA, Division of Allergy and Immunology, Department of Pediatrics, Massachusetts General Hospital and Harvard Medical School, Boston, MA, Harvard Medical School, Boston, MA, Department of Allergy and Immunology, Massachusetts General Hospital, Boston, MA

412 Implementation of a Standardized Clinical Assessment and Management Plan (SCAMP) for Food Challenges
Tander Simberloff,1,2 Ron Paranji, MBBS, MPH,1,2 Lisa Bartnikas, MD,1,3 Ana Dioum Broyles, MD, FAAAAI,1,3 Victoria Hartman,1,3 Karol G. Timmons, RN, MS, CPNP,1,2 D Marlowe Miller,1,3 Dionne Graham, PhD,1,2 Lynda C. Schneider, MD, FAAAAI,1,3 and Andrew J. MacGinnitie, MD, PhD,1,2 Boston Children’s Hospital, Boston, MA, Institute for Relevant Clinical Data Analytics, Harvard Medical School, Boston, MA

413 A Review of Food Challenges Performed on Children with Large Skin Prick Tests
Malika Gupta, MD,1 Liron D. Grossman, MD, Jonathan M. Spiegel, MD, MPH, FAAAAI,1 and Antonella Cianfoni, MD, PhD, FAAAAI, The Children’s Hospital of Philadelphia, Philadelphia, PA, Tel-Aviv University, Tel Aviv, Israel, Perelman School of Medicine, 3615 Civic Center Boulevard, The Children’s Hospital of Philadelphia, Philadelphia, PA

414 Basophil Activation and Peanut-Specific IgE Are Not Predictors of Threshold Dose during a Double-Blind Placebo-Controlled Food Challenge (DBPCFC)
Mofra E. Breslin, MD, MSE,1 Deanna K. Hamilton, RN, RiShu Guo, PhD,1 Ping Ye, PhD,1 Xiaotong Jiang,1 Paul Stewart, PhD,1 Stacy Chin, MD,2 Edwin H. Kim, MD, MS1 and A. Wesley Burks, MD, FAAAAI,1 University of North Carolina at Chapel Hill, Chapel Hill, NC, TDA/CDER, Washington, DC

415 Sensitiveness of Phenotype and Suppressive Activities of Tregs after Discontinuation of Epit or Not of OIT or Silt in Peanut Sensitive Mice
Vincent Dioszeghy, PhD, Lucie Mondoulet, PhD, Camille Plaquet, Emilie Puteaux, Melanie Liguor, Veronique Dhillon, Christophe Dupont, MD, PhD, and Pierre-Henri Benhamou, MD, DBV Technologies, Bagneux, France, Hospital Necker-Enfants Malades, Paris, France

416 Patients from Low-Income Families Referred for Oral Food Challenge Were More Likely to Pass
Koen R. Beukema,1 John Leung, MD, Yamin Virkud, MD, MA, MPH,1,2 Alice H. Shen,1 Sarita U. Patil, MD,1,2 Jyoti Ramakrishna, MD and Wayne Shreffler, MD, PhD,1 Division of Allergy and Immunology, Tufts Medical Center, Boston, MA, Department of Allergy and Immunology, Massachusetts General Hospital, Boston, MA, Division of Allergy and Immunology, Department of Pediatrics, Massachusetts General Hospital and Harvard Medical School, Boston, MA

417 Quantitative Assessment of the Safety Benefits Associated with Increasing Clinical Peanut Thresholds through Immunotherapy
Joseph L. Baumert, PhD,1 Laurent Martin, PharmD,2 Claude Thébault, MD,2,3,4 Steve L. Taylor, PhD,1 and Charles Ruban, MSc, Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, DBV Technologies, Bagneux, France

418 Determination of Milk Allergen Threshold Doses with Dedicated Challenge
Michal Melchior, MSE,1 Liat Nachshon, MD, Michael B. Levy, MD, FAAAAI, Michael R Goldberg, MD, PhD, Karen Golobov, BS/CNTR, RD, Arnon Elizur, MD,2 Yitzikh Katz, MD, FAAAAI,2,3 Tel-Aviv University, School of Medicine, Tel Aviv, Israel, Assaf Haroeh Medical Center, Zerifin, Israel, Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

419 Early Peanut OIT-Induced Suppression of Basophil Reactivity Is a Marker of Sustained Unresponsiveness
Sarita U. Patil, MD,2,3 Johanna Steinbrecher, BS, Alex Ma, BS,5 Neal Smith, BS,5 Cecilia Washburn, BS,6 Alanna Hickey, Caroline Southwick, Lauren Tracy, Bert Ruiter, PhD, Yamini Virkud, MD, MA, MPH, Michael Schneider, and Wayne Shreffler, MD, PhD, Division of Allergy, Immunology, and Rheumatology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, Department of Allergy and Immunology, Massachusetts General Hospital, Boston, MA, Department of Rheumatology, Allergy, and Immunology, Massachusetts General Hospital, Charlestown, MA, New York University College of Dentistry, New York, NY, Massachusetts General Hospital, Charlestown, MA, Department of Rheumatology, Allergy, and Immunology, Massachusetts General Hospital, Charlestown, MA, Food Allergy Center, Massachusetts General Hospital, Boston, MA, Massachusetts General Hospital, Boston, MA, Buhlmann Laboratories AG, Basel, Switzerland, Division of Allergy and Immunology, Department of Pediatrics, Massachusetts General Hospital and Harvard Medical School, Boston, MA, 1Harvard Medical School, Boston, MA

420 Peanut Allergen Thresholds in a “Low Peanut Allergy” Prevalence Area
Tamar Yechie, BS/CNTR, RD1, Michael R Goldberg, MD, PhD, Michael B. Levy, MD, FAAAAI, Liat Nachshon, MD, Karen Golobov, BS/CNTR, RD, Arnon Elizur, MD, Yitzikh Katz, MD, FAAAAI, Assaf Haroeh Medical Center, Zerifin, Israel, Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

421 Consumer Attitudes Towards Packaged Foods Having Food Allergen Advisory Labeling
Catherine A Mills, Julie Wang, MD, FAAAAI and Jacob D. Kattan, MD, Icahn School of Medicine at Mount Sinai, New York, NY

422 Epitope-Specific but Not Oral Immunotherapy Leads to Sustainable GATA3 Hypermethylation and Foxp3 Hypomethylation in Peanut Sensitive Mice
Jorg Tost, PhD, Lucie Mondoulet, PhD, Emilie Puteaux, Florence Busot, Melanie Liguor, Veronique Dhillon, Camille Plaquet, Christophe Dupont, MD, PhD and Pierre-Henri Benhamou, MD, CEA, Evry, France, DBV Technologies, Bagneux, France, Hospital Necker Enfants Malades, Paris, France

423 Food Allergies in a Pediatric Clinic – Interventions to Improve Management
Ari Zeilig, MD, Ilana Harwayne-Gidasky, MD, Allison Gault, MD, and Julie Wang, MD, FAAAAI, Albert Einstein College of Medicine, Bronx, NY, New York Presbyterian Hospital, Weill Cornell Medical Center, New York, NY, Icahn School of Medicine at Mount Sinai, New York, NY

424 Plasma Derived IgA from Healthy Donors Binds to Peanut Extract and Inhibits Peanut-Induced Rat Basophil Activation
Michael R. Simon, MD, FAAAAI, Secretory IgA, Inc., Ann Arbor, MI, William Beaumont Hospital, Royal Oak, MI and George N. Konstantinou, MD, PhD, MSc, Icahn School of Medicine at Mount Sinai, New York, NY, 424 General Military Training Hospital, Thessaloniki, Greece
425 IgE-Dependent Mechanism and Successful Desensitization of Erythritol Allergy
Shiro Sugiuara, MD, MPH1, Yasato Kondo, MD, PhD2, Ikuya Tsuge, MD, PhD3, Tomoko Nakagawa, MD4, Naoyuki Kando, MD5, Komei Ito, MD, PhD6 and Norihisa Koyama, MD, PhD7, 1Department of Allergy, Aichi Children’s Health and Medical Center, Obu, Japan, 2Department of Pediatrics, The Second Teaching Hospital, Fujita Health University, Nagoya, Japan, 3Department of Pediatrics, School of Medicine, Fujita Health University, Toyoake, Japan, 4Department of Allergy, Aichi Children’s Health and Medical Center, 5Aichi Children’s Health and Medical Center, Obu, Aichi, Japan, 6Department of Pediatrics, Toyoshashi Municipal Hospital

426 Glucopyranosyl a (GLA) a Toll-like Receptor 4 (TLR4) Agonist for Use As An Adjuvant in Combination with Peanut Allergen Immunotherapy

427 Tolerance Induction By Oral Immunotherapy in Patients with Cow’s Milk Allergy
Mohsen Ebrahimi, MD, Children’s Medical Center, Department of Allergy and Clinical Immunology,Tehran University of Medical Sciences, Iran, Masoud Movahedi, Department of Pediatrics, Children’s Medical Center, Tehran University of Medical Sciences, Tehran, Iran, Mohammad Gharagozlou, MD, Children’s Medical Center, Tehran University of Medical Sciences, Tehran, Iran, Majid Jafari, MD, Allergy research center, Mashhad University of Medical Sciences, Mashhad, Iran, Fatemeh Kiae, Children’s Medical Center,Department of Allergy and Clinical Immunology, Tehran University of Medical Science,Iran and Reza Farid, MD, FAAAAI, Allergy Research Center, Mashhad University of Medical Sciences, Iran

428 General Characteristics of Brazilian Children and Adolescents with Cow’s Milk Protein Allergy before Starting Oral Tolerance Induction (OIT)
Fabio C Kuschnir, MD, PhD1, Jose Luiz M. Rios, MD, PhD2, Alfredo A. Neto, Dr.3, Maria A. da Venda2, Flavia C. Loyola4, Bruno B Soato, Dr.5 and Joao B. M. Rios2, 1Department of Pediatrics Rio De Janeiro State University, Rio de Janeiro, Brazil, 2Policlinica Geral Do Rio De Janeiro, Rio De Janeiro, Brazil, 3Policlinica Geral Do Rio De Janeiro State University, Rio de Janeiro, Brazil, 4Policlinica Geral Do Rio De Janeiro, Brazil, 5Policlinica Geral Do Rio De Janeiro, Brazil, 6Policlinica Geral Do Rio De Janeiro, Brazil, 7Policlinica Geral Do Rio De Janeiro, Brazil

429 Cow’s Milk (CM) Oral Immunotherapy (OIT) Early Immunologic Shiftings
Jose Luiz M. Rios, MD, PhD1,2, Fabio C Kuschnir3, Alfredo Alves Neto4,5, Flavia C. Loyola4, Maria A. da Venda5, Cristiane A. Iraha6,7 and Joao B. M. Rios8, 1Department of Pediatrics Rio De Janeiro State University, Rio de Janeiro, Brazil, 2Policlinica Geral Do Rio De Janeiro, Brazil, 3Policlinica Geral Do Rio De Janeiro, Brazil, 4Policlinica Geral Do Rio De Janeiro, Brazil, 5Policlinica Geral Do Rio De Janeiro, Brazil, 6Policlinica Geral Do Rio De Janeiro, Brazil, 7Policlinica Geral Do Rio De Janeiro, Brazil

430 Real-Life Follow-up in Cows Milk Immunotherapy: Clinical and Serological Data
Paloma Poza-Gueudes, MD1,2, Ruperto González-Pérez, MD, PhD2,3, Inmaculada Sanchez-Machín, MD2 and Victor Matheu, MD, PhD2, 1Hospital del Tórax-Ofta, Sta Cruz de Tenerife, Spain, 2Hospital Universitario de Canarias, La Laguna, Spain

431 Successfull Desensitization to Cow’s Milk in Combination with Omalizumab
Cristina E. Jiménez, MD, Yesenia Peña, MD, Jesús Macias, MD, Gustavo Córdova, MD, Mar Moro, MD, PhD and Ana Rosado, MD, Hospital Universitario Fundación Alcorcón, Madrid, Spain

432 Improvement in Skin Testing Is Associated with Increases in Milk Component-Specific IgA and IgG4 during Milk Oral Immunotherapy
Bahar Torabi, MD1, Sarah De Schryver, MD1, Tanvir Rahman, MSc1, Duncan Leijtenyi, MSc1, Ingrid Baerg, BSN, CAE2, Edmond S. Chan, MD, FAAAAI3, Bruce D. Mazer, MD, FAAAAI1 and Moshe Ben-Shoshan, MD, MSc1, 1The Research Institute of the McGill University Health Centre, McEkins- Christie Laboratories, Division of Paediatric Allergy and Clinical Immunology, Department of Paediatrics, Montreal Children’s Hospital, Montreal, QC, Canada, 2Division of Allergy & Immunology, Department of Pediatrics, BC Children’s Hospital, Vancouver, BC, Canada, 3Division of Allergy & Immunology, Department of Pediatrics, Faculty of Medicine, University of British Columbia, BC Children’s Hospital, Vancouver, BC, Canada

433 Oral Allergy Symptoms and Pollen Sensitization in Tree Nut Allergic Subjects Receiving Walnut Oral Immunotherapy (WOIT)
Amika Sood1, Amy M. Searock, MD2, Mallikarjunu R Rettiganti, PhD3, Anne M. Hiegen, RN CRC4, James D Sikes5, Suzanne E House6, Jennifer N Payne7, Jessica L Betti8, Sarah E Beckwith9, Tamara T. Perry, MD9, Robbie D. Pesek, MD10, Josh L. Kennedy10, Peggy L. Chandler, APN10, Chunziao Luo, MS11 and Stacie M. Jones, MD11, 1University of Arkansas for Medical Sciences/Arkansas Children’s Hospital, 2Slot 512-13, UAMS/AR Children’s Hospital, Little Rock, AR, 3University of Arkansas for Medical Sciences, Little Rock, AR, 4Arkansas Children’s Hospital, Little Rock, AR, 5UAMS/AR Children’s Hospital, Little Rock, AR, 6Arkansas Children’s Hospital Research Institute, Little Rock, AR, 7Slot 512-13, University of Arkansas for Medical Sciences, Little Rock, AR

434 Trends in Adverse Reactions Requiring Epinephrine in the Build-up Phase of Oral Immunotherapy
Arram Noshirvan1, Daniel H. Petroni, MD, PhD2, Mindy Tsai, DMSc2, Stephen J. Galli, MD3, R. Sharon Chinthrajah, MD4 and Kari C. Nadeau, MD, PhD, FAAAAI1, 1Stanford University School of Medicine, Division of Pulmonary and Critical Care, Stanford, CA, 2Seattle Children’s Hospital, Seattle, WA, 3Stanford University School of Medicine, Stanford, CA, 4Medicine, Division of Pulmonary and Critical Care, Stanford University, Stanford, CA

435 Long-Term Follow-up of Oral Immunotherapy for Multiple Food Allergies
Sonja Singh, MD1, Rohun A Kshirsagar1, Tina L.R. Dominguez1, Dana Tupa1, Whitney Block, MSN, CPNP, FNP-BC2, R. Sharon Chinthrajah, MD3 and Kari C. Nadeau, MD, PhD, FAAAAI1, 1Stanford University, Stanford, CA, 2Medicine, Division of Pulmonary and Critical Care, Stanford University, Stanford, CA, 3Stanford University, Medicine, Division of Pulmonary and Critical Care, Stanford, CA

436 NMR-Based Metabolomics Analysis Reproducibly Identifies Unique Subject-Specific Profiles That Change during Peanut Oral Immunotherapy
Brian P. Vickers, MD, FAAAAI1, Michael D. Kulik Jr, PhD2, Deisha Stewart, PhD3, Wimal Pathmasiri, PhD2, Deanna K. Hamilton, RN4, Susan McRitchie, MS5, Jason P. Burgess, PhD3, Susan Sumner, PhD1 and A. Wesley Burks, MD, FAAAAI1, 1Department of Pediatrics, University of North Carolina, Chapel Hill, North Carolina, USA, Chapel Hill, NC, 2University of North Carolina School of Medicine, Chapel Hill, NC, 3RTI International, 4University of North Carolina at Chapel Hill, Chapel Hill, NC

437 Safety of Viaskan Milk Epicutaneous Immunotherapy (EPIT) in IgE-Mediated Cow’s Milk Allergy (CMA) in Children (MILES STUDY)
Karine Rutault, PhD1, Wence Agbotoumou, PhD1, Aurélie Peillon1, Claude Thébauld, MD2, Fanny Vincent, PhD3, Laurent Martin, PharmD2, Ruben Charles3, Christophe Dupont, MD, PhD2, Pierre-Henri Benhamou, MD1 and Hugh A. Sampson, MD, FAAAAI1,
No Impact of Filaggrin Deficiency on Epit Efficacy in a Murine Model
Sophie Wavrin, PhD,1 Lucie Mondoulet, PhD,2 Vincent Diosze-
gy, PhD,2 Emilie Puteaux,2 Mélanie Liguois,2 Véronique Dheiffil,
2 Camille Plaquet,2 Christophe Dupont, MD, PhD2 and Pierre-Henri
Benhamou, MD,1 DBV Technologies, 2DBV Technologies, Bag-
neux, France, Hospital Necker Enfants Malades, Paris, France,
Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY

Children Suspected for Hazelnut Allergy with and without Com-
Aunt Peanut Allergy Have 4 Independent and Well Charac-
terized Serotypes.
Eshen Eller, MSc, PhD1,2, Charlotte G. Moritz, MD, PhD1,2 and Carsten Bindels-Jensen, MD, PhD, DMSci, FAAAAl,2, Odense University Hospital, Odense, Denmark, Odense Research Center for Anaphylaxis (ORCA)

Oral Food Challenge: Are There Better Means to Predict Out-
comes?
Elias Akl, MD, Division of Allergy and Immunology, Department of Pediatrics, Virginia Commonwealth University, Richmond, Virginia, 23298, Richmond, VA, Donna W. Mitchell, RN, MSN, NP, Children’s Hospital of Richmond, Richmond, VA and Wei Zhao, MD, PhD, FAAAAl, Virginia Commonwealth University, Richmond, VA

Positive Oral Food Challenge, Shall We Stop or Continue?
Sonsoles Infante, MD1, Maria Elisa Caralli, MD2, Alexandra Yago, MD2, Alberto Alvarez-Perea, MD2, Victoria Fuentes-Aparicio, MD2 and Lydia Zapataro, MD, PhD2, Hospital General Universitario Gregorio Marañón, Allergy Department, Madrid, Spain, 2Hospital Materno Infantil Gregorio Marañón, Pediatric Allergy Department, Madrid, Spain, 2Hospital Universitario Puerta de Hierro, Allergy Department, Madrid, Spain, 2Hospital Clinico San Carlos Allergy Department. IdiSSC, Madrid, Spain

Results of a 16-Year Oral Food Challenges (OFC) Performed at a Major Teaching Hospital in Thailand
Pakit Vichyanond, MD, FAAAAl, Division of Allergy and Immunology, Department of Pediatrics, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand and Witchaya Srisuwatchari, MD, Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand

Outcomes of 109 Consecutive Open Food Challenges to Exten-
sively-Heated (baked) Milk
Jennifer Poon1, Elizabeth Feuille, MD2, Zara Azal, MD, Hugh A. Sampson, MD, FAAAAl,4,5 and Anna H. Nowak-Wegrzynek, MD, FAAAAl,4, Icahn School of Medicine at Mount Sinai, New York, NY1, Icahn School of Medicine at Mt. Sinai, 4Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, New York, USA, 5Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY

Severity of Reactions to Oral Peanut Challenges in Children and Adults
R. Sharon Chinthrajah, MD1, Jaime S. Rosa, MD, PhD1, Dana Tupa1, Bridget Smith, PhD1, Ruchi S. Gupta, MD, MPH2, Stephen J. Galli, MD2 and Kari C. Nadeau, MD, PhD, FAAAAl,1 Medicine, Division of Pulmonary and Critical Care, Stanford University, Stanford, CA, 2Stanford University School of Medicine, Stanford, CA, 3Stanford University, Stanford, CA, 4Northwestern University Feinberg School of Medicine, Chicago, IL, 5Ann and Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 6Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 7Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Northwestern Feinberg School of Medicine, Chicago, IL

The Role of Oral Food Challenge in Peanut-Sensitized Individ-
uals
Michael B. Levy, MD, FAAAAl, Litach Nachshon, MD1, Michael R Goldberg, MD, PhD2, Hadas Yechiam-Caspi1, Keren Golobov, BScNutr RD1, Arnon Elizer, MD1, and Yitzhak Katz, MD, FAAAAl,2,1 Assaf Harofeh Medical Center, Zerifin, Israel, 2Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

High Diagnostic Sensitivity and Specificity by Analysis of IgE to Different Types of Gliadins When Evaluating Wheat Allergy in Children
Sigrid Sjolander, PhD1, Nora Nilsson2, Helena Ekoff3, Sandra Wieser, PhD4, Gunilla Hedlin, MD, PhD5,6, Rudolf Valenta, MD7, Magnus P. Borres, MD, PhD, FAAAAl,8,9 and Caroline Nilsson, MD, PhD1, 2Thermo Fisher Scientific, Uppsala, Sweden, 3Astrid Lindgrens Children’s Hospital, Stockholm, Sweden, 4Division of Immunopathology, Department of Pathophysiology and Allergy Research, Center of Pathophysiology, Infectology and Immunology, Medical University of Vienna, Vienna, Austria, 5Karolinska Institutet, Stockholm, Sweden, 6Centre for Allergy Research, Karolinska Institutet, Stockholm, Sweden, 7Medical University of Vienna AKH, Wien, Austria, 8Department of Women’s and Children’s Health, Uppsala University, Sweden, Uppsala, Sweden, 9Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet and Sachs’ Children’s Hospital, Södersjukhuset, Stockholm, Sweden

The Relationship Between Self-Efficacy, Quality of Life, and Oral Food Challenge
Matthew J. Greenhawt, MD, MBA, MSc, Department of Internal Medicine, The University of Michigan Medical School, Division of Allergy and Clinical Immunology, Ann Arbor, MI, Christopher E. Couch, MD, University of Michigan, Division of Allergy and Clinical Immunology, Ann Arbor, MI, Timothy J. Fransman, MD, University of Michigan, Ann Arbor, MI and Audrey Dunn Galvin, University College Cork, Ireland

Fraction of Exhaled Nitric Oxide (FeNO) and Abdominal Pain and/or Vomiting in Reaction to Oral Food Challenge
Sara C. Slatkin, MD,1 Dana Tupa1, Kari C. Nadeau, MD, PhD, FAAAAl1 and R. Sharon Chinthrajah, MD3,1 Stanford Hospital and Clinics, Stanford, CA, 2Stanford University, Stanford, CA, 3Stanford Determination of Sesame Allergen Threshold Doses
Keren Golobov, BScNutr RD, 1 Tamar Yehie, BScNutr RD1, Michael B. Levy, MD, FAAAAl1, Michael R Goldberg, MD, PhD1, Litach Nachshon, MD, Arnon Elizer, MD,1,2 and Yitzhak Katz, MD, FAAAAl,1,2,1 Assaf Harofeh Medical Center, Zerifin, Israel, 2Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

The Risk of Failing Oral Food Challenge to Baked Egg and Milk Increases with Wheat Flour Replacers
Bruce J. Lanser, MD1, Nathan Rubinowich, MD, MPH2, Erwin W. Geldan, MD, FAAAAl and Pia J. Hauk, MD,3 Podiatrics, National Jewish Health, Denver, CO, 4National Jewish Health, Denver, CO

What Is Different about Kids Who Fail Oral Food Challenge to Egg?
Kathryn M. Barbon1, Christine Szychinski2, Ashley L. Devons-
shire, MD, MPH1 and Anne Marie Singh1,3,1 Department of Medicine, Northwestern Feinberg School of Medicine, Chicago, IL, 2Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 3Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Northwestern Feinberg School of Medicine, Chicago, IL

Oral Food Challenge Failures to Egg, Milk, and Peanut: An Evaluation of Doses, Proportion, and Time
Girish V. Vitalpur, MD, FAAAAl, Riley Hospital for Children at Indiana University Health, Indianapolis, IN, Kirsten Khoepfer, MD, MS, Pediatrics, Indiana University School of Medicine, Indiana-
apolis, IN, James Slaven, MS, Indiana University School of Medicine, Indianapolis, IN and Frederick E. Leckley, MD, MPH, FAAAAl, Riley Hospital for Children at Indiana University Health North, Carmel, IN
453 Characteristics of Tree Nut Challenges in Tree Nut Allergic and Tree Nut Sensitized Individuals

Christopher E. Couch, MD, University of Michigan, Division of Allergy and Clinical Immunology, Ann Arbor, MI, Timothy J. Franxman, MD, University of Michigan, Ann Arbor, MI, and Matthew J. Greenhut, MD, MBA, MSc, Department of Internal Medicine, The University of Michigan Medical School, Division of Allergy and Clinical Immunology, Ann Arbor, MI.

454 Intracellular Expression of Fluorochrome-Labelled-Diamine Oxidase in Basophils: A Novel Diagnostic Tool for Peanut Allergy

Yasmin R. Mohseni, BS1,2, Paul J. Turner, FRACP, PhD1,2,3, Robert J. Boyle, MBChB, PhD1,2, Andrew Clark, MRCPCH, MD,4, Abigail O Robb, BSc1,2,3, Stephen R. Durham, MA, MD, FRCP1,2, and Mohamed H. Shami, BS1, MSc, PhD, FAAAAI1,2, 1Immunomodulation and Tolerance Group, Immunology Group Network (ITN) Distributed Centre of Excellence for Allergy & Asthma, Allergy & Clinical Immunology, Inflammation, Repair and Development National Heart & Lung Institute, Imperial College London, United Kingdom, 2MRC & Asthma UK Centre in Allergic Mechanisms of Asthma, London, United Kingdom, 3Section of Paediatrics, Imperial College London, United Kingdom, 4Department of Medicine, University of Cambridge, Cambridge, United Kingdom.

455 A Skin Prick Test with Grilled Hazelnut is a Useful Tool for Predicting Severe Hazelnut Allergy in Routine Practice.

Sophie Jarot-Chevaux1,2, Sandrine Jacquenot1, Gisèle Kanny2 and Martine Morisset3, 1Gentilly Allergology Center, Nancy, France, 2University Hospital, Nancy, France, 3Gencis Research Laboratory, Vandoeuvre Les Nancy, France, 4University Hospital, Luxembourg, Luxembourg.

456 Evaluation of Testing with Baked Milk Muffin to Predict Safe Ingestion of Baked Milk in Unbaked Milk Allergic Subjects

Julia E. Upton, MD, FRCP(C)1,2, Maria Asper, MD, FRCP(C)1,2, Elana Lavine, MD, FRCP(C)2, and David Hummel, MD, FRCP(C)1,2, 1University of Toronto, ON, Canada, 2The Hospital for Sick Children, ON, Canada, 3Queen’s University, Kingston, ON, Canada.

457 Using BAT as a Predictor for Baked Egg Oral Challenge Outcomes

Opal Kamdar, MD1,2, Maaria Syed, MD1,4, Kristin A Erickson2, Ashleigh A. Olson, MD2,3, Christine Szylchinski2, Miao Cai, MSc2 and Anne Marie Singh1,2, 1Department of Pediatrics, Northwestern School of Medicine, Chicago, IL, 2Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 3Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL, 4Department of Pediatrics, Northwestern Feinberg School of Medicine, Chicago, IL, 5Department of Medicine, Northwestern Feinberg School of Medicine, Chicago, IL, 6Department of Pediatrics, Northwestern Feinberg School of Medicine, Chicago, IL.

458 Utility of Immunoproteomics in Soybean Allergy

Naoshi Shionojo, PhD1,2, Masashi Nakamura1,2, Naya Sato1,2, Akiyo Sano, MD1,2,3, Tsukane Kobayashi, MD, PhD1, Akiko Yamagi, MD, PhD4, Atsushi Kojima2 and Kayoko Matsunaga, MD, PhD1,2,3, 1Department of Dermatology, Fujita Health University School of Medicine, Japan, 2General Research and Development Institute, Hokus Co., Ltd., Japan, 3Department of Integrative Medical Science for Allergic Disease, Fujita Health University School of Medicine, Japan.

459 Pen a 1 Improves Clinical Predictability of Shrimp Allergy Compared to Skin Prick Testing

Karen Thursday S. Tuano, MD1, Adrian M Casillas, MD, FAAAAI2, Sara Anvari, MD3, Joud Hajjar, MD1,2, I. Celine Hanson, MD, FAAAAI4, Filiz O Seeborg, MD, MPH1, Lenora M. Noskei, MD, MPH2, Grace Kang1, Danielle Guffey, MS5 and Carla M. Davis, MD5, 1Baylor College of Medicine and Texas Children’s Hospital, Department of Pediatrics, Section of Immunology, Allergy and Rheumatology, Houston, TX, 2Baylor College of Medicine, Department of Medicine, Section of Immunology, Allergy and Rheumatology, Houston, TX, 3Baylor College of Medicine and Texas Children’s Hospital, Department of Pediatrics Section of Immunology, Allergy and Rheumatology, Houston, TX, 4Dan L. Duncan Institute for Clinical and Translational Research, Baylor College of Medicine, Houston, TX.

460 Component-Resolved Diagnosis in Hazelnut Allergy

Ismael Garcia-Moguel1, Cinthia De la cruz2, Natividad De Las Cuevas, PhD1, Ramón Vives Conesa, MD3, Jesús F. Fernandez Crespo, MD3 and Maria Del Carmen Dieguez, MD, PhD4, 1Hospital 12 de Octubre, madrid, Spain, 2Hospital Universitario 12 de Octubre, Madrid, Spain, 3Hospital Universitario 12 De Octubre, Madrid, Spain.

461 Utility of Measuring Cow’s Milk Components Specific IgE Levels in Evaluating Clinical Tolerance of Milk Allergy

Kazuyo Kazume, Department of Pediatrics, Ehime University Graduate School of Medicine, Toon, Ehime, Japan, Munemitsu Kozumi, Department of Pediatrics, Ehime Prefectural Central Hospital, Koshi Nishiuma, Department of Pediatrics, Ehime Prefectural Niihama Hospital, Michiko Okamoto, Department of Pediatrics, Uwajima City General Hospital and Eiichi Ishii, Department of Pediatrics, Ehime University Graduate School of Medicine, Toon, Japan.

462 In Vivo Diagnosis with Purified Tropomyosin. Comparison of Tropomyosin Sensitization in Shellfish and Mite Allergic Patients

Jerónimo Carnes1, M. Angeles López Matas1, Raquel Moya1, Carlos H. Larramendi, MD2, Julio Huertas, MD3, Angel Ferrer, MD, PhD4, Luis A Navarro5, Jose L Garcia-Abujetas2, Sandra Vicario5, Isabel Flores5, Carmen Andrea2, Maribel Peña2 and Inmaculada Sanchez-Guerrero2, 1Laboratorios LETI, Tres Cantos, Spain, 2Hospital de la Mar Bella, La Villa Jokou(Acant), Spain, 3Complejo Hospitalario Universitario de Cartagena, Cartagena, Spain, 4Agencia Valenciana De Salud, Sant Bartolome Orriu, Spain, 5Centro de Especialidades El Espartoloto, Jativa, Spain, 6Hospital Marina Baixa, 1Hospital Marina Baixa, Villajoyosa, Spain, 7Hospital de la Vega Baja, Orihuela, Spain, 8Hospital Virgen de la Arrixaca, Murcia, Spain.

463 Retrospective Chart Review Examining the Clinical Utility and Cost of Component Resolved Diagnostics (CRD) for Peanut Allergy (PA) in 2015

Mariam Hanna, MD, McMaster University Hospital, Hamilton, ON, Canada, Paria Kashani, MD, 1280 Main St W, Hamilton, ON, Canada, Joseph Macr, MD, 237 Main Street E, Hamilton, ON, Canada and Susan Waserman, MD, FAAAAI, Department of Medicine, McMaster University Hospital, Hamilton, ON, Canada.

464 The Ability of Pediatric Health Care Providers to Visually Identify Peanuts, Tree Nuts and Seeds

Kara Wada, MD1, Princess U. Ogbogu, MD, FAAAAI2, Sarah Hostetler, MD3, Todd L. Hostetler, MD, FAAAAI3, Bryan L. Martin, DO, FAAAAI4, Margaret Redmond, MD5 and Rebecca Scherzer, MD, FAAAAI5, Ohio State University/National Pediatric Children’s Hospital, 2Wexner Medical Center at The Ohio State University, Columbus, OH, 3Aspirus Dermatology Clinic, Wausau, WI, 4Allergy & Asthma Center at ENT Associates of North Central Wisconsin, Wausau, WI, 5Wexner Medical Center at Ohio State University, 6Nationwide Children’s Hospital, Columbus, OH.

465 Reasons for Peanut Specific IgE Ordering Among Community Physicians

Kaitlyn Spears, BS1, Alyssa Drosdak2, Elizabeth A. Erwin, MD3 and Irene Mikhail, MD4, 1The Ohio State University College of Medicine, Columbus, OH, 2The Ohio State University College of Medicine, Nationwide Children’s Hospital, Columbus, OH.

466 Serum IgE Results Differ According to Indication for Peanut Allergy Testing

Alyssa D. Drosdak, BS1, Kaitlyn Spears, BS1, Elizabeth A. Erwin, MD2 and Irene Mikhail, MD4, 1The Ohio State University College of Medicine, Nationwide Children’s Hospital, Columbus, OH, 2The Ohio State University College of Medicine, Nationwide Children’s Hospital, Columbus, OH.
of Medicine, Columbus, OH, 2Nabroton Children’s Hospital, Columbus, OH

466.1 Baked Egg Oral Immunotherapy (OIT) Accelerates Desensitization to Unbaked Egg (UBE) in Severely Egg Allergic Children
Steve M. Dorman, MD, Department of Internal Medicine, Division of Allergy and Immunology, University of Texas Southwestern Medical Center, Dallas, TX, April Clark, RD, CSP, LD, Children’s Medical Center, Dallas, TX and J. Andrew Bird, MD, FAAAAI, UT Southwestern Medical Center, Dallas, TX

Atopic Dermatitis and Food Allergy (Allergens, Mechanism, Risk Factors, Epidemiology)

FADDA

3207
Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

467 How Much of a Problem Is Peanut in Ground Cumin for Individuals with Peanut Allergy?
Rebekah L. Sayers, MRes1, Lee Gethings, PhD2, Antonietta Wallace, MSC1, Aida Semici-Jusufic, MD, PhD1, Angela Simpson, MD1, Perdita Barran, PhD1, John Gilbert, PhD1, Hamide Senyucu, PhD1, Adrian Rodgers, BSc2, Mike Bromley, PhD2, Michael Walker, MSc2, Helen Brown, PhD2, and E.N. Clare Mills, PhD1, 1The Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom, 2Waters Corporation, United Kingdom

468 Skin Lipid Composition Varies Based on Clinical Subphenotypes in Adult European American Atopic Dermatitis Subjects
Arup K Indra, Professor1, Shan Li2, Miguel Villarreal3, Denise C. Babineau, PhD2, Catherine Philpore1, Gloria David, PhD2, Mark Boguniewicz2, Jon M. Hanifin, MD, FAAAAI4, Donald Y.M. Leung, MD, PhD, FAAAAI4, Eric L. Simpson5 and Lisa A. Beck, MD, FAAAAI4, 1OSU-OHSU, Corvallis, 2OSU-OHSU, Corvallis, OR, 3Rho, Inc., Chapel Hill, NC, 4Rho Federal Systems Division Inc., Chapel Hill, NC, 5National Jewish Health, Denver, CO, 6Oregon Health and Science University, Portland, OR, 7Department of Pediatrics, National Jewish Health, Denver, CO, 8Department of Dermatology, University of Rochester Medical Center, Rochester, NY

469 Interaction Between the RS01X Filaggrin Mutation and Disease Severity Associates with Increased Methylphosphonate Aureus Colonization in European American Subjects with Atopic Dermatitis
Nicholas M Rafaels1, Alexandre Lockhart2, Denise C. Babineau, PhD2, Keli Artis, BS3, Gloria L. David, PhD2, Takeshi Yoshida, PhD2, Mark Boguniewicz2, Peck Y. Ong, MD, FAAAAI4, Anna De Benedetto, MD, FAAAAI4, Jon M. Hanifin, MD, FAAAAI4, Eric L. Simpson5, Amy S. Palfer1, Emma Guttman-Yassky, MD, PhD, Klynda C. Schneider, MD, FAAAAI4, Rasika A. Mathias, ScD5, Kathleen C. Barnes, PhD6, Donald Y. Leung, MD, PhD, FAAAAI4 and Lisa A. Beck, MD, FAAAAI4, 1Center for Biomedical Informatics and Personalized Medicine, University of Colorado, Anschutz Medical Campus, Aurora, CO, 2Rho, Inc., Chapel Hill, NC, 3Department of Dermatology, University of Rochester Medical Center, Rochester, NY, 4National Jewish Health, Denver, CO, 5Children’s Hospital Los Angeles/USC, Los Angeles, CA, 6Oregon Health and Science University, Portland, OR, 7Northwestern University Feinberg School of Medicine, Chicago, IL, 8Kahin Medical School at the Mount Sinai Medical Center, New York, NY, 9Boston Children’s Hospital, Boston, MA, 10Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD

470 Anaphylaxis to Pericarpium Zanthoxyli and Its Cross-Reactivity Between Nuts and Citrus
Hong Li1, MD1, Ri Qi Wang2, Xuan Cheng3, Xi Ping Zhou1 and Jia Yin1, 1Peking Union Medical College Hospital, Beijing, China, 2Department of Allergy, Peking Union Medical College Hospital, Chinese Academy of Medical Science

471 Skin Barrier Disrupted By Enzymatic Activity of House Dust Mite Extracts
Lukas Eihorn1,2, Kumi Ko Oida1,2, Ina Herrmann3, Susanne Vrata, PhD4, Yvonne Resch5, Lucia Panama5, Gertrude Hofstetter, MSc6, BSc6, Hiroshi Matsu6, Akane Tanaka6 and Erik Jensen-Jarolim, MD7, 1Comparative Medicine, Messerli Research Institute of the University of Veterinary Medicine Vienna, Medical University Vienna and University Vienna, Austria, 2Institute for Pathophysiology and Allergy Research, Center of Pathophysiology, Infectiology and Immunology, Medical University of Vienna, Austria, 3Laboratory of Veterinary Molecular Pathology and Therapeutics, Tokyo University of Agriculture and Technology, Japan, 4Department for Companion Animals and Horses; University of Veterinary Medicine Vienna, 5Department of Pathophysiology and Allergy Research, Austria, 6The University Messerli Research Institute, University of Veterinary Medicine Vienna, Medical University of Vienna and University Vienna, Austria, 7Laboratory of Veterinary Molecular Pathology and Therapeutics, Tokyo University of Agriculture and Technology, Tokyo, Japan

472 Increasing Incidence of Food Allergies in Olmsted County, MN
Erin Willits1, Martha F. Hartz, MD, FAAAAI2, Nancy L. Ott, MD, FAAAAI2, Miguel A. Park, MD3, and Avni Y. Joshi, MD4, 1Mayo Clinic, 2Mayo Clinic, Rochester, MN, 3Department of Internal Medicine: Division of Allergic Diseases, Mayo Clinic, Rochester, MN

473 Eczema Is an Independent Risk Factor for Incident Mouse Skin Test Sensitivity Among Employees at a Mouse Production and Research Facility
Torie Grant, MD1, Jennifer Dantzer, MD2, Corinne Keet, MD, PhD2, Roger Peng, PhD2, Mary Krevans, RN3, Karol Hagberg, BSN, EnP4, Jean Curtin-Bosman, MA5, Wayne Shreffler, MD, PhD2 and Elizabeth Matsui, MD, MHS6, 1Division of Pediatric Allergy/Immunology, Johns Hopkins School of Medicine, Baltimore, MD, 2Johns Hopkins School of Public Health, Baltimore, MD, 3The Jackson Laboratory, Bar Harbor, ME, 4Division of Allergy and Immunology, Department of Pediatrics, Massachusetts General Hospital and Harvard Medical School, Boston, MA

474 Expression of Filaggrin in Skin Biopsies: Role in Maintenance of Symptoms Among Brazilian Patients with Moderate-to-Severe Atopic Dermatitis
Karline Bouilleur, MD1, Renata Nahas Cardilli Sr.2, Janaina M. L. Melo, MD3, Adriana S. Moreno, PhD4, Ana Maria Rosolino5, Edison Soares6 and Luisa Karla P. Arruda, MD, PhD, FAAAAI4, 1Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, Brazil, 2Ribeirao Preto Medical School- University of Sao Paulo, 3Ribeirao Preto Medical School - University of Sao Paulo, 4Ribeirao Preto Medical School - University of Sao Paulo, 5Ribeirao Preto, Brazil

475 Pre-Birth Cohort Study of Atopic Dermatitis and Severe Bronchiolitis during Infancy
Diana S. Bulekian, MD, MPH1, Rachel W. Linnemann, MD2, Victor M Castro, MS3,4, Roy Perlis, MD, MS5,6, Ravi Thadhani, MD, MPH7 and Carlos Camargo Jr., MD, DrPH8, 1Division of
Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA; 2Division of Pediatric Pulmonology, Department of Pediatrics, Massachusetts General Hospital, Harvard Medical School, Boston, MA; 3Research Information Systems and Computing, Partners HealthCare System, Boston, MA; 4Laboratory of Computer Science, Department of Neurology, Massachusetts General Hospital, Boston, MA; 5Center for Experimental Drugs and Diagnostics, Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Boston, MA; 6Psychiatric and Neurodevelopmental Genetics Unit, Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Boston, MA; 7Division of Nephrology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA; 8Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA

476 Risk Factors for Severe Eczema in Children: Findings from a National Web-Based Survey
Mari Sasaki, MD1, Koichi Yoshida, MD1, Yuichi Adachi, MD, PhD2, Mayumi Furukawa, MD1, Toshiko Iizawa, MD, PhD3, Hiroshi Odajima, MD, PhD4, Hirohisa Saito, MD, PhD5 and Akira Akasawa, MD, PhD1, 1Division of Allergy, Tokyo Medical Children’s Medical Center, Tokyo, Japan; 2Department of Pediatrics, University of Toyama, Toyama, Japan; 3Fukuoka National Hospital, Fukuoka, Japan; 4Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan

477 Case of a Young Man with Anaphylaxis to Hemspeeds (Canna-bis sativa).
Vaishaali Manga, MD. University of Western Ontario, London, ON, Canada and D. William Moote, MD, FAAAAI, University of Western Ontario, London, London, ON, Canada

478 The Prevalence and Risk Factors of Atopic Dermatitis from Nationwide Study: Korean Environmental Health Survey in Children and Adolescents (KorEHS-C)
Jung-Hoon Lee1, Ju-Hee Seo2, Hyun-Ju Cho, MD3, Eun Lee4, Min da Ha, MD5, Eunae Bum6, Kee-Jae Lee7, Hwan-Cheol Kim, MD8, Si-nye Lim9, Hee-Tae Kang10, Hee-Tae Kang10, Mia Son11, Soo-Young Kim12, Ha-Kyung Cho13, Yu-Mi Kim14, Gyung-Jae Oh15, Joon Sankong16, Chul-Gab Lee17, Sue Jin Kim18, Yong-Wook Baek19 and Soo-Jong Hong, MD, PhD20, 1Asan medical center, 2Department of Pediatrics, Korea Cancer Center Hospital, 3Department of Pediatrics, childhood atopy center, 4Research Center for Standardization of Allergic Diseases, 5Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 6Department of Pediatrics, Childhood Asthma Atopy Center, Research Center for Standardization of Allergic Diseases, 7Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 8Department of Pediatrics, Childhood Asthma Atopy Center, Environmental Health center, 9Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 10Department of Preventive Medicine, Dankook University College of Medicine, Seoul, 11Department of Public Health, Graduate School of Dankook University, Cheonan, South Korea, 12Department of Information Statistics, Seoul, Korea, 13Department of Occupational and Environmental Medicine, Inha University School of Medicine, Incheon, South Korea, 14Department of Occupational and Environmental Medicine, Inha University Hospital, 15Department of Occupational and Environmental Medicine, College of Medicine, Kyunghee University, Seoul, South Korea, 16Department of Occupational and Environmental Medicine, Wonju Severance Christian’s Hospital, Yonsei University, Wonju, South Korea, 17Department of Preventive Medicine, School of Medicine, Kangwon National University, Chuncheon, South Korea, 18Department of Preventive Medicine, School of Medicine, Eulji University, Daejeon, South Korea, 19Department of Social and Preventive Medicine, and Samsung Biomedical Research Institute, Suwon, South Korea, 20Department of Preventive Medicine, School of Medicine, Dong-A University, Busan, South Korea, 21Department of Preventive Medicine, School of Medicine, Wonkwang, South Korea, 22Department of Preventive Medicine and Public Health, College of Medicine, Yeungnam University, Daegu, South Korea, 23Department of Occupational and Environmental Medicine, School of Medicine, Chosun University, Gwangju, South Korea, 24Division of Advanced Materials, Korea Research Institute of Chemical Technology, Daejeon, South Korea, 25Department of Environmental Epidemiology, Division of Environmental Health, National Institute of Environment, Incheon, South Korea

479 Breastfeeding May Increase the Risk of Food Sensitization but Not Affect Food Allergy Symptoms in Young Children with Atopic Dermatitis
So Yeon Lee, MD, PhD. Department of Pediatrics, Hallym University College of Medicine, Seoul, South Korea; Song-Yang Y. Department of Pediatrics, Hallym University Sacred Heart Hospital, College of Medicine, Hallym University and Hae-Ran Lee, Hallym University, South Korea

480 The Effect of Prenatal Exposure to Heavy Metals on Atopic Dermatitis: A Population-Based, Prospective Birth Cohort Study (COCOA)
Jiyun Kim, MD1,2, Sook-young Woo2, Sun-Woo Kim3, Jaehee Choi4, Jin-Yong Chang5, Young-Scoub Hong6, Youngshin Han, PhD7, Se-Young Oh8, Suk-Joo Choi9, Soo-Young Oh10, Kyung Won Kim11, Youn Ho Shin, MD12, Hye-Sung Won13, Kyung-Ju Lee14. Hee Jin Park15, Soo-Jong Hong, MD, PhD13 and Kangnam Ahn, MD, PhD13, 1Environmental Health center for atopic diseases, Seoul, South Korea, 2Department of Pediatrics, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea, 3Biostatistics Team, Samsung Biomedical Research Institute, Seoul, South Korea, 4Department of Pediatrics, Samyook Medical Center, Seoul, South Korea, 5Heavy Metal Exposure Environmental Health Center, Dong-A University, Busan, South Korea, 6Department of Preventive Medicine, Dong-A University College of Medicine, 7Department of Food and Nutrition, College of Human Ecology, Kyung Hee University, Seoul, South Korea, 8Department of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea, 9Department of Pediatrics, Yonsei University College of Medicine, Seoul, South Korea, 10Department of Pediatrics, CHA Gangnam Medical Center, CHA University School of Medicine, Seoul, South Korea, 11Department of Obstetrics and Gynecology, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 12Department of Obstetrics and Gynecology, CHA University College of Medicine, Seoul, South Korea, 13Department of Pediatrics, Childhood Asthma Atopy Center, Research Center for Standardization of Allergic Diseases, 14Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 15Department of Preventive Medicine, Dankook University College of Medicine, Seoul, 16Department of Public Health, Graduate School of Dankook University, Cheonan, South Korea, 17Department of Information Statistics, Seoul, Korea, 18Department of Occupational and Environmental Medicine, Inha University School of Medicine, Incheon, South Korea, 19Department of Occupational and Environmental Medicine, Inha University Hospital, 20Department of Occupational and Environmental Medicine, College of Medicine, Kyunghee University, Seoul, South Korea, 21Department of Occupational and Environmental Medicine, Wonju Severance Christian’s Hospital, Yonsei University, Wonju, South Korea, 22Department of Preventive Medicine, School of Medicine, Kangwon National University, Chuncheon, South Korea, 23Department of Preventive Medicine, School of Medicine, Eulji University, Daejeon, South Korea, 24Department of Social and Preventive Medicine, and Samsung Biomedical Research Institute, Suwon, South Korea, 25Department of Preventive Medicine, School of Medicine, Dong-A University, Busan, South Korea, 26Department of Preventive Medicine, School of Medicine, Wonkwang, South Korea, 27Department of Preventive Medicine and Public Health, College of Medicine, Yeungnam University, Daegu, South Korea, 28Department of Occupational and Environmental Medicine, School of Medicine, Chosun University, Gwangju, South Korea, 29Division of Advanced Materials, Korea Research Institute of Chemical Technology, Daejeon, South Korea, 30Department of Environmental Epidemiology, Division of Environmental Health, National Institute of Environment, Incheon, South Korea

481 Food Diversity, Breastfeeding Frequency, and the Incidence of Food Allergy and Eczema in the First Year of Life
Ernest K. Kwergyir-Afful, PhD1, Emma Westermann-Clark, MD, MA2, Yuanting Zhang, PhD3 and Stefano Lucciol1, 1Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, College Park, MD, 2Department of Internal Medicine, University of South Florida Morsani College of Medicine, Tampa, FL

482 Severe Anaphylaxis in Non-Atopic Teenager Due to Cartmine Allergic: A Detective Work
Inmaculada Sanchez-Machin, MD1, Borja Bartolome2, Paloma Poza Guedes, MD3, Ruperto Gonzalez, MD, PhD4 and Victor Matheu, MD, PhD5, 1Hospital Quirón, Santa Cruz de Tenerife, Spain, 2Research & Development Department, Bial-Aristegui, Bilbao, Spain, 3Research & Development Department, Bial-Aristegui, Bilbao, Spain, 4Allergocan, Santa Cruz de Tenerife, Spain, 5Hospital Quiron Tenerife, Santa Cruz de Tenerife, Spain

483 The Natural History of Atopic Dermatitis and Its Association with Atopic March
Sinjira Somamunt, MD, Jittima Vesitkitkul, MD, Puchama Pacharn, MD, Nualanong Visitsanthorn, MD, Pakit Vichyamon,
MD, FAAAI and Oratthi Jirapongsananun, MD, Division of Allergy and Immunology, Department of Pediatrics, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand

484 Clinical Impact in the Real Life of Guidelines Recommendations for Atopic Dermatitis in a Tropical Population (TECCEMA cohort)
Yuliana Toro, University of Antioquia, Medellin, Colombia

485 Targeted Therapy in Children with Atopic Dermatitis
Tatiana Slayayskaya, MD, PhD,1,2 and Vladislava Derkach,1,3 1Peoples’ Friendship University of Russia, Moscow, Russia, 2Institute of Immunophysiology, Moscow, Russia, 3Pacific State Medical University, Vladivostok, Russia

486 Treatment of Severe Atopic Dermatitis with Omalizumab: Experience of a Portuguese Immunology-Gastroenterology Department
Ana M. Mendes,1 MD, Leticia Pestana, MD,2 Rita Aguiar, MD,2 Ana Célia Costa, MSc,1 Elisa Pedro, MD,1 Anaíthel Lopes, MD,1 Maria A. Spinola Santos, MD,3 Estrella Alonso, MD,4 and MA Pereira-Barbosa, PhD.2 1Hospital de Santa Maria – Immunology-Gastroenterology Department, Lisbon, Portugal, 2Hospital de santa Maria-Immunology-Gastroenterology Department, 3Hospital de Santa Maria-Immunology-Gastroenterology Department, Lisbon, Portugal, 4Hospital de Santa Maria-Immunology-Gastroenterology Department, Lisbon, Portugal

487 Patch Testing in Pediatric Patients with Atopic Disease
Irnum Noor, DO, Melanie Cheng, MD, Mark A. Davis-Lorton, MD, FAAAI, Marcella R. Aquino, MD, FAAAI and Luz S. Fonacier, MD, FAAAI, Winthrop University Hospital, Allergy & Immunology, Mineola, NY

488 The Atypical Ixth That Rashes–Disseminated and Recurrent Infundibulofofolliculitis (DRIF) in an Atopic African Male
Katherine S. Tille, MD, Wilford Hall Ambulatory Surgical Center, Lackland AFB, TX and Tonya S. Rans, MD, Wilford Hall Ambulatory Surgical Center, San Antonio, TX

489 Characterization of Patients and Pattern of Sensitization at a New Memaster University Allergy and Dermatology Patch Test (ADPT) Clinic
Sam Waserman, MD/MA Candidate, McGill University, Montreal, QC, Canada, Hermero Lima, MD, PhD, McMaster University, Hamilton, ON, Canada and David Fahmy, MD, McMaster University, Hamilton, ON

490 IL-33 Promotes Food Anaphylaxis in Epicutaneously-Sensitized Mice By Targeting Mast Cells,
Claire Galand, PhD,1 Juan-Manuel Leyva-Castillo, PhD,2 Raif S. Geha, MD, FAAAI,3 Juhan Yoon, PhD,1 Mischiko K. Oyoshi, PhD, MSc, FAAAI,1 Alex Han, Andrew McKenzie, PhD and Michael Sussman,1 1Division of Immunology, Boston Children’s Hospital, Boston, MA, 2Division of Immunology at Boston Children’s Hospital, Boston, MA, 3Division of Immunology, Boston Children’s Hospital, Harvard Medical School, Boston, MA, 4MRC Laboratory of Molecular Biology, Cambridge, United Kingdom, 5Institute for Immunology, American University Medical Center of the Johannes Gutenberg-University Mainz, Mainz, Germany

491 Low Levels of LPS Promotes a Th2 Sensitization to Pru p 3 Generating Anaphylactic Mice
Maria J Rodriguez,1 Ana Aranda Guerrero, PhD,2 Tahia D. Fernandez, PhD,2 Nuria Cubells,3 Ana Molina,3 Maria J Torres, MD, PhD,2 Francisca Gomez, MD, PhD,2 Francisca Palomares, PhD,2 Javier Rojo,2 Miguel Blanca, MD, PhD,2 Araceli Díaz-Perales, PhD and Cristobalina Mayorga, PhD,1 1Research Laboratory, IBIMA-Regional University Hospital of Malaga, Malaga, Spain, 2Research Laboratory, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 3Research Laboratory, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain, 4Center for Plant Biotechnology and Genomic (UPM-INIA), Madrid, Spain, 5Allergy Unit, Regional University Hospital of Malaga, IBIMA, UMA, Malaga, Spain, 6Allergy Unit, IBIMA-Regional University Hospital of Malaga, IBIMA, UMA, Malaga, Spain, 7Glycoseums Laboratory, Instituto de Investigaciones Químicas (IBQ), CSIC-Universidad de Sevilla, Sevilla, Spain, 8Allergy Unit, Regional University Hospital of Malaga-IBIMA, UMA, Malaga, Spain, 9Centre for Plant Biotechnology and Genomic (UPM-INIA), Campus of Montegancedo, Pozuelo de Alarcón, Madrid, Spain, Madrid, Spain

492 Alum-Containing Vaccines Increase Total and Food Allergen-Specific IgE, and Cow’s Milk Oral Desensitization Increases Bslb4 IgG4 While Peanut Avoidance Increases Arah2 IgE: The Complexity of Today’s Child with Food Allergy.
Alice E.W. Hoyt, MD, Alexander J. Schuyler, BS, BA, Peter W. Heymann, MD, Thomas A.E. Platt’s-Mills, MD, PhD, FAAAI, FRS and Scott P. Commens, MD, PhD, Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA

493 Cytokines in Breast Milk in Populations with Low Vs. High Risk for Atopic Diseases
Jessica L. Stern, MD, A. Seppo, C. Martina, R.J. Looney and K.M. Jarvinoen, The University of Rochester School of Medicine and Dentistry, Rochester, NY

494 Lifestyle Reduces Sensitization to Food Allergens in Infancy – the Aladdin Cohort
Sara Fagerstedt, MSc,1 Helena Marcell Hesla, MD,2,3 Emelie Ekhager1,2,4, Helen Rosenlund, PhD,1,3 Axel Mie, PhD,1 Lena Benson, MSc,1 Anna Likert, PhD3, Johan Alm, MD, PhD,3,4 Karolinska Institutet, Department of Clinical Science and Education, Södersjukhuset, Stockholm, Sweden, 2Sachs’ Children and Youth Hospital, Södersjukhuset, Stockholm, Sweden, 3Division of Clinical Nutrition and Dietetics, Department of Orthopaedics, Danderyd Hospital, Stockholm, Sweden, 4Translational Immunology Unit, Department of Medicine Solna, Karolinska Institutet and University Hospital, Stockholm, Sweden

495 Relationship Between Serious Wheat Allergy Caused By Cutaaneous Sensitization and Mutations in the Filaggrin Gene
Akiko Yagami, MD, PhD,1 Emiko Noguchi, MD, PhD,2 Mayumi Tamari, MD, PhD,3 Tomomitsu Hirota, DDS PhD,4 Zenichiro Kato, MD, PhD5, Hirohito Saito, MD, PhD5,6 and Kayoko Matsu-naga, MD, PhD7, 1Department of Dermatology, Fujita Health University School of Medicine, Japan, 2Department of Medical Genetics, University of Tsukuba, 3Laboratory for Respiratory and Allergic Diseases, Center for Integrative Medical, 4Laboratory for Respiratory and Allergic Diseases, Center for Integrative Medical, Yokohama, Japan, 5Biomedical Informatics, Medical Information Sciences Division, The United Graduate School of Drug Discovery and Medical Information Sciences, Gifu University, 6Department of Pediatrics, Graduate School of Medicine, Gifu University, 7Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan, 8Medical Support Center for Japan Environment and Children’s Study, National Center for Child Health and Development, 9Department of Integrative Medical Science for Allergic Disease, Fujita Health University School of Medicine, Japan

496 Determinants of Peanut Allergy in an Observational Study (COFAR2) of Food Allergy
Scott H. Sicherer, MD, FAAAI,1 Robert A. Wood, MD, FAAAI,2 Tamara T. Perry, MD,3 Brian P. Vickery, MD, FAAAI,4 Stacie M. Jones, MD,4 Donald Y. Leung, MD, PhD, FAAAI,5 Beth Blackwell, PhD,6 Peter Dawson, PhD,7 A. Wesley Burks, MD, FAAAI,1 Robert W. Lindblad, MD and Hugh A. Sampson, MD, FAAAI,1 1Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY, New York, NY, 2Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, Maryland, USA, 3University of Arkansas for Medical Sciences, Little Rock, AR, 4Department of Pediatrics, University of North Carolina, Chapel Hill, Chapel Hill, NC, 5Department of Pediatrics, National Jewish Health, Denver, Colorado, USA, 6The EMMES Corporation, Rockville, MD, Rockville, MD, 7The EMMES Corporation, Rockville, MD.
Corporation, Rockville, Maryland, USA, 5Department of Pediatrics, University of North Carolina, Chapel Hill, North Carolina, USA, 6Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY

497 START: Susceptibility to Food Allergies in a Registry of Twins
Sarah De Schryver, MD, Division of Paediatric Allergy and Clinical Immunology, Department of Paediatrics, McGill University Health Center, Canada, Montreal, QC, Alizee Dery, Department of Experimental Medicine, Mc Gill University, Montreal, QC, Canada, Ann Elaine Clarke, MD, MSc, Division of Rheumatology, Department of Medicine, University of Calgary, Calgary, AB, Canada, Kari C. Nadeau, MD, PhD, FAAAAI, Pediatric Allergy Immunology, Stanford University School Medicine, Stanford, CA, Laurie Harada, BA, Anaphylaxis Canada, Toronto, ON, Canada, Celia Greenwood, Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, QC, Departments of Oncology, Epidemiology, Biostatistics and Occupational Health, and Human Genetics, McGill University, Montreal, QC, Kimberly Weatherall, Multiple Births Canada, ON, Denise Daley, Department of Medicine, University of British Columbia, BC, Yuka Asai, MD, Division of Dermatology, Department of Medicine, Queen’s University, Kingston, ON, Fiona Bamforth, Alberta Health Services, AB and Moshe Ben-Shoshan, MD, MSc, The Research Institute of the McGill University Health Centre, Meakins-Christie Laboratories, Division of Paediatric Allergy and Clinical Immunology, Department of Paediatrics, McGill, Montreal Children’s Hospital, Montreal, QC, Canada

498 Occupational Contact Dermatitis Caused By Seafood Proteins: Which Profession Is Most Affected?
Pierreck Cros, MD1, Brice Lodde, MD2, Anne-Marie Roque-das-Contos, MD2, Jd Dewitte, MD, PhD3,4 and Laurent Misery, MD, PhD, 1Service de pédiatrie CHRU Morvan, Brest, France, 2Service de Dermato-vénéérologie, CHRU Morvan, Brest, France, 3Service de Santé au Travail et Maladies Liées à l’Environnement, CHRU Morvan, Brest, France, 4Université Européenne de Bretagne, Université de Brest, EA 4686, CS 93837, Brest Cedex 3, France, 5Service de Dermato-vénéérologie, Brest, France, 6and Service de Santé au Travail et Maladies Liées à l’Environnement, CHRU Morvan, Brest, France, 7Université Européenne de Bretagne, Université de Brest, EA 4686, CS 93837, Brest, France

499 Specific Allergen Immunotherapy for the Treatment of Atopic Eczema: A Cochrane Systematic Review
Herman Tam, MBBS, MSc1, Moises A. Calderon, MD, PhD1, Logan Manikam1, Helen Nankervis2, Ignacio Garcia, MD, PhD, Hywel Williams2, Stephen R. Durham, MA, MD, FRCP3 and Robert J. Boyle, MBChB, PhD2, 1Imperial College London, London, United Kingdom, 2University of Nottingham, Nottingham, United Kingdom, 3Allergy Service, Carlos Haya Hospital, Malaga, Spain, 4National Heart and Lung Institute, Imperial College London, United Kingdom, 5Section of Paediatrics, Imperial College London, United Kingdom

500 Ultraviolet Sun Exposure Is Associated with the Acute Symptoms of Atopic Dermatitis in Young Children
Kangmo Ahn, MD, PhD1,2, Jihyun Kim, MD1,2, Hyunyoung Jeon2, Hyunmi Kim2, Youngshin Han, PhD2,3, Kwon Jung2, Sumi Eo2, Mijin Ahn1 and Young-Min Kim2, 1Department of Pediatrics, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea, 2Environmental Health Center for Atopic Diseases, Seoul, Seoul, Korea, 3Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, South Korea, 4Seoul Research Institute of Public Health and Environment, Gwacheon, South Korea

501 Diagnosis of Food and Environmental Allergies in Patients Referred from Dermatology Clinic to Allergy/Immunology Clinic in a Tertiary Care Pediatric Center
Samantha Knox1, Rebecca Scherer, MD, FAAAAI1, Elizabeth A. Erwin, MD2 and Joy Mosser-Goldfarb2, 1Nationwide Children’s Hospital, Columbus, OH, 2Nationwide Children’s Hospital

502 Standard Patch Series Around the World. Different Place, Different Patches
José L. Garcia-Abujaña1, Mónica Antón Gironés2, Carlos Hernando de Llarramendi1, Javier Monzor3, Leticia de las Vacillas4, Sandra Vicario1 and Fernando Rodríguez1, 1Hospital Marina Baixa, Villajoyosa, Spain, 2Hospital de Vinalopó, Elche, Spain, 3Hospital Arnau de Vilanova, Valencia, Spain, 4Hospital Universitario Marqués de Valdecilla, Santander, Spain

503 Dermatographism, Atopic Dermatitis and Other Atopic/Related Non-Atopic Disorders
Alanna G. Wong, MD, Montefiore Medical Center, Bronx, NY and Johnson T. Wong, MD, FAAAAI, Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA

504 Clinical and Immunological Profile of Patients Allergic to Fruits in East of Spain
F. Javier Fernandez, MD, PhD1, Emilio Flores-Pardo2, María Victoria Moreno1, Esther Caparros3, Laura Isabel Velasquez2 and Francisca Gómez, MD, PhD1, 1UMH Alicante G University Hospital - Allergy Sect., Alicante, Spain, 2San Juan Hospital, UMH, San Juan de Alicante, Spain, 3Clinical Medicine Dpt. UMH, San Juan de Alicante, Spain, 4Allergy Unit, IBIMA-Regional University Hospital of Malaga, Malaga, Spain, Malaga, Spain

505 Nut Allergy Prevalence and Differences Between Asian-Born Children and Australian-Born Children of Asian Descent: A State-Wide Survey of Children at Primary School Entry in Victoria, Australia
Katrina Jane Allen, FRACP, PhD, FAAAAI1, Mary Panjari, PhD2, Jennifer Koplin, PhD3, Shyamali Dharmage, MD, PhD2,5, Rachel L. Peters, MPH, PhD3,4, Lyle Gurrin, PhD3,4, Susan Sawyer, MBBS, MD, FRACP, Vicki L. McWilliam, BSc (MND) Adv APD1, Jana K. Eckert, PhD3, Don Vicienduse, BSc, Bircan Erbas, PhD3, Melanie C Matheson, PhD, Mini L. K. Tang, PhD, FAAAAI5, Jo Douglass, BMEd (Hons), MBBS (Hons) MD, FRACP, Anne-Louise Ponsonby, PhD3, Terry Dwyer, PhD3 and Sharon Goldfield, MBBS, FRACP, PhD3, 1Royal Children’s Hospital and Murdoch Childrens Research Institute, Melbourne, Australia, 2Murdoch Childrens Research Institute, Melbourne, Australia, 3Royal Children’s Research Institute, Victoria, Australia, 4University of Melbourne, Victoria, Australia, 5University of Melbourne, Melbourne, Victoria, Australia, 6La Trobe University, Bundoora, 7The Department of Clinical Immunology and Allergy, Royal Melbourne Hospital and University of Melbourne, Parkville, 8Murdoch Childrens Research Institute, Parkville, Victoria, Australia

506 Food Sensitization Profile of Children from Lebanon
Zeina E. Baz, MD, FAAAAI, St George Hospital University Medical Center, Beirut, Lebanon

507 The Epidemiologic Characteristics of Childhood Eczema, Asthma, Rhinitis, and Food Allergy in a Large Primary Care Cohort
David A. Hill, MD, PhD1, Gita S. Ram, MD, MD, Robert Grundmeier, MD, and Jonathan M. Spiegel, MD, PhD, FAAAAI1, 1The Children’s Hospital of Philadelphia, Philadelphia, PA, 2The Children’s Hospital of Philadelphia, Ambler, PA

508 Prevalence and Characteristics of Parent-Reported Food Allergies Among Young Asian Children
Pantipa Chatchatee, MD, Phaneet Pansarasukit, Narissara Suranond, MD and Jarungchit Ngamphaiboon, MD, Division of Allergy and Immunology, Department of Pediatrics, Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand

509 Different Triggers for the Diagnosis of Individual Food Allergies in Multiple Food Allergic Patients
Aron Elizur, MD1, Jennifer B. Bollyky, MD1, Whitney Block, MSN, CPNP, FNP-BC2 and Kari C. Nudece, MD, PhD, FAAAAI1, 1Stanford University, Stanford, CA, 2Stanford University, Medicine, Division of Pulmonary and Critical Care, Stanford, CA
510 Characterization of Peanut Allergic Patients in an Area with a High Lipid Prevalence
Ana Aranda Guerrero, PhD1, Francisca Gómez, MD, PhD2, Cristobalina Mayorga, PhD2, Ana Molina1, Gador Bogas, MD3, Maria J Torres, MD, PhD2 and Miguel Blanca, MD, PhD4. 1Research Laboratory, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 2Allergy Unit, IBIMA-Regional University Hospital of Malaga, Malaga, Spain, 3Allergy Unit, CMG-Regional Hospital of Malaga-IBIMA, UMA, Malaga, Spain, 4Allergy Service, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain.

New Strategies for Patient and Provider Education
HEDQ

3208 Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

511 Anaphylaxis Preparedness Initiative for Allergen Immunotherapy: Implementation of an Online Training Module
Lissanne P. Newton, MD1, Abhla Subramaniam, MD, MPH1 and David M. Lang, MD, FAAAAI2. 1Cleveland Clinic Foundation, Cleveland, OH, 2Cleveland Clinic, Cleveland, OH.

512 Combined Program with Computer-Based Learning and Peer Education in Early Adolescents with Asthma: A Pilot Study
Tomohisa Ando, MD1, Kiwako Yamamoto-Hanada, MD2, Mizuho Naga0, MD1, Takao Fujisawa, MD, PhD, FAAAAI1 and Yukihiro Ohya, MD, PhD1. 1Division of Allergy, National Center for Child Health and Development, Japan, 2Division of Allergy, National Center for Child Health and Development, Tokyo, Japan.

513 A Paucity of Ethical Investigation in Food Allergy: Bringing Awareness to Allergists
Kristin C. Sokol, MD, MS, MPH. Beth Israel Deaconess Medical Center, MA.

514 Caregiver Satisfaction with a Food Allergy Education Kiosk
Niti Y. Chokshi, MD and Scott H. Sicherer, MD, FAAAAI, Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY, New York, NY.

515 The Knowledge of School-Aged Children with Low Socioeconomic Status
Seraf Ozmaz1, Iknunr Bostanci, MD2, Zeyneb Sergul Emeksl1 and Aysegul Ergul1, 1Dr. Sami Ulus Obstetrics, Children’s Health and Diseases Training and Research Hospital, 2Dr. Sami Ulus Children’s Hospital, Ankara, Turkey.

517 A Patient-Focused, High-Impact Educational Module on Food Allergy with Free Online Resources: Feasibility and Implementation
Mina Dimova1, Aima Shahid1, Ves Dimov, MD2 and Shahid Randhawa1. 1Allergy, Asthma & Sinus Associates, PA., Fort Lauderdale, FL, 2Cleveland Clinic Florida, Weston, FL.

518 A Randomized Controlled Trial of an Educational Handbook for Parents of Children with Food Allergy
Jennifer S. LeLofflidge, PhD1, Alexis Michaud, BA1, Ashley Deleon, BA1, Laurie Harada, BA2, Susan Waserman, MD, FAAAAI1 and Lynda C. Schneider, MD, FAAAAI1. 1Boston Children’s Hospital, Boston, MA, 2Anaphylaxis Canada, Toronto, ON, Canada, 3Department of Medicine, McMaster University, Hamilton, ON, Canada.

519 Food Allergy Knowledge Among Summer Camp Personnel before and after an Evidence Based Educational Session
Margaret Redmond, MD1, Rebecca Scherzer, MD, FAAAAI2, Kara J. Wada, MD1, Kasey Strothman, MD2, Erin Kempe3, Barbara Galantowicz1 and David R. Siukus, MD, FAAAAI. 1Ohio State University/Nationwide Children’s Hospital, 2Ohio State University Medical Center, Columbus, OH, 3Nationwide Children’s Hospital and The Ohio State University, Columbus, OH.

520 The Importance of Educating Pediatric Trainees about Food Allergy
Lukman I. Abdurrahim, MD1, Mehdi M. Adeli, MD2, Ahmad H. Al-Hammedi, MCHB, FRCP1 and Mohamed A. Hendaas, MD, FAAP1. 1Hamad Medical Corporation, Doha, Qatar, 2Hamad Medical Corporation, Doha, Qatar.

521 Reliability of Youtube Videos for Patient Education on Food Allergies
Charl Khalil, Cleveland Clinic Florida, Michael Megaly, Mercy Hospital and Medical Center, Chicago, IL, Amira Ibrahim, Faculty of Medicine, Ain Shams University, Cairo, Egypt and Ves Dim0, MD, Cleveland Clinic Florida, Weston, FL.

522 Teaching and Evaluating Residents’ Epinephrine Autoinjector Use with the Epipen® Proficiency Assessment Tool (E-PAT)
Artemio M. Jongco III, MD, PhD, MPH1, Scott J Bodner, MD1, Ana Barrera1, Joshua L Brener2, Brianne Navetta-Modor, MD2, Myriam Calle, MD1, Saima I Chaudhry, MD2, Gregory Grimaldi, MD1, Barry F. Kanzer, MD2 and Michael Tamuz, PhD. 1Feinstein Institute for Medical Research, Manhasset, NY. 2Division of Allergy & Immunology Hofstra North Shore-LI School of Medicine, Great Neck, NY, 3Department of Medicine Glen Cove Hospital, Glen Cove, NY, 4Center for Learning and Innovation North Shore LJI Health System, Lake Success, NY, 5Department of Medicine Hofstra North Shore LJI School of Medicine, Manhasset, NY, 6Biostatistics Unit, Feinstein Institute for Medical Research, Manhasset, NY, 7Department of Radiology North Shore University Hospital, Manhasset, NY, 8Department of Radiology Long Island Jewish Medical Center, New Hyde Park, NY.

523 Anaphylaxis Simulation Programs Can Improve Knowledge, Attitudes, and Behaviors (KAB) of Pediatric Residents
Kiranjit K. Uppal, MD1, Michelle Levinson1 and Susan Schwa1, MD, FAAAAI1, 2Stony Brook University Hospital, 3Stony Brook U Medical Center, Stony Brook Children’s Hospital, Stony Brook, NY.

Rhinitis, Diagnosis and Therapy
IRSO

3209 Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

524 Phase II Clinical Trial of ONO-4053, a Novel DFI Antagonist, in Patients with Seasonal Allergic Rhinitis
Yamamotoya Hajime, Ono Pharmaceutical Co., Ltd. and Kimihito Okubo, MD, PhD, Department of Otorhinolaryngology, Nippon Medical School, Tokyo, Japan.

525 Redirection of Human CD4+ T Cell Responses with the Toll-like Receptor 4 (TLR4) Agonist Glucopyranosyl Lipid a (GLA)
L J1, A. Peterson1, T. Soos1, C. Arcendt, PhD2 and C. Jones1, 1Bio-Innovation, Global Biotherapeutics, SANOFI, Cambridge, MA, 2Bio-Innovation, Global Biotherapeutics, SANOFI, Cambridge, MA.
526 Major Allergen Content of SQ-House Dust Mite Silt-Tablets Is Consistent and in Concordance with Patient Sensitivity Profiles in North America and Europe

Hendrik Nolte, MD, PhD, Greg A. Plankett, PhD, Mirko Bollen, PhD, Karin Grosse, MSc, Jorgen Nedergaard Larsen, PhD and Kure Lund, PhD, 1Merck & Co., Inc., Kenilworth, NJ, 2ALK-Abelló, Inc Round Rock, TX, 3ALK, Horsholm, Denmark

527 Rapid Clinical Response to Omalizumab in Severe Atopic Keratoconjunctivitis

Rupertó González-Pérez, MD, PhD, Paloma Pozo-Guedes, MD, Victor Matheu, MD, PhD and Inmaculada Sanchez-Machin, MD, 1Hospital del Tórax-Ofría, Sta Cruz de Tenerife, Spain, 2Hospital del Tórax-Ofría, SC Tenerife, Spain

528 In Vivo Evaluation of the Efficacy and Safety of a Depigmented-Polymerized Extract of Cat Epithelium

Víctor M. Iraola, 1María Teresa Gallego, María Morales, Marta Taules and Jerónimo Carvés, 1Laboratorios LETI, Tres Cantos, Spain, 2Centres Científics i Tecnològics. Universitat de Barcelona, Barcelona, Spain

529 Rhinitis Symptoms during Challenge with House Dust Mites in Nasal Provocation Test Correlates with Those during Exposure to House Dust in Daily Life.

Sang Min Lee, MD, PhD and Sang Pyo Lee, MD, PhD, Division of Pulmonology and Allergy, Gachon University Gil Medical Center, Incheon, South Korea

530 Increase in Allergic Rhinitis and Aeroallergen Composition of Texas Panhandle

Nabarun K. Ghosh, PhD, Constantine K. Saadeh, MD, FAAAAAI, Jeff Bennett, PhD, CTN, Chandini Revanna, BDN, MPH1, Mary Veloz, BS and Clinton Ross Bell, RN2, 1West Texas A&M University, Canyon, TX, 2Allergy ARTS ACCCR, Amarillo, TX, 3AIR OASIS, Amarillo, TX, 4Texas Tech University, Lubbock, Lubbock, 5Allergy ARTS, Amarillo, Amarillo

531 Rapid Diagnosis of Bacterial Sinusitis in Young Children with Chronic Coughing and without Wheezing

Charles H. Song, MD, FAAAAAI, Harbor-UCLA, Torrance, CA and Andrew Wong, MD

532 Modified Rhinitis Control Assessment Test

Eybas Abla, MD, Creighton University and Agnandria K. Bewtra, Department of Medicine, Division of Allergy and Immunology, Creighton University Medical Center, Omaha, NE

533 Sensitivity and Specificity of a Clinical Diagnosis of Allergic Rhinitis in Childhood

Ashish K. Mathur, MD1, Debra A. Stern2, Michael O. Daines, MD, Anne L. Wright, PhD3, Fernando D. Martinez, MD and Tara F. Carr, MD, 1Banner University Medical Center, Division of Pulmonary, Allergy, Critical Care and Sleep Medicine, Tucson, AZ, 2Arizona Respiratory Center, University of Arizona, Tucson, AZ

534 Treatment with STG 320 Sublingual Tablets of House Dust Mite Allergen Extracts: Profile of Subjects with HDM-Associated Allergic Rhinitis in the Clinical Development Program

Karl-Christian Bergmann, PhD, MD, Pascal M. Demoly, PhD, MD, Michel Roux, MD, Sandrine Khairallah, MSc and Robert K. Zeldin, MD, 1Allergy-Centre-Charité, Berlin, Germany, 2University Hospital of Montpellier, Montpellier, France, 3Stallergenes SAS, Antony, France

535 Skin Puncture Test Response Is Not Altered By Season of Testing

SuzanneWarford, MD, D. Lew, C. Michael and J. Lieberman, Le Bonheur Children's Hospital, Memphis, TN, Department of Allergy and Immunology, University of Tennessee Health Science Center, TN

536 Retrospective Analysis of Allergy Skin Testing Results and Relationship to Chronic Sinusitis in the Tucson Adult Population

Nour A. Parsa, MD, Rhonda Alkatib, MD and Tara F. Carr, MD, 1Banner University Medical Center, Department of Internal Medicine, Tucson, AZ, 2Banner University Medical Center, Division of Pulmonary, Allergy, Critical Care and Sleep Medicine, Tucson, AZ

537 Retrospective Analysis of Ocular Allergic Conjunctivitis Responders and Non-Responders during Screening in an Environmental Exposure Chamber

Holly Lorentz, PhD, Stephanie Recker, MSC, CCRP, Fiona Soong and Anne Marie Salapatek, PhD, Influmax Research, Mississauga, ON, Canada

538 Serum Specific IgE Levels Detects More Pollen Sensitizations in Symptomatic Patients Than Skin Prick Testing Alone

Denisa Ferastaroaru, MD, Maria Shtessel, MD and Gabriele de Vos, MD, MSc., Montefiore Medical Center, Bronx, NY

539 A Phase 1 First-in-Human Study (B4901001) Evaluating a Novel Anti-IgE Vaccine in Adult Subjects with Allergic Rhinitis

Gilbert Y. Wong, MD, Pfizer WRD - Biotechnology Clinical Development, South San Francisco, CA, Emile Efissi, MD, Diex Research Montreal, Montreal, QC, Canada, Ginette Girand, MD, Diex Research Sherbrooke, Sherbrooke, Canada, William H. Yang, MD, Ottawa Allergy Research Corporation, Ottawa, ON, Canada, Jacques Hebert, MD, Centre de Recherche Applique en Allergie de Quebec, Quebec City, QC, Canada, Roberto Bagarini, PhD, Pfizer WRD - Biotechnology Clinical Development, San Diego, CA, Michael A. O’Connell, MD, Pfizer - Business Unit, New York, NY, Brian Champion, PhD, Formerly Pfizer Vaccine Immunotherapeutics; Presently PsiOxus Therapeutics, Oxford, United Kingdom, James Merson, PhD, Pfizer Vaccine Immunotherapeutics, San Diego, CA and Heather Davis, PhD, Pfizer Vaccine Immunotherapeutics, Ottawa, ON, Canada

540 A High Titer Anti RSV Polyclonal Antibody (RI-002) Prevents Infection with Palivizumab Resistant (PR) RSV in Cotton Rats and Achieves Greater Neutralizing RSV Activity As Compared to Palivizumab

James J Mond, MD, PhD, ADMA Biologics, Ramsey, NJ and Brian Gilbert, Baylor College of Medicine

541 The Allergic Rhinitis Clinical Investigator Collaborative (AR-CIC) - Cytokine Analysis of Nasal Secretions before and after Nasal Allergen Challenges (NAC)

Jenny Thiele, MSc1,2, Mena Soliman, MBCbc, MSc (candidate)1,2, Lisa M. Stetsy, BSc1, Daniel Adams, BSc1 and Anne K. Ellis, MD, MSc, FAAAAAI1,2, 1Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, 2Departments of Medicine and Biomedical & Molecular Science, Queen’s University, Kingston, ON, Canada

Eosinophils

MAAI

3210

Sunday, March 6th, 2016, 9:45 AM - 10:45 AM

542 Effect of Cysteinyi Leukotriene Receptor Antagonists on Leukotriene D4-induced Chemotaxis of Human Eosinophil Cell Line, Eol-I Cells

Hideaki Shirasaki, MD, PhD, 1Etsuko Kanaizumi, 1Manabu Fujita, 1Tomoaki Sekioka and 1Tetsuo Himi, 1Sapporo Medical University, Sapporo, Japan, 2Nion Pharmaceutical Co., LTD, Osaka, Japan, 3Department of Otolaryngology, Sapporo Medical University School of Medicine

543 A Clinicopathological Study of Small Intestinal Perforations in Patients with Eosinophilic Granulomatosis with Polyangiitis

Shin Saito, MD, PhD, Kentaro Kurashina, 1Shiro Matsumoto, Yanasuru Sakuma, 1Seiji Minoto, 1Masahiro Iwamoto, 2Daisuke Matsubara, 3Noriyoshi Fukushima, 4Hisanaga Horie, 5Yoshinori Hosoya, 1Kan Kefor and Naohito Sata, 1Department of
Surgery, Jichi Medical University, Shimotsuke, Japan, 2Division of Rheumatology and Clinical Immunology, Jichi Medical University, 3Department of Pathology, Jichi Medical University

544  Sophora Flavescens Suppresses Lung Eosinophilia By Inhibiting Both Eosinophil Hematopoiesis and Migration
Hirofumi Tsuzuki1, Yojiro Arinobu1, Kohta Miyawaki2, Ayako Takakazu3, Shun-ichiro Ota4, Naoko Ueki5, Yuri Ota5, Siamak Jabbarzadeh Tahrizi6, Mitsuteru Akahoshi7, Hiroaki Niiro7, Hiroshi Tsuchamoto8, Makiko Horihara9, Shisei Ohita9, Kenji Iizuka10, MD, PhD10, Hiroyuki Fuku10 and Koichi Akashi10, 1Department of Medicine and Biobmolecular Science, Kyushu University Graduate School of Medical Sciences, Fukuoka City, Japan, 2Clinical Education Center, Kyushu University Hospital, Fukuoka City, Japan, 3Department of Rheumatology, Internal medicine and connective tissue disorders, Shimonoeki City Hospital, Shimonoeki City, Japan, 4Division of Nephrology and Rheumatology, Fukuoka University Hospital, Fukuoka City, Japan, 5Division of Medical Biochemistry, Department of Biomolecular Sciences, Saga Medical School, Saga City, Japan, 6Institute of Biomedical Sciences, Tokushima University Graduate School, Tokushima City, Japan

545  Successful Use of Cyclosporine for Eosinophilic Cystitis in a 64-Year-Old Female
Sohaib Aleem, MD, MPH, FACP. University at Iowa Hospitals and Clinics, Iowa City, IA, Antoine Azar, MD, FAAAAI, John Hopkins Asthma & Allergy Center, Baltimore, MD, Bharat Kumar, MD, University of Iowa Hospitals & Clinics, Iowa City, IA, Mary Beth Pisano, MD, FAAAAI, C4-6 GH, University of Iowa College of Medicine, Iowa City, IA and Elizabeth B Takacs, MD, University at Iowa Hospitals and Clinics

546  Hypereosinophilic Syndrome in a Patient with T-Cell Lymphoma
Samata Kamireddy, MD, LSU-New Orleans and Sanjay Kamboj, MD, Louisiana State University Health Sciences Center, Metairie, LA

547  Trans-Basement Membrane Migration of Eosinophils Induced By LPS-Stimulated Neutrophils from Human Peripheral Blood in Vitro
Kazuyuki Nakagome, MD, PhD1,2, Fuyumi Nishihara, MD1,2, Takehiro Kobayashi, MD, PhD2,3, Toru Noguchi, MD, PhD2,3, Tomoyo Soma, MD, PhD2,3 and Makoto Nagata, MD, PhD2,3, 1Department of Respiratory Medicine, Satitama Medical University, Japan, 2Allergy Center, Satitama Medical University, Japan

548  Patient-Reported Symptoms from a Diverse Group of Subjects with Hypereosinophilic Syndrome
Nicholas C. Kavas1,2, Linda Nelsen1, Suyong Yun Kun8, Kathy Benjamin9, Olga Moschlikova9, Nicole Holland-Thomas, MSN, RN9, Amy D. Klonon, MD10, Paneez Khoury, MD10 and Jonathan Steinfeld10, 1National Jewish Health, 2National Institutes of Health, 3GlaxoSmithKline, King of Prussia, PA, 4GlaxoSmithKline, 5ICON, Gaithersburg, MD, 6Leidos Biomedical Research Inc, Frederick, MD, 7National Institutes of Health, Bethesda, MD

549  Siglec-7 on Peripheral Blood Eosinophils: Surface Expression and Functional Analysis
Fanny Legrand1, Nadine A Landolino1, Francesca Levi-Schaffer, PhD, FAAAAI2 and Amy D. Klonon, MD2, 1National Institutes of Health, Bethesda, MD, 2The Hebrew University of Jerusalem, Jerusalem, Israel

550  cDC9 Is a Novel Eosinophil Derived Decoy Receptor That Decreases Sb Activity in Vitro and In Vivo
Francesca Levi-Schaffer, PhD, FAAAAI and Roopesh Singh Gangwar, The Hebrew University of Jerusalem, Jerusalem, Israel

551  Exosomes from Eosinophils of Asthmatic Patients Produce Functional Alterations on Structural Lung Cells
Victoria Del Pozo, PhD1,2, J Cañas1, Beatriz Sastre3, Carla Mazzeo2, P Barranco2, Santiago Quirce, MD, PhD2 and Joaquín Sastre3, MD, PhD, FAAAAI1, 1ISF-Dugin Jiménez Díaz, Madrid, Spain, 2IS-FJD and CIBIRES, 3IS-FJD, 4Fondo de Investigación Jimenez Diaz, Madrid, Spain, 5Department of Allergy, Hospital La Paz Research Institute (IdiPAZ), 6Department, Hospital La Paz Institute for Health Research (IdiPaz), Madrid, Spain, 7Fundación Jiménez Díaz, Madrid, Spain

Long Term Outcomes of Mepolizumab Treatment Compared to Conventional Therapy for Subjects with HES
Fei Li Kuang, MD, PhD, Pannee Khoury, MD, Jean Anne M Ware, CRNP and Amy D. Klonon, MD, National Institutes of Health, Bethesda, MD

552  A Unique Case of Idiopathic Hypereosinophilic Syndrome in a Patient Presenting with Chronic Urticaria
Stephanie N. Hudey, MS, University of South Florida Morsani College of Medicine, Tampa, FL, Hana B. Niebur, MD, University of Nebraska Medical Center, Omaha, NE and Jennifer W. Leiding, MD, University of South Florida, St. Petersburg, FL

553  An Unusual Cause of Eosinophilia - Hypereosinophilia Due to Contact Dermatitis
Prathyusha Savjani, MD, Tulane University, New Orleans, LA

554  A Rare Case of Hypereosinophilia: Sp1 Myeloproliferative Syndrome (EMS) in a 7 Month Old
Nasim Reedy, DO1, Alysa G. Ellis, MD2 and Caroline C. Horner, MD, FAAAAI3, 1Washington University, St. Louis, MO, 2Washington University School of Medicine, Saint Louis, MO

555  Idiopathic Hypereosinophilic Syndrome Presenting with Otaigia: A Case Report
woo Kyung Kim, Dongguk University Ilsan hospital, Goyang, South Korea, Yu Ran Nam, Dongguk University College of medicine, department of Physiology, South Korea and Seung Eun Nam, Dongguk University Ilsan hospital, Goyang, South Korea

556  An Unusual Hypereosinophilic Syndrome
Massimo Arquati, Maddalena A. Wu, Roberto Castelli and Marco Cicardi, Department of Biomedical and Clinical Sciences “Luigi Vanvitelli”, University of Milan, Luigi Sacco Hospital, Milan, Italy

557  Eosinophilia and Cutaneous Involvement in Angioinnmblasttic T-Cell Lymphoma
Nan Chen, Internal Medicine Resident, University of Arizona - College of Medicine, Tucson, AZ and Saul Amber, MD, Intercare Medical Associates, Mesa, AZ

558  IgE and Other Immunoglobulins

MAAI 3211
Sunday, March 6th, 2016, 9:45 AM - 10:45 AM
The Danger of Vaccination By Autopilot
Miranda L. Curtiss, MD, PhD1,2, Ewa Szymbanksa, PhD1,2, Tracy Hwanggo, MD, PhD1, Gregory Ippolito, PhD2,3, George Georgiou, PhD3, T. Prescott Atkinson, MD, PhD, FAAAAI4, Moon H Nahm, MD1 and Harry Schroeder, MD, PhD1,3, 1University of Alabama at Birmingham Department of Medicine, Birmingham, AL, 2University of Alabama at Birmingham Department of Pediatrics, Birmingham, AL, 3University of Alabama at Birmingham Department of Microbiology, Birmingham, AL, 4Urica College Department of Biology, Ulca, NY, 5University of Texas at Austin Department of Molecular Biosciences, Austin, TX, 6University of Texas at Austin Institute for Cell and Molecular Biology, Austin, TX, 7University of Alabama at Birmingham Department of Pathology, Birmingham, AL.
560 Humoral Immune Response Survey in a Schistosoma Japonicum (Sjap) Endemic Chinese Population
Jianping Zhao, MD1,2, Qian Chen, MD, PHD1, Xing Long, MD, PHD2, Jingjing Wang, MD3, Huaifang Liang, PHD2, Bixiang Zhang, MD, PHD2, Kathleen C Barnes, PHD3, Robert G. Hamilton, PhD, D.A.B.M.I, F.A.A.A.A1 and Xiaoping Chen, MD, PHD2, 1Johns Hopkins University School of Medicine, Baltimore, MD, 2Hepatic Surgery Center, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China, 3Division of Gastroenterology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China, 4Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD

561 Where Rheumatology, Oncology, and Allergy / Immunology Meet: Two Cases of Schnitzler Syndrome
Kathleen Lee-Sarwar, Brigham and Women’s Hospital, Division of Rheumatology, Immunology and Allergy, Boston, MA and Cedars Sinai, MD, PhD, F.A.A.A.A., Harvard Medical School, Brigham and Women’s Hospital, Boston, MA.

562 Accessing Natural Killer Cell Antibody-Dependent Cell-Mediated Cytotoxicity Via CMV-Specific Hyperimmune Human Immunoglobulin
Anastasiya Vermakova, PhD1, Pnaki B. Barjeeree, PhD1, Levi B. Watkins, PhD1, Alexandre F. Carisey, PhD1, Cindy De Los Santos1, Gall J. Demmler-Harrison, MD2, and Jordan S. Orange, MD, PhD, F.A.A.A.A1. 1Baylor College of Medicine and Texas Children’s Hospital, Section of Immunology, Allergy, and Rheumatology, Houston, TX. 2Texas Children’s Hospital and Baylor College of Medicine, Department of Pediatrics, Houston, TX

563 Measurement of Antigen-Specific IgA May be Useful in Children with Food Allergy
Yousuke Baba, MD, PhD1,2, Asuka Honjo, MD2, Susumu Yamazaki, MD, PhD1,2, Eiisuke Inage, MD, PhD,2, Mari Mori, PhD,2, Massa Kambakke, MD, PhD1,2, Yoshikazu Ohtsuka, MD, PhD2, and Toshiki Shimizu, MD, PhD2. 1Department of Pediatrics, Juntendo University Shizuoka Hospital, Shizuoka, Japan. 2Department of Pediatrics and Adolescent Medicine, Juntendo University Faculty of Medicine, Tokyo, Japan

564 Breast Milk IgA Levels in the Old Order Mennonite Vs. City Mothers
Mahta Morzezavi, MD, Kiri E. Jarvinen-Seppo, PhD, Camille A. Martina, PhD, Richard J. Looney, MD, F.A.A.A.A and Kiri M. Jarvinen-Seppo, MD, PhD, F.A.A.A.A, University of Rochester, NY

565 Recombinant Human IgE Antibodies to Analyze Antigenic Determinants in Group 1 Mite Allergens for the Design of Immunotherapy
Anna Pomés, PhD, F.A.A.A.A1, Jill Glesner, BS1, Magdalena Godzun, MS2, Mattias Levin, PhD2, Martin D. Chapman, PhD, F.A.A.A.A1 and Mats Ohlin, PhD1. Indoor Biotechnologies, Inc., Charlottesville, VA. 2Lund University, Lund, Sweden

566 The Measure of Specific IgE to Whole-Allergen Extracts May Not be Useful for Primary Sensitization Diagnosis in Children with Atopic Dermatitis and Asthma
Lukasz Blazkowski, MD, PhD1,2 and Ryszard Kurzawa3, 1Pediatric and Allergy Department Specialist Hospital Jaslo, Poland, 2Allergy and Pulmonary Medicine Department, National Research Institute for Tuberculosis and Lung Diseases - Rakbka Branch, Rakbka-Zdroj, Poland

567 Production of Human Monoclonal IgE from Patients with Allergic Bronchopulmonary Mycosis
Mark Wurth, MD, PhD1,2, Dennis J Horvath, PhD1, Rebekah F Brown, MD1, Yasmim W. Khan, MD, Ryszard Dworski, MD, PhD1 and Scott A. Smith, MD, PhD1, 1Vanderbilt University, Nashville, TN. 2Vanderbilt University

568 IgE Anti-Haemophilus Influenzae Type b (Hib) Antibodies Detected in Serum of Hib Vaccinated Asthmatic and Non-Asthmatic Pediatric Patients
Tehila A. Saadia, MD1, Stephan Kohlhoff, MD1, Natalie Banniet, MD1, Yitzchok M. Norowitz, BS1, Rauno Joks, MD2, Helen G. Durkin, PhD3 and Tamar A. Smith-Norowitz, PhD2, 1Department of Pediatrics, State University of New York Downstate Medical Center, Brooklyn, NY. 2SUNY Downstate Medical Center, Brooklyn, NY. 3Department of Pathology/Medicine, 1Department of Medicine, State University of New York Downstate Medical Center, Brooklyn, NY. 4Department of Pediatrics, SUNY Downstate Medical Center, Brooklyn, NY

569 Detection of Ovomucoid-Specific Low-Affinity IgE in 14-Month-Old Infants and Its Relationship with Eczema
Norio Kawamato, MD, Ph.D1, Norio Kamemura, Ph.D2, Hiroshi Kid0, MD, Ph.D2 and Toshiyuki Fukuok, MD, Ph.D2, 1Gifu University, Gifu City, Japan. 2The University of Tohoku, Japan

570 Relationship of Serum Total IgE Levels, Specific IgE Levels and Peripheral Total Eosinophil Count in Patients of Younger Than 2 Years with Allergic Diseases
Sun Hee Choi, MD, PhD, Kyung Hee University Hospital at Gangdong, Seoul, South Korea, Kyung Suk Lee, MD, PhD, Department of Pediatrics, CHA University Bundang Medical Center, Seongnam, South Korea, Haerim Park, Kyung Hee University Hospital, Seoul and YeongHo Rha, MD, PhD, Kyung Hee University Hospital, Seoul, South Korea

571 Pulmonary Vascular: Leukin Requires IgE during Respiratory Viral Infection
Brian T. Kelly, MD, MA, Jennifer L. Santoro, BS and Mitchell H. Grayson, MD, F.A.A.A.A, Medical College of Wisconsin, Milwaukee, WI

572 Study of Total and Allergen Specific IgE and Salivary IgA, As Well As Leukocyte Populations in Atopic and Non-Atopic Children with Asthma and / or Rhinitis
Julio cesar Orellana1,2, Maria ofelia Miño3, Estela Pautasso4, Ana Romero Boni5, Stefania c Santo6, Maria ines Pereira7, Adriana Cassinero8, Telma Varela9, Pablo Romero, Omar Romero9 and Horacio marcelo Serr9, 1Children, Argentina, 2Children Hospital of Santosiana Trinidad from Cordoba, cordoba, Argentina, 3Children Hospital of Santosiana Trinidad from Cordoba, 4Nuevo Hospital de Niños de la Santosiana Trinidad Cordoba Argentina, 5Laboratorio, Hospital de Niños de la Santosiana Trinidad, 6Laboratorio, Hospital de Niños de la Santosiana Trinidad Cordoba, argentina, 7Laboratorio, Hospital de Niños de la Santosiana Trinidad Cordoba, argentina, 8Laboratorio, Hospital de Niños de la Santosiana Trinidad Cordoba, argentina, 9Laboratorio, Hospital de Niños de la Santosiana Trinidad Cordoba, argentina

573 Characterization of Patients with Low IgE Levels
Andrew Q. Pham1, Joyce Xiang Wu Lee1, MD, Connie Lin, MD2, Emily Liang, MD2 and Joseph S. Yusin, MD, F.A.A.A.A1, 1VA Greater Los Angeles Health Care System, 2 Cedars-Sinai Medical Center

574 Specific IgE and IgG Antibodies to Human Rhinovirus 16 Capsid Protein VP1 Among Asthmatic and Non-Asthmatic Children from Costa Rica: Comparison with Virginia and Northern Sweden
Thomas A.E. Platts-Mills, MD, PhD, F.A.A.A.A, F.R.S.1, Alexander J. Schuyler, BS, BA2, Lisa J Workman, BA3, Eva Rönnmark, PhD3, Lydiana Avila1 and Peter W. Heymann, MD3, 1University of Virginia Asthma and Allergic Diseases Center, Charlottesville, VA, 2Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA, 3Umeå University, Umeå, Sweden, 4Hospital Nacional de Niños, San José, Costa Rica, 5University of Virginia Asthma and Allergic Diseases Center and the Department of Pediatrics Division of Respiratory Medicine, Charlottesville, VA

575 CS5 Replaces IL-4 in Anti-CD40 + IL-4 Mediated Induction of IgE Responses By PBMC of Adult Allergic Asthmatic Humans
Kokskul Chotikanatis, MD1, Jane Yee, MD, MD1, Yan Yan, MD2, Seto M Chice, MS3, Helen G. Durkin, PhD4, Rauno Joks, MD5 and

SUNDAY
Molecular Mediators of Mucosal Damage in the Gut and Airway

Basic Science Workshop

SUNDAY

301

Sunday, March 6th, 2016, 12:15 PM - 1:30 PM

576 Toll-like Receptor 4 Signaling Pathway Mediates Inhaletral Organic Dust-Induced Bone Loss
Jill A. Poole, MD, FAAAAI1, Elizabeth Klein2, Anand Dusad, MD, Todd Wyatt, PhD3, Debra Romberger, MD3, Michael Durley4, Lynell Klassen, MD1, Ted Mikulis, MD5, Dong Wang, PhD6 and Geoffrey Thiele, PhD7, 1University of Nebraska Medical Center, Omaha, NE, 2University of Nebraska Medical Center, Omaha, NE, 3UnMC, Omaha, NE

577 Micronema-155 Regulates Cockroach Allergen Induced Cyclooxygenase-2 Expression in Airway Epithelium
Lipeng Qiu, PhD1, Yinfeng Zhou, MD, PhD1, Yilin Zhao, MD, PhD1, Danh Do, PhD1, Heng Wang, MD, PhD1, Changlian Li2, Xiaoping Liu, PhD1, Xu Cao, PhD2, Mei Wen, MD, PhD2 and Pei Song Gao, MD, PhD1, 1Division of Allergy & Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD, 2Department of Orthopedic Surgery, Johns Hopkins University School of Medicine, Baltimore, MD

578 RNA-Binding Protein H1 Regulates CD4+ T Cell Differentiation and Is Required for Normal IL-2 Homeostasis and Allergic Airway Inflammation
Ulus Atasoy, MD, FAAAAI, Patsharapon Tchesaditana, Jacqueline Glascott, Suzanne Ridenhour, Joseph Magee and Matt Guerin, University of Missouri, Washington University

579 Impaired Effector T cells and Production of Mitochondrial Reactive Oxygen Species (mitoROS) By Monocytes in Human Chronic Granulomatous Disease (CGD) Is Reversed by Treatment with the Pyrropanagin Agonist Pilocicazine (Pio)
Donna Brattton, MD, Ruby Fernandez-Boyananali, PhD, Emilia Liana Falcone, Christa Zetke, Beatriz Marciano and Steven M. Holland, MD, National Jewish Health, Denver, CO

580 Forkhead Box Protein 3 (Foxp3) Demethylatation Is Associated with Tolerance Induction in Peanut-Induced Intestinal Allergy
Melquin Wang, MD, PhD1, Ivana Yang, PhD2, Elizabeth J Davidson, BA2, Anthony Joehalm, Jordan K. Abbott, MD, Brian P. O'Connor, PhD3 and Erwin W. Gelfand, MD, FAAAAI1, National Jewish Health, Denver, CO

581 Non Type-2 Severe Asthma Has Increased Bronchoalveolar Mast Cell Mediator Release and Health Care Utilization
Merritt L. Fujii, MD1, John Tradou, BA2, Fernando Holguin, MD, MPH2, Lawrence B Schwartz, MD, PhD, FAAAAI3 and Sally E. Wenzel, MD, FAAAAI4, 1University of Pittsburgh Medical Center, Division of Pulmonary, Allergy and Critical Care Medicine, Pittsburgh, PA, 2The University of Pittsburgh Asthma Institute at UPMC and the University of Pittsburgh School of Medicine, Department of Pulmonary, Allergy and Critical Care Medicine, Pittsburgh, PA, 3Virginia Commonwealth University, Richmond, VA

Endotypes of Difficult-to-Control Asthma in Inner City Children Differ By Race
Kari R. Brown, MD, MS1, Rebecca A. Zabel, MS1, Agustin Calatroni, MA, MS1, Cynthia Vinness, PhD, MPH1, Umasundari Sivappasad, PhD1, Elizabeth Matsui, MD, MHS1, Joseph B. West, MD1, Melanie M. Mahjiha, MD, MS1, Michelle A. Gill, MD, PhD1, Haejin Kim, MD1, Meyer Kattan, MD1, Dinesh K. Pillai, MD2, James E. Gern, MD, FAAAAI3, William W. Busse, MD, FAAAAI1, Alkis Togias, MD, FAAAAI3, Andrew H Liu, MD, FAAAAI14,15 and Gurjit K. Khurana Hershey, MD, PhD, FAAAAI16, 1Cincinnati Children's Hospital Medical Center, Cincinnati, OH, 2Rho Federal Systems Division Inc., Chapel Hill, NC, 3Cincinnati Children's Hospital Medical Center, Division of Asthma Research, Cincinnati, OH, 4Johns Hopkins University School of Medicine, Baltimore, MD, 5Boston University Medical Center, Boston, MA, 6Ann and Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, 7UT Southwestern Medical Center, Dallas, TX, 8Henry Ford Health System, Division of Allergy and Clinical Immunology, Detroit, MI, 9College of Physicians and Surgeons, Columbia University, New York, NY, 10Children's National Health System, Washington, DC, 11University of Wisconsin-Madison, Madison, WI, 12University of Wisconsin School of Medicine and Public Health, Madison, WI, 13NIAID/NIH, Bethesda, MD, 14Children's Hospital Colorado, Aurora, CO, 15National Jewish Health, Denver, CO, 16Cincinnati Children's Hospital, Cincinnati, OH

582 MIP-1a/Lta Level in Nasopharyngeal Aspirates at First Wheezing Episode Is a Predictor of Recurrent Wheezing
Kazuko Sugai, MD, PhD, Hirokazu Kinnuma, PhD, Yumiko Miyaji, MD, PhD, Masakazu Yoshizumi, PhD, Hirooiky Tsukagoshi, PhD, Yumi Yamada, MD, PhD, Masanori Ikeda, MD, PhD, Masahiro Noda, DVM, PhD, Kunihisa Kozawa, MD, PhD, Shigemi Yosihara, MD, PhD, Akihiko Ryo, MD, PhD, Hiromitsu Ogata, PhD and Yoshinori Okawara, MD, PhD, 1Department of Pediatrics, National Hospital Organization Fujukaya Medical Center, Hiroshima, Japan, 2Infectious Disease Surveillance Center, National Institute of Infectious Diseases, Tokyo, Japan, 3Division of Allergy, National Center for Child Health and Development, Tokyo, Japan, 4Toho-Namati Public Health and Welfare Office, Gunma Prefecture, Gunma, Japan, 5Gunma Prefectural Institute of Public Health and Environmental Sciences, Japan

583 MP-1a/Lta Level in Nasopharyngeal Aspirates at First Wheezing Episode Is a Predictor of Recurrent Wheezing
Kazuko Sugai, MD, PhD, Hirokazu Kinnuma, PhD, Yumiko Miyaji, MD, PhD, Masakazu Yoshizumi, PhD, Hirooiky Tsukagoshi, PhD, Yumi Yamada, MD, PhD, Masanori Ikeda, MD, PhD, Masahiro Noda, DVM, PhD, Kunihisa Kozawa, MD, PhD, Shigemi Yosihara, MD, PhD, Akihiko Ryo, MD, PhD, Hiromitsu Ogata, PhD and Yoshinori Okawara, MD, PhD, 1Department of Pediatrics, National Hospital Organization Fujukaya Medical Center, Hiroshima, Japan, 2Infectious Disease Surveillance Center, National Institute of Infectious Diseases, Tokyo, Japan, 3Division of Allergy, National Center for Child Health and Development, Tokyo, Japan, 4Toho-Namati Public Health and Welfare Office, Gunma Prefecture, Gunma, Japan, 5Gunma Prefectural Institute of Public Health and Environmental Sciences, Japan

584 Allergen-Induced Increase in Group 2 Innate Lymphoid Cells in the Airways of Mild Asthmatics
Ruchong Chen, MD1,2, Steven G Smith, PhD3,4, Brittany Salter, PhD5, Amani El-Gammal, MD1, John-Paul Oliveria, Caitlin Obminski1, Richard Watson1, Paul M. O’Byrne5, MB, FRCP, FRSC1, Gail M. Gauvreau, PhD6 and Roma Sehmi, PhD, FAAAAI1, 1Department of Medicine, Cardio-Respiratory Research Group, McMaster University, Hamilton, ON, Canada, 2State Key

Asthma Diagnosis and Biomarkers

ADT

3601

Sunday, March 6th, 2016, 2:00 PM - 3:15 PM
Laboratory of Respiratory Disease, Guangzhou Institute of Respiratory Diseases, The First Affiliated Hospital of Guangzhou Medical University, Guangzhou, China

585 PAI-1 Early Life Infections and Asthma Risk, Exacerbations, and Reduced Lung Function

Kumar Rajesh, MD, MS, FAAAAI1, Seong Ho Cho, MD, FAAAAI2,3, Jin Young Min, MD, PhD4, Joseph Kang, PhD5, Wendy Chan, MD6, Dong-Young Kim7, Sam Oh, PhD, MPH8, Dara Torgerson, MD9, Maria del Mar Del-Pino-Yanes, MD9, Donglee Hu, PhD9, Saunak Sen, PhD10, Scott Huntsman, MS11, Celeste Eng, BSc12, Harold J. Furber, MD, MSPH13, William Rodriguez-Cintron14, Jose Rodriguez-Santana, MD15, Denise Serebriiskiy, MD16, Shannon Thyne, MD16, Luisa Borrell, DDS, PhD16, L. Keoki Williams, MD, MPH, FAAAAI17, Max Seibold, PhD18, Esebien Gonzalez Burchard, MD, MPH19,20 and Pedro C. Avila, MD21, Pediatric allergy, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL.

Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL. 2University of South Florida, College of Medicine, Tampa, FL. 3Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL. 4Department of Preventive Medicine, Northwestern University, Chicago, IL. 5Department of Biostatistics, Northwestern University, Chicago, IL. 6Division of Allergy and Immunology, Department of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL. 7Department of Medicine, University of California, San Francisco, San Francisco, CA. 8Department of Medicine, University of California, San Francisco, CA. 9Department of Epidemiology and Biostatistics, University of California, San Francisco, San Francisco, CA. 10Baylor College of Medicine and Texas Children's Hospital, Houston, TX. 11Veterans Caribbean Health Care System, San Juan, PR. 12Centro de Neumologia Pediatrica, San Juan, PR. 13Pediatric Pulmonary Division, Jacobi Medical Center, Bronx, NY. 14UCSF School of Medicine, San Francisco, CA. 15Department of Health Sciences, Graduate Program in Public Health, Lehman College, City University of New York, Bronx, NY. 16Henry Ford Health System, Detroit, MI. 17National Jewish Health, Denver, CO. 18UCSF, San Francisco, CA. 19Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL.

588 Interrogating Genetic Susceptibility Loci in CVID and Autoimmunity

Luanna Yang1, Shaiit N Shah, MD3, D Stephen Serafini, Roman G Timoshchenko1, Paula Scotland2, Kristy Richards1, Matthew J Billard3, Patricia L. Lugar, MD, MS4 and Teresa K. Tarrant, MD, FAAAAI5, 1University of North Carolina, Chapel Hill, NC. 2Duke University, Durham, NC. 3University of North Carolina, Chapel Hill, NC. 4Medicine, Duke University Medical Center, Durham, NC. 5Departments of Medicine and Microbiology and Immunology, University of North Carolina School of Medicine, Chapel Hill, NC 27599, USA, Chapel Hill, NC.

589 Extra-Immunologic Manifestations of Common Variable Immunodeficiency in Pediatric Versus Adult Patients

Lauren A Sanchez, MD, MA1, Matthew S Panelli, MD, MS2, Soren Melkorka Maggadotir, MD3, Kathleen E. Sullivan, MD, PhD, FAAAAI3 and . USDNNet4, Children's Hospital of Philadelphia, Philadelphia, PA. 1University of California, San Francisco, San Francisco, CA. 2The Children's Hospital of Philadelphia, Philadelphia, PA. 3U.S. Immunodeficiency Network.

590 Role of B Cell Activating Factor in CVID Lung Disease

Paul J. Maglione, MD, PhD1, Montserrat Cols2, Emma Roelkle2, Lin Radigan2 and Charlotte Cunningham-Rundles, MD, PhD2, 1Clinical Immunology, Icahn School of Medicine at Mount Sinai, New York, NY. 2Icahn School of Medicine at Mount Sinai, New York, NY.

Fungal and Mouse Allergens and Allergy

EORD

3603

Sunday, March 6th, 2016, 2:00 PM - 3:15 PM

591 IgE Antibodies to Fungi Among Asthmatic Children Living in Homes Damaged By Hurricane Sandy in New York City

Adnan Divjian, BA1, Luis M. Acosta, MD2, Edward Sobek, PhD3, Nizan Soffer, PhD2 and Matthew S. Perzanowski, PhD4, 1Columbia University Mailman School of Public Health, New York, NY. 2Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, New York, NY. 3Assured Bio Labs, Oak Ridge, TN. 4Department of Environmental Health Sciences, Columbia University, New York, NY.

592 Fungal Metagenomic Analysis of Indoor Evaporative Cooler Environments in the Great Basin Desert Region

Angela R. Lemons, MS5, Mary Beth Hogan, MD, FAAAAI6, Ruth A Gault, PhD7, Kathleen J Holland, MD8, Edward Sobek, PhD9, Kimberly A Olsen-Wilson, MSPh10 and Brett J. Green, PhD, FAAAAI11, 1Allergy and Clinical Immunology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV. 2Department of Pediatrics, University of Nevada School of Medicine, Las Vegas, NV. 3Department of Microbiology and Immunology, University of Nevada School of Medicine, Reno, NV. 4Department of Pediatrics, Indiana University, Indianapolis, IN. 5Assured Bio Labs, Oak Ridge, TN. 6Department of Pediatrics, University of Nevada School of Medicine, Reno, NV.

593 Internal Transcribed Spacer rRNA Gene Sequencing Analysis of Dustborne Fungi in a Water-Damaged Office Building

Brett J. Green, PhD, FAAAAI12, Angela R. Lemons, MS5, Yonemmi Park, MS5, Jean M. Cox-Ganser, PhD5 and Ju-Hyeong Park, ScD, MPH, CHF13, 1Allergy and Clinical Immunology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention,
594 The Murine Pulmonary Proteomic Profile Associated with Allergic Aspergillus Fumigatus Exposure
Ajay P. Nayak, PhD1, Tara L. Croston, PhD2, Angela R. Lemons, MS2, W. Travis Goldsmith, BSCp6, Michael L. Kashon, PhD3, Dori M. Germolec, PhD3, Donald H. Beezhold, PhD, FAAAAI6, and Brent J. Green, PhD, FAAAAI6, 1Allergy and Clinical Immunology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV; 2Biostatistics and Epidemiology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV, 3CDC/NIOSH/ACIB, Morgantown, WV; 4Engineering and Control Technology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV; 5Biostatistics and Epidemiology Branch, Health Effects Laboratory Division, National Institute of Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV, 6Toxicology Branch, Division of the National Toxicology Program, National Institute of Environmental Health Sciences, Research Triangle Park, NC. 7Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV.

595 Measurement of Major Allergen Mus m 1 in Commercial Mouse Allergen Extracts and Mouse Urine
Taruna Khurana, PhD1, Jessica R. Shartemy2, Natalie A. David2, and Jay E. Slater, MD3. 1FDA/CBER/OVRR/DBPAP, Silver Spring, MD; 2FDA/CBER/OVRR/DBPAP.

596 Filaggrin Associated Risk for Atopic Dermatitis Is Offset By Protective Missense Variants in RPTN and LCE1B Genes in the Epidermal Differentiation Complex
Rasika A. Mathias, ScD1, Meher Boorgula2, Sameer Chavan, MS2, Kruhika R. Iyer2, Nicholas M. Rafael2, Joseph Potec3, Jon M. Huminia, MD, FAAAAI4, Amy S. Paller2, Lynda C. Schneider, MD, FAAAAI5, Richard L Gallow, MD, PhD5, Emma Guttman-Yassky, MD, PhD5, Peck Y. Ong, MD, FAAAAI6, Ingo Rucinski, PhD7, Terri H. Beaty, PhD7, Li Gao, MD, PhD7, Lisa A. Beck, MD, FAAAAI9, Donald Y.M. Leung, MD, PhD, FAAAAI11 and Kathleen C. Barnes, PhD, FAAAAI12, 1Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD; 2Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD; 3Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD; 4Oregon Health and Science University, Portland, OR; 5Northwestern University Feinberg School of Medicine, Chicago, IL; 6Boston Children’s Hospital, Boston, MA; 7Division of Dermatology, University of California, San Diego, San Diego, CA; 8Ichim Medical School at the Mount Sinai Medical Center, New York, NY; 9Children’s Hospital Los Angeles/USC, Los Angeles, CA; 10Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD; 11Department of Dermatology, University of Rochester Medical Center, Rochester, Rochester, NY; 12Department of Pediatrics, National Jewish Health, Denver, CO.

597 The Role of Gastric Releasing Peptide (GRP) in Atopic Dermatitis (AD) Induced by Interleukin 13 (IL-13)
Eun Byul Choi, Master Degree1, Zhou-Feng Chen, PhD2, Zhou Zhu, MD, PhD3, and Tao Zheng, MD1, 1Yale University School of Medicine, New Haven, CT; 2St. Louis Washington University School of Medicine at St Louis, MO; 3Yale University School of Medicine, CT.

598 Novel Gene Signatures Observed in the Nonlesional Skin from European American Atopic Dermatitis Subjects Who Are Colonized with Staphylococcus Aureus
Takeshi Yoshiida, PhD1, Jason R Myers, MS2, John M Ashton, PhD3, Anna De Benedetto, MD, FAAAAI4, Steven R Gill, PhD7, Catherine Philpot3, Gloria David, PhD3, Donald Y. Leung, MD, PhD, FAAAAI6 and Lisa A. Beck, MD, FAAAAI9. 1Department of Dermatology, University of Rochester Medical Center, Rochester, NY, 2University of Rochester Medical Center, Rochester, NY, 3Rho, Inc., Chapel Hill, NC, 4Department of Pediatrics, National Jewish Health, Denver, Colorado, USA.

599 Staphylococcus Aureus Colonization Is Associated with Increased Peanut Allergy Sensitization in Children with Atopic Dermatitis (AD)
Andrea I. Jones, MD, Douglas Everett, PhD and Donald Y.M. Leung, MD. 1Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD; 2Division of Allergic and Immunologic Disease, National Jewish Health, Denver, CO; 3Division of Dermatology, University of Rochester Medical Center, Rochester, NY; 4Oregon Health and Science University, Portland, OR; 5Northwestern University Feinberg School of Medicine, Chicago, IL; 6Ichim Medical School at the Mount Sinai Medical Center, New York, NY; 7Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD.

599 Improving Self Management with Innovative Technologies
HDQ
3605 Sunday, March 6th, 2016, 2:00 PM - 3:15 PM

601 Adherence Barriers and Durala Adherence in an Asthma Adherence Management Study: Preliminary Results
Andrew G. Weinstein, MD, FAAAAI1, Deborah A. Gentile, MD2, Jennifer Mabilo2, Erica Butler, BS, CCRC3 and David P. Skoner, MD3, 1Jefferson Medical College, Philadelphia, PA, 2West Penn Allegheny Health System, Pittsburgh, PA, 3Allegheny Singer Research Institute, Pittsburgh, PA.

602 Self-Injectable Epinephrine Adherence Survey Amongst Veterans
Anil M Patel, MD, Joyce XW Lee, MD, Andrew Q Pham, MD and Joseph S Yustin, MD, FAAAAI, VA Greater Los Angeles Health Care System, Los Angeles, CA.
Rhinosinusitis & Sleep

IRSO

3606

Sunday, March 6th, 2016, 2:00 PM - 3:15 PM

Sleep-Disordered Breathing and Upper Airway Allergy: A Survey of Allergists’ Practices

Dennis Shusterman, MD, MPH, University of California, San Francisco, San Francisco, CA; Faisal M. Barood, MD, FAAAAI, The University of Chicago, Chicago, IL; Timothy J. Craig, DO, FAAAAI, Professor, Penn State University, Department of Medicine and Pediatrics, Hershey, PA; Samuel L. Friedlander, MD, Case Western Reserve University/University Hospitals of Cleveland, Cleveland, OH; Talal M. Nsouli, MD, FAAAAI, Georgetown University Medical Center, Washington, DC and Bernard Silverman, MD, FAAAAI, SUNY Downstate Medical Center, Brooklyn, NY

3607

High Burden of Obstructive Sleep Apnea in Subgroups of Chronic Rhinosinusitis: Importance of Phenotyping Chronic Rhinosinusitis Patients for Stratifying Risk Factors for This Major Comorbidity

Jessica W. Hui, MD, Mohamed Benhammeda, Vahid Kalantari, Arpita Mehta, Raj Kote, Pete Bera, MD, Phillip LoSavio, MD, Mary C. Tobin, MD and Mahbboobeh Mahdvina, MD, PhD, Internal Medicine/Pediatrics Division, Department of Pediatrics, Rush University Medical Center, Chicago, IL; Department of Immunology and Microbiology, Allergy/Immunology Section, Rush University Medical Center, Chicago, IL; Allergy/Immunology section, Department of Immunology and Microbiology, Rush University Medical Center, Chicago, IL; Department of Otorhinolaryngology-Head and Neck Surgery, Rush University Medical Center, Chicago, IL

608

3D Quantitation of Sinonasal Inflammation Correlates with Symptoms and Disease-Specific Quality of Life in Patients with Rhinosinusitis

Sooyoung Lim, BS, Michael Ramirez, BS, Katherine McKeough, BS, Adam Starkey, BS, Fowwaz Qayyum, BS, Jonathan Garneau, MD, Megan K Ford, MD, William F Sempakovic, PhD, Daniel T Ginet, MD, Samuell G Armato, III, PhD, Faad M. Barood, MD, FAAAAI and Jayant M. Pinto, MD, FRcTker School of Medicine, Section of Otolaryngology-Head and Neck Surgery, Department of Surgery, The University of Chicago, Department of Radiology, The University of Chicago, Department of Radiology, TuUniversity of Chicago, Mount Sinai Health System, New York, NY; Department of Medicine, Thomas Jefferson University Hospital, Philadelphia, PA; Department of Radiology, Florida Hospital, Orlando, FL; Department of Radiology, The University of Chicago, Chicago, IL; The University of Chicago, Chicago, IL

609

Cross-Talk Between Human Mast Cells and Epithelial Cells By IgE-Mediated Peristin Production in Eosinophilic Nasal Polyps

Dae Woo Kim, MD,1,2,3 Marianna Kutila, PhD,4, A Ra Jo,5 Kyung Mi Eun,4, Narcy Arzimendi,6 Brian P. Tzanev,6 Seung-No Hong, Hong Ryun Jin, MD, Dong-Kyu Kim, MD,1,2,3 Richard F. Lockey, MD1,2,3 and Seong Ho Cho, MD, FAAAAI, Division of Allergy-Immunology, Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL; Department of Otorhinolaryngology-Head and Neck Surgery, Seoul National University College of Medicine, Seoul, South Korea; University of Alberta, Edmonton, AB, Canada; National Research Council Canada, Edmonton, AB, Canada; Division of Allergy-Immunology, Department of Internal Medicine, University of South Florida Morsani College of Medicine, "Seoul National University Hospital and Boramae Medical Center, South Korea; Department of Medical Microbiology and Immunology, University of Alberta, Edmonton, Alberta T6G 2E5; Johns Hopkins University, Baltimore, MD; Department of Otorhinolaryngology-Head and Neck Surgery, Boramae Medical Center, Seoul National University College of Medicine, "Chunccheon Sacred Heart Hospital, Hallym University College of Medicine, South Korea; University of South Florida Morsani College of Medicine, Tampa, FL; Division of Allergy and Immunology, Department of Internal Medicine, University of South Florida, Morsani College of Medicine, "University of South Florida, College of Medicine, Tampa, FL; Kyung Hee University, Seoul, South Korea

610

Eosinophil Production of PGD2 in Aspirin-Exacerbated Respiratory Disease

John W. Steinke, PhD, FAAAAI, Asthma and Allergic Disease Center, Center for Immunology Research, University of Virginia, Charlottesville, VA; Julie Negri, BS, University of Virginia, Charlottesville, VA; Mary Grace Baker, MD, Yale-New Haven Hospital, New Haven, CT; Spencer Payne, MD, University of Virginia Department of Otolaryngology, Division of Rhinology and Endoscopic Sinus Surgery, Charlottesville, VA; Larry Borish, MD, FAAAAI, Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA; Xia Feng, Qilu Hospital of Shandong University, Shandong, China

T Cells and Innate Lymphoid Cells

MAAI

3607

Sunday, March 6th, 2016, 2:00 PM - 3:15 PM

Contributions of Two Distinct T Cell Subsets (CD4+, CD8+CD69+) to Induction of Specific Memory IgE Responses

Charles J. Kim, BS, Bryan McCarthy, BS, Jonathan I. Silverberg, MD, PhD, MPH, Seto M Chice, MS, Yitzchok M. Norowitz, American Academy of Allergy Asthma & Immunology
BS4, Maja Nowakowski, PhD5, Stephan Kohlhoff, MD2,6, Rauno Joks, MD2,7, Tamar A. Smith-Norowitz, PhD2,8 and Helen G. Durkin, PhD2,9. 1Center for Allergy and Asthma Research at SUNY Downstate Medical Center, 2Center for Allergy and Asthma Research at SUNY Downstate Medical Center, 3Brooklyn, NY, 4Department of Dermatology, Northwestern University School of Medicine, Chicago, IL, 5Center for Allergy and Asthma Research at SUNY Downstate Medical Center, 6Department of Pathology, 7Department of Pediatrics, State University of New York Downstate Medical Center, Brooklyn, NY, 8SUNY Downstate Medical Center, Brooklyn, NY, 9Department of Pediatrics, SUNY Downstate Medical Center, Brooklyn, NY. 8Department of Pathology at SUNY Downstate Medical Center, Brooklyn, NY.

612 Identification of Functional Peanut-Responsive Tregs in Peanut Allergic Human Blood
David Chiang, MS2, Hugh A. Sampson, MD, FAAAAI1 and M. Cecilia Berin, PhD2. 1Graduate School of Biomedical Sciences, Icahn School of Medicine at Mount Sinai, New York, NY. 2Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY.

613 Ovarian Hormones Increase Alternaria Extract Induced ILC2 Activation
Dawn C. Newcomb, PhD2, Jacqueline-Yvonne Cephus, BS2, Matthew T. Stier, BS1, Melissa T. Bloodworth, BS2, Hubaida Fucine, BS2, Weisong Zhou, PhD2, Shani Toki, PhD1 and R. Stokes Peebles Jr, MD, FAAAAI1. 1Division of Allergy, Pulmonary, and Critical Care Medicine, Vanderbilt University, Nashville, TN, 2Vanderbilt University Medical Center, Nashville, TN. 3Department of Pathology, Microbiology, and Immunology, Vanderbilt University, Nashville, TN.

614 Expression of Micro RNA-155 Is Induced By Dust Mite Extract in CD4+ T-Cells of Dust Mite Allergic Subjects and Is Inhibited By Glucocorticoids
Elizabeth M. Balaraj, Penn State Hershey Medical Center, Alana Roff, Penn State and Fauad T. Ishmael, MD, PhD, FAAAAI, Penn State University, Hershey, PA.

615 Identification of Tr1 Cells in a Pediatric Population
Jenna R. Bergerson, MD, MPH, Ann and Robert H. Lurie Children’s Hospital of Chicago, IL; Division of Allergy-Immunology, Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, IL; Division of Allergy & Immunology, Department of Pediatrics, Northwestern University Feinberg School of Medicine, Chicago, IL and Anne Marie Singh, Division of Allergy-Immunology, Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, IL; Division of Allergy & Immunology, Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL.

Featured Asthma Therapy

ADT

Sunday, March 6th, 2016, 4:45 PM - 6:15 PM

616 Suppression of IL-13-Associated Gene Signature in Airway Epithelial Cells By Desmethasone Is Decreased in Poorly Controlled Asthma
Karyn Pollack, BS1, Sanford Williams, MS1, Kristen Wavell, BS1, Debbie-Ann Shirley, MD1, John W. Steinke, PhD1, FAAAAI1, Larry Borish, MD, FAAAAI1 and W. Gerald Teague, MD1. 1University of Virginia, Charlottesville, VA. 2Asthma and Allergic Disease Center, Carter Center for Immunology Research, University of Virginia, Charlottesville, VA. 3Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA.

617 Predictive Factors of Reaction Severity during Standardized Aspirin Desensitization in Aspirin-Exacerbated Respiratory Disease (AERD).
Kristen M. Daay, MD1, Jeremy D. Waldram, MD1, Jill Waalen, MD, MPH1, Katharine M. Woessner, MD, FAAAAI1, Ronald A. Simon, MD, FAAAAI1 and Andrew White, MD, FAAAAI1. 1Scripps Clinic, San Diego, CA. 2Scripps Translational Science Institute, La Jolla, CA.

618 Expression of Corticosteroid Regulated Genes By Peripheral Blood Mononuclear Cells (PBMCs) in Children from the NIH/NIAID Sponsored Asthma Phenotypes in the Inner City (APIC) Study after One Year of Guidelines-Based Therapy
Elena Goleva, PhD1, Leisa P. Jackson, BS1, Baomei Shuo, BS2, Zheng Hu, BS3, Michelle A. Gill, MD, PhD2, Denise C. Babineau, PhD2, Andrew H. Liu, MD, FAAAAI1 and Donald Y.M. Leung, MD, PhD, FAAAAI1. 1National Jewish Health, Denver, CO. 2UT Southwestern Medical Center, Dallas, TX. 3Rho Federal Systems Division Inc., Chapel Hill, NC. 4Department of Pediatrics, National Jewish Health, Denver, CO.

619 SK Potassium Channel Antagonists As Novel Bronchodilators
Robert Brenner, PhD1. 1Edward G. Brooks, MD2, Adriana P. Chapparo, MS2, Hui-Hsiu Chuang, BA2, Derek J. Wallace2, Vladimir Bugay, PhD2 and Bin Wang, PhD2. 1UT Health Science Center San Antonio, San Antonio, TX. 2Univ. Texas Health Science Center San Antonio, San Antonio, TX. 3UT Health Science Center San Antonio, San Antonio, TX. 4Baylor University, Waco, TX.

620 Duplumb Supresses Fractional Exhaled Nitric Oxide (FeNO) and Biomarkers of Type 2 Inflammation in Adult Patients with Persistent Uncontrolled Asthma Despite Use of Medium-to-High Dose Inhaled Corticosteroids Plus Long-Acting Beta-Agonists (ICS/LBAs)
Brian N. Swanson, PhD1, Ariel Teper, MD1, Jennifer D. Hamilton, PhD2, Bingzhi Zhang, PhD2, Heribert Staudinger, MD1, Nian Tian1, Ying Wang, PhD2, Jeffrey E. Ming, MD, PhD1, Neil M.H. Graham, MD1 and Gianluca Pirozzi, MD, PhD1. 1Sanofi, Bridgewater, NJ. 2Regeneron Pharmaceuticals, Inc., Tarrytown, NY.

Research Advancement in Allergy and Inflammation

BCI

3802
Sunday, March 6th, 2016, 4:45 PM - 6:15 PM

621 Anti-Mcam Monoclonal Antibody PRX003 Inhibits the Unique Migratory Potential of Pathogenic IL-17-Producing T Cells

622 IL-10 Differentially Regulates IgE and IgG4 Production through Indirect Effects on Naive B Cells
Adora A. Lin, MD, PhD, NIAID, National Institutes of Health, Bethesda, MD and Thomas B. Nutman, MD, National Institutes of Health, Bethesda, MD.

623 The Histone Deacetylase Inhibitor Trichostatin a (TSA) Suppresses Alternaria Extract-Induced Murine Innate Allergic Inflammation By Blocking Group 2 Innate Lymphoid Cell (ILC2) Activation
Lesson 1: /something

Lesson 2: /something

Lesson 3: /something

Lesson 4: /something

Lesson 5: /something

Lesson 6: /something

Lesson 7: /something

Lesson 8: /something
634 Desensitization to Walnut and Test Tree Nuts during a Double Blind, Placebo Controlled Oral Peanut Immunotherapy Trial
Amy M. Scurllock, MD1, Mallikarjuna R. Rettiganti, PhD2, Anne M. Hiegel, RN, CRC5, Amika Sood4,5, Caroline Daniel6, Sarah E. Beckwith6, Jessica L. Bettis6, James D. Sikes6, Suzanne E. House7, Jennifer N. Payne8, Robbie D. Pesek, MD9, Tamara T. Perry, MD9, Peggy L. Chandler, APN9, Josh L. Kennedy, MD9, Chunqiao Luo, MS9, Lynn Christie, MS, RD, LD10 and Stacie M. Jones, MD11, 1Slot 512-13, UAMS/AR Children’s Hospital, Little Rock, AR, 2University of Arkansas for Medical Sciences, Little Rock, AR, 3Arkansas Children’s Hospital, Little Rock, AR, 4University of Arkansas for Medical Sciences/Arkansas Children’s Hospital, 5UAMS/AR Children’s Hospital, Little Rock, AR, 6Arkansas Children’s Hospital Research Institute, Little Rock, AR

635 Role of T Cell Sub-Populations in Food Allergy
Luis Diego Archila Diaz, PhD1, David K. Jeong, MD2, David Robinson, MD3, Mary L. Farrington, MD4, Erik R. Wambre, PhD5, and William W. Kwok, PhD6, 1Benoy Research Institute, Seattle, WA, 2Virginia Mason Medical Center, Kirkland, WA, 3Virginia Mason Medical Center, 4Virginia Mason Medical Center, Seattle, WA, 5Benoy Research Institute at Virginia Mason, Seattle, WA

Unleashing the Power of Health Information Technology

HEDQ

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636 A Simple Intervention Significantly Improves Electronic Documentation of Medication Reactions in the Allergy Clinic
Samantha K. Lin, MD1, Charlie P. Lin, ScB2 and Faoud T. Ishmael, MD, PhD, FAAAI3,4, 1Penn State Hershey Medical Center, Hershey, PA. 5Penn State University College of Medicine, Hershey, PA

637 Automated Allergy and Infectious Disease Pharmacy Consult to Limit the Use of Aztreonam in Patients with Reported Beta-Lactam Allergy
Fonda Jiang, MD, Rupali Jain, PharmD, Paul S. Pottinger, MD, Andrew G. Ayars, MD and Matthew C. Altman, MD, University of Washington, Seattle, WA

638 Automated Chart Review for Asthma Ascertainment: An Innovative Approach for Asthma Care and Research in the Era of Electronic Medical Record
Chung I. Wi, MD1, Sungahn Sohn, PhD2, Euijung Ryu, PhD3, Hongfang Liu, PhD4, Miguel A. Park, MD5 and Young J. Juhn, MD, MPH6, 1Dept of Pediatric and Adolescent Medicine, Mayo Clinic, Rochester, MN, 2Mayo Clinic, Rochester, MN, 3Department of Internal Medicine: Division of Allergic Diseases, Mayo Clinic, Rochester, MN

639 Reported Incidence of Hypersensitivity Reactions to Non-Steroidal Anti-Inflammatory Drugs in the Electronic Health Record
Kimberly G. Blumenthal, MD1,2, Kenneth H. Lai, MA3, Paige G. Wickner, MD, MPH4, Foster R. Goss, DO5, Diane L. Seger, RPh6, Sarah P. Slight, MPharm, PhD, PGDip7,8, Maxim Topaz, RN, PhD9, Frank Y. Chang, MSc8,9 and Li Zhou, MD, PhD9, 1Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, 2Harvard Medical School, Boston, MA, 3Partners HealthCare System, Boston, MA, 4Division of Rheumatology, Allergy, and Immunology, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Chestnut Hill, MA, 5University of Colorado, Aurora, CO, 6Brigham and Women’s Hospital, Boston, MA, 7Durham University, Durham, United Kingdom

Best of IRSO

IRSO

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Sunday, March 6th, 2016, 4:45 PM - 6:15 PM

640 Clinical and Environmental Factors Associated with Habitual Snoring in the Cincinnati Childhood Allergy and Air Pollution Study (CCAPS)
Jennifer A. Kannan, MD1, Cole Brokamp, BS2, David I. Bernstein, MD, FAAAAI3, James E. Lockey, MD, MS, FAAAAI4, Manuel S. Villareal, MD, FAAAAI5, Gurjit K. Khurana Hershey, MD, PhD, FAAAAI6, Grace K. LeMasters, PhD7 and Patrick Ryan, PhD8, 1University of Cincinnati College of Medicine, Cincinnati, OH, 2Cincinnati Children’s Hospital, Cincinnati, OH, 3Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

641 Randomised Placebo-Controlled Trial of Grass Pollen Allergen Tablet Immunotherapy for Seasonal Rhinitis: Clinical and Surrogate Outcomes and Early Time Course of Immunologic Changes
Esther H. Steveling, MD1, Mongkol Lao-Araya, MD2, Christopher Koulias, MD1, Merajur Chowdhury1, Guy Scadding, MRCP1, Arif Eifan, MD1, Alina Damiru, MD2, PhD3, Martin J. Penagos Panigua, MD4, Mohamed H. Shamji, BSc, MSc, PhD, FAAAAI4 and Stephen R. Durham, MA, MD, MD, FRCPC5, Imperial College London, London, United Kingdom, 6NHLI Imperial College London, London, United Kingdom

642 Microparticles in Nasal Lavage: Potential Biomarkers for Chronic Rhinosinusitis and Aspirin Exacerbated Respiratory Disease
Tory Takahashi, MD, PhD1, James E. Norton, MS2, Lydia Suh, BSc3, Roderick G. Carter, BSc4, Robert C. Kern, MD5, Bruce K. Tan, MD6, Stephanie S. Smith, MD6, Kevin C. Welch, MD7, David B. Conley, MD8, Anju T. Peters, MD9, Leslie C. Grammer, MD10, Kathleen E. Harris, BSc11, Whitney W. Stevens, MD, PhD12, Kathryn E. Hulse, PhD13, Bruce S. Bochner, MD, FAAAAI14, Atsushi Kai, PhD15 and Robert P. Schleimer, PhD16, 1Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, 2Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, 3Department of Otolaryngology, Northwestern University Feinberg School of Medicine, 4Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, 5Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL

643 SIRT1 Attenuates Nasal Polyposisgenesis By Suppressing Epithelial-to-Mesenchymal Transition
Hyun-Woo Shin1,2, Mingyu Lee1 and Dae Woo Kim, MD3, 1Seoul National University College of Medicine, Department of Pharmacology and Biomedical Sciences, South Korea, 2Seoul National University Hospital, Department of Otolaryngology-Head and Neck Surgery, 3Seoul National University Hospital and Boramae Medical Center, South Korea, 4Department of Otolaryngology-Head and Neck Surgery, Seoul National University College of Medicine, Seoul, South Korea
Mechanisms of Allergic Inflammation

MAAI

3807

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645 Role of Lyso phosphatidylcholine in Allergic Airway Disease Manifestation
Preeti Bansal, CSIR Institute of Genomics and Integrative Biology, New Delhi, India, Shailendra N. Gaur, MD, FAAAAAI, University Of Delhi, Delhi, India and Naveen Arora, PhD, CSIR- Institute of Genomics and Integrative Biology, Delhi, India

646 Oxidative Stress Responses to the Fungal Allergen Alternaria Mediate IL-33 Secretion by Airway Epithelial Cells and Type 2 Immunity in the Airways
Koji Iijima, PhD1, Takao Kobayashi, PhD2, Masaru Uchida, MD3, Erik L. Anderson1, Diane Squillace1, Gail M. Kephart1, Scott M. O’Grady, PhD2 and Hirokito Kita, MD1, Mayo Clinic, Rochester, Rochester, MN, 1University of Minnesota, St. Paul, MN

647 IgG4 Component Allergens Are Preferentially Increased in Eosinophilic Esophagitis As Compared to Patients with Milk Anaphylaxis or Galactose-Alpha-1,3-Galactose Allergy
Jeffrey M. Wilson, MD, PhD1, Alexander J. Schuyler, BS, BA2, Anubha Tripathi, MD3, Elizabeth A. Erwin, MD3, Scott P. Commins, MD, PhD4 and Thomas A.E. Platts-Mills, MD, PhD, FAAAAAI FRS5, 1Division of Asthma, Allergy and Immunology, University of Virginia, 2Nationalwide Children’s Hospital, Columbus, OH, 3University of Virginia Asthma and Allergic Diseases Center, Charlottesville, VA

648 Microrna-203 Regulates Aryl Hydrocarbon Receptor in Cockroach Mediated Allergic Responses
Yilin Zhao, PhD, Lipeng Qu, PhD, Danh Do, PhD, Heng Wang, MD, PhD, Xiaopeng Liu, PhD and Peisong Gao, MD, PhD, Division of Allergy & Clinical Immunology, Johns Hopkins School of Medicine, Baltimore, MD

649 Aspirin Exacerbated Respiratory Disease Involves a Cysteiny1 Leukotriene-Driven IL-33-Mediated Mast Cell Activation Pathway
Tao Liu, PhD1,2, Yoshioide Kanoaka, MD, PhD3, Nora A. Barrett, MD, FAAAAAI1, Chunli Feng, MD4, Denise Garofalo1, Juying Lai1, Kathleen M. Buchheit, MD2, Neil Bhattacharyya, MD2, Tanya M. Laidlaw, MD1, Howard Katz, PhD1,6 and Joshua A. Boyce, MD, FAAAAAI1,2, 1Brigham and Women’s Hospital, Division of Rheumatology, Immunology, and Allergy, Boston, MA, 2Harvard Medical School, Brigham and Women’s Hospital, Boston, MA, 3Brigham and Women’s Hospital, Division of Rheumatology, Immunology, and Allergy, Boston, MA, 4Brigham and Women’s Hospital, Division of Rheumatology, Immunology, and Allergy, Boston, MA, 5Harvard Medical School, Boston, MA

Best of Allied Health

Allied Health

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Sunday, March 6th, 2016, 4:45 PM - 6:15 PM

650 Pilot Study of an Interdisciplinary Mobile Model to Deliver Asthma Care to Inner-City School Children in the Pittsburgh Region
Jennifer Elliott, PharmD1, Najwa Al-Ghamedi, PharmD2, Paige E. Dewhirst, MPH1, Joseph Lombardo, PharmD2, David P. Skoner, MD3 and Deborah A. Gentile, MD1, 1Duquesne University, 2American Lung Association, 3Allegheny Health Network, 4Allegheny Health Network, Pittsburgh, PA

651 Exploring Correlations Between Cross-Reactive Tree Nuts in Multiple Food Allergic Patients
Annie Chang1, Whitney Block, MSN, CPNP, FNP-BC2, Jennifer B Bollyky, MD3, R. Sharon Chinthrajah, MD1, Kari C. Nadeau, MD, PhD, FAAAAAI1 and Arnon Elizur, MD1, 1Stanford University, 2Stanford University, Stanford, CA, 3Pediatrics, Division of Allergy, Immunology and Rheumatology, Stanford University, Stanford, CA, 4Pediatric Allergy Immunology, Stanford University School Medicine, Stanford, CA

652 Participant’s Experience with Food Allergy Clinical Trials
Jennifer Fishman, RN, BSN1, Jaime Ross, RN, MSN2, Sally A. Noone, RN, RSNO3, Beth D. Strong, RN, CCRC4, Zara Atai5, Carly Ehritz, RN, MSN6, Jessica Gau, NP CRC6 and Julie Wang, MD, FAAAAAI1, 1Icahn School of Medicine at Mount Sinai, New York, NY, 2The Icahn School of Medicine at Mount Sinai, New York, NY, 3Icahn School of Medicine at Mount Sinai, New York, NY, 4Icahn School of Medicine at Mount Sinai, New York, NY, 5Icahn School of Medicine at Mount Sinai, New York, NY, 6Icahn School of Medicine at Mount Sinai, New York, NY

653 Parent’s Perception of Food Allergy Management in Schools
Jaime Ross, RN, MSN2, Jennifer Fishman, RN, BSN1, Sally A. Noone, RN, MSN2, Beth D. Strong, RN, CCRC4, Zara Atai5, Carly Ehritz, RN, MSN6, Jessica Gau, NP, CRC6 and Julie Wang, MD, FAAAAAI1, 1Icahn School of Medicine at Mount Sinai, New York, NY, 2The Icahn School of Medicine at Mount Sinai, New York, NY, 3Icahn School of Medicine at Mount Sinai, New York, NY, 4Icahn School of Medicine at Mount Sinai, New York, NY, 5Icahn School of Medicine at Mount Sinai, New York, NY, 6Icahn School of Medicine at Mount Sinai, New York, NY

654 Impact of Endogenous IgE Levels on Immunoglobulin Replacement Efficiency in Primary Immunodeficiency (PID)
Stephen R. Jolles, MD, PhD1, Mark J. Ponsford1, John-Philip Lawo, PhD2 and Mikhail Rovijan, PhD3, 1University Hospital of Wales, Cardiff, United Kingdom, 2CSL Behring GmbH, Marburg, Germany, 3CSL Behring, King of Prussia, PA

Asthma Diagnosis

ADT

4201

Monday, March 7th, 2016, 9:45 AM - 10:45 AM

655 Relationship Between Exhaled Breath Temperature and Ear Temperature in Otherwise Healthy Persons during Febrile Infection
Todor A. Popov, MD, PhD1, Tanya Krailmarkova1 and Lawrence M. DuBuske, MD, FAAAAAI1,2, 1SoFa Medical University, Sofia,
Bulgaria, 2George Washington University School of Medicine, Washington, DC, 3Immunology Research Institute of New England, Gardner, MA

656 Pulmonary Embolism in a Patient with Factor V Leiden Mutation, Preventing with Symptoms of Asthma Exacerbation
Anil Nanda, MD, Asthma and Allergy Center, Lewisville, TX; UT-Southwestern Medical Center, Dallas, TX and Anita N. Wasan, MD, Allergy and Asthma Center, Lansdowne, VA

657 The Asthma Control Test (ACT): Does it Reliably Assess Asthma Control in African American Adolescents with Persistent Asthma?
Allison J. Burbank, MD1, Katherine Mills, BA2, Haibo Zhou, PhD3, Qingning Zhou1 and Michelle L. Hernandez, MD4, 1UNC School of Medicine, Chapel Hill, NC, 2University of North Carolina Chapel Hill School of Medicine, Chapel Hill, NC, 3University of North Carolina at Chapel Hill School of Public Health, 4University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, NC

658 Characterization of Ureg to Cough in Patients with the Common Cold: Results from a US Internet Survey
Peter Digipinigalitis, MD1, Howard M. Druce, MD, FAAAAAI2, Ron Eccles, BSc, PhD, DSc3, Ronald Turner, MD4, Maryann Atah, MPH4 and Ashley L. Mann, MS3, 1Albert Einstein College of Medicine, 2Rutgers-NJ Medical School, 3Cardiff University Cardiff, 4University of Virginia, Charlottesville, VA, 3Pfizer Consumer Healthcare

659 Sterility Practices in Bronchodiator Administration in Allergy Office Settings
Kabir S. Chhabra1, Johanna Wiekemeyer1,2, Sudhir Sekharria, MD1 and Naba A. Sharif, MD3, 1Asthma, Allergy & Sinus Center, Waldorf, MD, 2Georgetown University School of Medicine, Washington, DC

660 Respiratory Disease Evaluation Using Peak Flow Measurement and Environmental Exposure Analysis in Rural Peru
Heather N. Hartman, MD and Paula E North, MD, PhD, Medical College of Wisconsin, Milwaukee, WI

661 Total Serum IgE Levels in Asthmatic Children
Cristine S. Rosario, MD1, Nelson A. Rosario, MD, PhD, FAAAAAI2, Herberto J. Chong Neto, MD, PhD, FAAAAAI3, Carlos Antonio Riedi, MD, PhD4 and Monica Lima5, 1Hospital de Clínicas, Federal University of Parana - Brazil, curitiba, Brazil, 2Federal University of Parana, Curitiba, Brazil, 3Federal University of Parana, Curitiba, Brazil

662 Serum Tryptase and Uterine Cellular Profile in Relation to Asthma Severity
Ghada E. Fouad1, Magd M. Gaila2, Mona H. Alsayeh3 and El-Dessouki E. Fouad, MD, FAAAAAI4, 1Al-Azhar University Allergy & Immunology Center, Cairo, Egypt, 2Faculty of Medicine for Girls, Al Azhar University, Cairo, Egypt

663 Validation of an EHR Algorithm to Identify Adult and Pediatric Patients with Asthma in West Chicago.
Ashvini Biswas, MD1,2, Byung H. Yu, MD2, Christopher D. Codispoti, MD, PhD3 and Sindurah Bandi, MD1, 1Department of Immunology and Microbiology, Allergy/Immunology Section, Rush University Medical Center, Chicago, IL, 2Department of Pediatrics, Division of Allergy and Immunology, John H. Stroger Jr. Hospital of Cook County, Chicago, IL

664 The Allergist’s Role in Detection of Severe Alpha–1 Antitrypsin Deficiency
Theodore E. Kelbel, MD, Penn State Hershey Medical Center, Hershey, PA, Darren Morris, Penn State Hershey College of Medicine, Deirdre Walker, Medical University of South Carolina and Timothy J. Craig, DO, FAAAAAI Professor, Penn State University, Department of Medicine and Pediatrics, Hershey, PA

665 The Reference Value of Peak Expiratory Flow Rate of Children in China
Chuangli Hao and Chuangli Hao, Children’s Hospital Affiliated to Soochow University.

666 Quantitative Validity of the Sgrq in Patients with Severe Asthma
Linda Nelsen, GlaxoSmithKline, King of Prussia, PA, Sarah Cockle, GlaxoSmithKline, Value Evidence and Outcomes, Stockley Park, United Kingdom, Miriam Kimel, Evidera, Bethesda, MD, Frank C. Albers, MD, PhD, GlaxoSmithKline, Research Triangle Park, NC and Paul Jones, GlaxoSmithKline, Stockley Park, United Kingdom

667 Comparison of Clinical Usefulness Between Hypertonic Saline-Induced Sputum and Exhaled Breath Condensate in Asthma Patients
Terufumi Shimoda, MD1, Yasushi Obase, MD2, Michiyoshi Imaoka, MD3, Reiko Kirishima, MD2 and Tomoaki Inanaga, MD1, 1The National Hospital Organization Fukushima Hospital, Fukushima, Japan, 2Nagasaki University, Nagasaki, Japan, Fukushima National Hospital, Fukushima, Japan

668 Bronchodilator Reversibility Testing Methods By Practicing Allergists
Jaydeep S. Sangha1, Larick S. David, MS1,2, Sudhir Sekharria, MD1 and Naba A. Sharif, MD3, 1Asthma, Allergy & Sinus Center, Waldorf, MD, 2Georgetown University School of Medicine, Washington, DC

669 Classification of Asthma in a Resident Based Primary Care Clinic
Simia J. Patel1, Saritha Kattan2, Yulanca Castro3 and Mirela Feurdean3, 1Rutgers NJMS, 2Columbia University

670 Comparison of Non-Invasive Methods for Detecting Exercise-Induced Bronchoconstriction in Asthmatic Children
Heysung Baek, MD, PhD, Department of Pediatrics, Hallym University College of Medicine, Seoul, South Korea, Kenji Izuhara, MD, PhD, Division of Medical Biochemistry, Department of Biomedical Sciences, Saga Medical School, Saga City, Japan, Man-Yong Han, MD, CHA University Bundang Medical Center, Seongnam, South Korea, Sun-Hee Choi, MD, PhD, Gangdong Kyung Hee University Hospital, Seoul, South Korea, Youn Ho Shin, MD, Department of Pediatrics, CHA Gangnam Medical Center, CHA University School of Medicine, Seoul, Korea, South Korea and Jung Won Yoon, Department of Pediatrics, Myongji Hospital, Gyeonggi-do, South Korea

671 Exhaled Nitric Oxide Utility in Predicting Asthma Exacerbations
Jamie A. Rosenthal, MD1 and Leonard C. Altman, MD2, 1University of Washington, 2Northwest Asthma and Allergy Center, Seattle, WA

672 Association Between Asthma Control Test, Peripheral Eosinophil Counts, and Serum Total Immunoglobulin E Levels in Severe Asthmatics
Santiago Alvarez Arango, MD, Jennifer Toh, MD, Denisa Ferastrau, MD, MSc, Gabriele de Vos, MD, M.Sc., David L. Rose, Piri, R.A.A. and Sunit P. Jariwala, MD, Albert Einstein/Montefiore Medical Center, Bronx, NY

673 Estimated Prevalence of AERD in Patients with Diagnosis of Asthma Identified with a Symptom-Based Assessment Questionnaire
Ayobami Akenroy, MD, MPH1,2, Niharika Theta, MD3, Rebecca Koransky, MD4, Anna Tavdy, BA5, Denisa Ferastrau, MD, MSc5, and Elina Jerschow, MD, MSc6, 1Jacobi Medical Center, Bronx, NY, 2Albert Einstein College of Medicine, Bronx, NY, 3Montefiore Medical Center, Bronx, NY, 4Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY, 5New York Medical Center, NY, 6Division of Allergy and Immunology, Department of Medicine, Montefiore Medical Center, Bronx, NY, 7Albert Einstein/Montefiore Medical Center, Bronx, NY

674 Asthma Control Test Composite Score May Not be Superior to Assessments of Rescue Inhaler Use for Predicting Severe Asthma Exacerbations
Sonia Cajigal, MD1, Edward L. Peterson, PhD2, Karen E. Wells, MPH2, Edward M. Zoratti, MD, FAAAAI2, David E Lanear,
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Craig LaForce, MD, CP1, Herminia Taveras, PhD, MPH2, Harald Jervsen, PhD3, Paul Shore, MD, MS4 and Tushar P Shah, MD5
1North Carolina Clinical Research, Raleigh, NC, 2Teva Pharmaceuticals, Miami, FL, 3Teva Pharmaceuticals, Frazer, PA

Effects of Roflumilast on Airway Hyperresponsiveness (AHR)
Robert G. Townley, MD, FAAAAI, Swati Agrawal, MBBS, Mina R Hanna, MS, Bryston Y Chang, BS and Peter J Oldenburg, PhD, Creighton University School of Medicine, Omaha, NE

Montelukast Is a Better Controller in Obese Atopic Asthmatics
Sherry Farzan, MD1, Sundas Khan, MD2, Claudia Elera3 and Meredith Akerman, MS1
1Departments of Pediatrics and Internal Medicine, Division of Allergy & Immunology, Hofstra North Shore-LIJ School of Medicine, Great Neck, NY, 2Department of Medicine, North Shore - LIJ Health System, Hofstra University School of Medicine, Manhasset, NY, 3Department of Biostatistics, Feinstein Institute of Medicine, North Shore - LIJ Health System, Hofstra University School of Medicine, Manhasset, NY

Once-Daily Tiotropium Respimat® Add-on to at Least Ics Maintenance Therapy Demonstrates Improved Asthma Control in Patients with Symptomatic Asthma, Independent of Serum IgE or Blood Eosinophil Levels
Mark L. Vandewalker, MD1, Johann Christian Virchow, MD2, Thomas B. Casale, MD3, FAAAAI®, Michael Engel, MD4, Petra Moroni-Zentgraf, MD5, Reinhold Lührmann, PhD6 and Ronald Dahl, MD7
1Clinical Research of the Ozarks, Columbia, MO, 1University Clinic Rostock, Rostock, Germany, 2University of South Florida Morsani College of Medicine, Tampa, FL, 3Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim Am Rhein, Germany, 4Boehringer Ingelheim Pharma GmbH & Co. KG, Biberach an der Riss, Germany, 5Odense University Hospital, Odense, Denmark

Feasibility of Using Treatment Response Thresholds for Lung Function and Asthma Symptom Variables As Indicators of Asthma Control in Patients with Moderate to Severe Asthma
David J. Slade1, Michael DePietro1, John Horton1, Donald P Tashkin1 and Bradley E. Chipp1
1AstraZeneca LP, Wilmington, DE, 2University of California, Los Angeles, CA, 3Capital Allergy & Respiratory Disease Center, Sacramento, CA

Dose-Ranging Efficacy and Safety Study of Albuterol Multidose Dry Powder Inhaler (MDPI) vs Albuterol Hydrofluoroalkane (HFA) and Placebo MDPI in Children With Asthma
Paul Y Quandah, MD1, Hermiana Taveras, PhD, MPH2, Harald Jervsen, PhD3, Paul Shore, MD, MS4 and Tushar P Shah, MD5
1Pediatric Care Medical Group, Inc., Huntington Beach, CA, 2Teva Pharmaceuticals, Miami, FL, 3Teva Pharmaceuticals, Frazer, PA

Comparison of Treatment Modalities for Inpatient Asthma Exacerbation Among U.S. Pediatric Hospitals
Meredith A. Dilley, MD1,2, William J. Sheehan, MD1,2, Dianne Graham, PhD1,3, Carter Petty, MA4 and Wanda Phipatanakul, MD5, MS1,2
1Boston Children’s Hospital, Boston, MA, 2Harvard Medical School, Boston, MA, 3Institute for Relevant Clinical Data Analytics, 4Clinical Research Center, Boston Children’s Hospital, Boston, MA

Unsuccessful Aspirin Desensitization in Minority Patients with AERD: Association with Increased Eosinophilia and Sinus Surgery Timing.
Elina Jerschow, MD, MSc1, Teresa Pelletier, BA2, Ren Zhen3, Robert Tamayev, MD, PhD4, Waleed Abuzeid, MD5, Marvin Fried, MD6, Golda Hudes, MD, PhD7, Esperanza Morales8, Krista Nelson, BFA9, Jonathan Feldman, PhD10, Victor Schuster, MD11, Simon Spivack, MD, MPH12 and David L. Rosenstreich, MD, FAAAAI®13
1Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY, 2Albert Einstein College of Medicine, Bronx, NY, 3Jacobi Medical Center, Bronx, NY, 4Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 5Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 6Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 7Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 8Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 9Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 10Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 11Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 12Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY, 13Albert Einstein College of Medicine/ Montefiore Medical Center, Bronx, NY.

Asthma Therapy II: Steroids, Bronchodilators, Other Therapies

ADT
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Monday, March 7th, 2016, 9:45 AM - 10:45 AM

Efficacy and Safety of Albuterol Multidose Dry Powder Inhaler (MDPI) Versus Placebo in Children With Asthma
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Once-Daily Tiotropium Respimat® Add-on to at Least Ics Therapy Demonstrates Reduced Risk of Severe Asthma Exacerbation and Asthma Worsening in Symptomatic Asthma, Independent of Ige or Blood Eosinophil Levels

Thomas B. Casale, MD, FAAAAI1, Donald P. Tashkin2, Reinhold Lührmann, PhD3, Michael Engel, MD4, Petra Moroni-Zentgraf, MD5, and Huib A.M. Kerstjens, MD5.

1University of South Florida Morsani College of Medicine, Tampa, FL, 2University of California, Los Angeles, CA, 3Boehringer Ingelheim Pharma GmbH & Co. KG, 4Odense University Hospital, Odense, Denmark, 5University Medical Center Groningen, University of Groningen, Groningen, Netherlands

A Retrospective Study of the Effect of Anti-fungal Therapy on a Cohort with Asthma and Chronic Rhinosinusitis

Evan Li, MD, Ranii Maskatia, MD, Paul Porter, PhD and David B. Corry, MD, Baylor College of Medicine, Houston, TX

Differences in Oral Corticosteroid Prescribing Regimens for Asthma Exacerbations Between Primary Care and Speciality Pediatricians

Kara McNamara, MD and David R. Stukus, MD, FAAAAI, Nationwide Children's Hospital, Columbus, OH

No Significant Growth Velocity Changes in Two Trials Evaluating the Potential Effects of Flumisolide HFA (AerosolTM) on Growth in Pediatric Patients with Mild-to-Moderate Asthma

George W. Bensch, MD, FAAAAI, Allergy, Immunology and Asthma, Stockton, CA and David P. Skoner, MD, Department of Medicine, Allegheny General Hospital, Pittsburgh, PA; Temple University School of Medicine, Philadelphia, PA

Variation of In Vitro Glucocorticoid Response in Asthma

Monica B. Reddy, MD1, Donald Y.M. Leung, MD, PhD, FAAAAI2, Joseph D. Spahn, MD3, Douglas Curran-Everett, PhD3, Vijaya Knight, MD, PhD4 and Ronina A. Covar, MD, FAAAAI1, University of Colorado, 2Department of Pediatrics, National Jewish Health, Denver, CO, 3National Jewish Health, Division of Biostatistics and Bioinformatics, Denver, CO, 4National Jewish Health, Denver, CO

Growth Effects of Concomitant Inhaled (ICS) and Intranasal (INCS) Corticosteroids (CS) Use in Children.

David P. Skoner, MD1, 2, Deborah A. Gentile, MD3, 2, Nicole Pieskovik, BSc3, Erica Butler, BS, CCRCE and Asha Patel, MS3, Allegheny Health Network, Pittsburgh, PA, 2Temple University School of Medicine, Philadelphia, PA, 3Allegheny Singer Research Institute, Pittsburgh, PA

Primary Immunodeficiency

BCI

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Monday, March 7th, 2016, 9:45 AM - 10:45 AM

Resolution of T Cell Lymphopenia in a Term Infant with Absent TRECs on Newborn Screen

Peter Mustillo, MD, FAAAAI, Nationwide Children's Hospital, Columbus, OH, Rosemary Hage, Ohio Department of Health and Margaret Redmond, MD, Ohio State University/Nationwide Children's Hospital

The University of Virginia Experience at Implementing Newborn Screening for Severe Combined Immunodeficiency (SCID) Thaniris V Palacios, DO, University of Virginia, Palmyra, VA,
Brooke Vergales, MD, University of Virginia, Charlottesville, VA, Julia Wistiewski, MD, University of Virginia, Division of Pediatric Respiratory Medicine and Allergy, Charlottesville, VA, Larry Borish, MD, FAAAAI, Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA and Monica G. Lawrence, MD, University of Virginia, Department of Medicine, Division of Asthma, Allergy and Immunology, Charlottesville, VA

A Call for an Early Clinical Consideration for Ataxia-Telangiectasia in Infants with Low TREC and Combined Immunodeficiency
Rory Greenberg, MD, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada and Reni Herzog, MD, New York University Langone Medical Center, New York University School of Medicine, New York, NY

705 Immune Dysregulation, Polyendocrinopathy, Enteropathy, X-Linked Syndrome (IPEX) Associated with Neurological Presentation
Mehdi M. Adeli, MD1,2, Heidi Sandige, Co - Author1,2, Adiba Hamad1 and Eman Almusleman1,2, Hamad Medical Corporation, Doha, Qatar, Sida Medical and Research Center, Doha, Qatar, Well Cornell Medical College in Qatar, Doha, Qatar

706 Novel Presentation of STAT1 Gain of Function (GOF) with Specific Antibody Deficiency without Fungal Infection
Maya Gharfeh1, Alexander Vargas-Hernandez2, Ivan K. Chin, MD3, I. Celine Hanson, MD, FAAAAI4,5 and Lisa R. Forbes, MD6, 7Texas Children’s Hospital, Houston, TX, 7Texas Children’s Hospital Center for Human Immunobiology, Houston, TX, 8Bay College of Medicine, Houston, TX, 9Bay College of Medicine, and Texas Children’s Hospital, Department of Pediatrics Section of Immunology, Allergy and Rheumatology, Houston, TX, 8Bay College of Medicine/Texas Children’s Hospital, Houston, TX, 8Bay College of Medicine/Texas Children’s Hospital, School of Immunology, Allergy, and Rheumatology, Houston, TX

707 Two Symptomatic Patients with Atypical Heterozygous Artemis Mutation Along with Other Mutations Including TACI, While Parents with an Inherited Heterozygote Mutation were Asymptomatic
LaHarri Rampur, MD, Albert Einstein/Children’s Hospital at Montefiore, Bronx, NY, Rachel Eisenberg, MD, Montefiore medical center, Bronx, NY, Jennifer Toh, MD, Albert Einstein/Montefiore Medical Center, Bronx, NY, and Arny Rubinstein, MD, Albert Einstein College of Medicine and Montefiore Hospital, Bronx, NY

708 Detection of the 22q11 Deletion Using Dried Blood Spots and Digital PCR
Lisa J. Kobrinsky, MD, MPH, FAAAAI, Emory University/Children’s Healthcare of Atlanta, Atlanta, GA; Emory University School of Medicine, Atlanta, GA

709 Newborn Screening for SCID Is Associated with a Shorter Interval from Diagnosis to Transplant
Juhhee Lee, MD, Kathleen E. Sullivan, MD, PhD, FAAAAI, Soma Jyonouchi, MD, Alix E Seif, MD, MPH, Nancy Bunin, MD and Jennifer Heimall, MD, The Children’s Hospital of Philadelphia, Philadelphia, PA

710 Incongruent Phenotypic Expression of Autosomal Dominant Hyper IgE Syndrome (AD-HIES) in a Mother and Son
Charles J. Calais, DO, National Capital Consortium

711 Prolonged Immune Suppression after Rituximab Use in Children
Susanne LaBarba, DO1, Blanka M. Kaplan, MD, FAAAAI1 and Barbara Eberhard, MD2, Departments of Pediatrics and Internal Medicine, Division of Allergy & Immunology, Hofstra North Shore-LIJ School of Medicine, Great Neck, NY, Department of Pediatrics, Division of Pediatric Rheumatology, Hofstra North Shore-LIJ School of Medicine, New Hyde Park, NY

712 A Case of Severe Combined Immunodeficiency (SCID) Due to Cartilage Hair Hypoplasia (CHH) with Normal Vaccine Responses and T-Cell Proliferation to Poikiloe Mitogen
Erin L. Reigh, MD, MS, Washington University/Barnes-Jewish Hospital, St. Louis, MO and Megan Cooper, Washington University/St. Louis Children’s Hospital, MO

713 Idiopathic CD4 Lymphopenoticy: Immunologic Characteristics, Clinical Manifestations, and Disease Course
Jenni Y. Yoon, MD, Panida Siraitoon, MD, Jennifer W. Leiding, MD and Mark Ballow, MD, FAAAAI, University of South Florida, St. Petersburg, FL

714 Efficacy of Recombinant Human Hyaluronidase-Facilitated Subcutaneous Infusion of Immunoglobulin G (IgG) (IgHy) in Patients with Primary Immunodeficiency Disease (PIDD): Infections over Time
Richard L. Wasserman, MD, PhD, FAAAAI1, Mark R. Stein, MD, FAAAAI2, Lisa J. Kobrinsky, MD, MPH, FAAAAI3, Sudhir Gupta, MD, PhD, FAAAAI4, J. Andrew Grant, MD, FAAAAI5, Arye Rubinstein, MD, FAAAAI6, Christopher J. Rabbat, PhD7, Werner Engl, PhD8, Barbara McCoy, PhD9, Heinz Leibl, PhD10 and Leman Yel, MD, FAAAAI11, 1Allergy Partners of North Texas, Dallas, TX, 2Allergy Associates of the Palm Beaches, North Palm Beach, FL, 3Emory University, Atlanta, GA, 4University of California, Irvine, Irvine, CA, 5University Texas Medical Branch, Galveston, TX, 6Albert Einstein College of Medicine and Montefiore Hospital, Bronx, NY, 7Baxalta US, Inc, Bannockburn, IL, 8Baxalta Innovations GmbH, Vienna, Austria, 9Baxalta US, Inc, Westlake Village, CA

715 Incidence of Clinically Diagnosed Digerosy Syndrome in Olmsted County, Minnesota
Cristina Alcaraz1, Jay Jin, MD, Phd2, Erin Conboy3 and Avni Y. Joshi, MD3, 1UNC, 2Mayo Clinic, Rochester, MN, 3Mayo Clinic

716 Local Adverse Reaction Rates Decreased over Time during Treatment with Recombinant Human Hyaluronidase-Facilitated Subcutaneous Infusion of Immunoglobulin G (IgHy) in Patients with Primary Immunodeficiency Disorders in the IgHy Phase 3 Studies
Mark R. Stein, MD, FAAAAI1, Richard L. Wasserman, MD, PhD, FAAAAI2, Isaac Melamed, MD3, Sudhir Gupta, MD, PhD, FAAAAI4, Lisa J. Kobrinsky, MD, MPH, FAAAAI5, Arye Rubinstein, MD, FAAAAI6, Christopher J. Rabbat, PhD7, Werner Engl, PhD8, Barbara McCoy, PhD9, Heinz Leibl, PhD10 and Leman Yel, MD, FAAAAI11, 1Allergy Associates of the Palm Beaches, North Palm Beach, FL, 2Allergy Partners of North Texas, Dallas, TX, 3ImmunOx Health Centers, Centennial, CO, 4University of California, Irvine, Irvine, CA, 5Emory University, Atlanta, GA, 6Albert Einstein College of Medicine and Montefiore Hospital, Bronx, NY, 7Baxalta US, Inc, Bannockburn, IL, 8Baxalta Innovations GmbH, Vienna, Austria, 9Baxalta US, Inc, Westlake Village, CA

717 Resolution of Primary Immune Deficit in 22q11.2 Deletion Syndrome
Yiwa Sulsawat, MD, Jittima Veskitkul, MD, Orathai Jirapongsananuruk, MD, Nualanong Visitsanthorn, MD, Pakit Vichayond, MD, FAAAAI and Punchama Pacharn, MD, Department of Allergy and Immunology, Department of Pediatrics, Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand

718 Real-World Use of Recombinant Human Hyaluronidase-Facilitated Subcutaneous Infusion of Immunoglobulin G (IgG) (IgHy) in Patients with Primary Immunodeficiency Disorders (PIDD)
Kevin P. Rosenbach, MD, FAAAAI1, Stephanie Hughes, PharmD2 and Leon Rozen, MBBS3, CareOne Allergy Center, Naples, FL, 2Baxalta US Inc, Bannockburn, IL

719 Case Report of an Infant Female with X-Linked Chronic Granulomatous Disease Due to a De Novo Mutation in CYBB and Extremely Skewed X-Chromosome Inactivation (Lyonization)
Taylor Alberdi, University of South Florida Morsani College of
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Medicine, MR Morrow, University of South Florida and Jennifer W. Leiding, MD, University of South Florida, St. Petersburg, FL

270  Construction and Validation of a Health-Related Quality of Life (HR-QOL) Instrument for Patients with Primary Antibody Deficiency Disease. Mark Ballow, MD, FAAAAI1, Mark R. Conaway, PhD2, Rima A. Rachid, MD, FAAAAI1, Filiz O. Seeborg, MD, MPH3, Panida Sria-roon, MD4, Carla M. Duif, CPNP MSN CCRP IgC5, M. Elizabeth Younger, CRNP PhD6, Ralph Shapiro, MD9 and Ted M. Burns9, 1University of South Florida, St. Petersburg, FL, 2University of Virginia, Charlottesville, VA, 3Boston Children’s Hospital, Boston, MA, 4Baylor College of Medicine and Texas Children’s Hospital, Department of Pediatrics, Section of Immunology, Allergy and Rheumatology, Houston, TX, 5Johns Hopkins University School of Medicine, Baltimore, MD, 6Midwest Immunology Clinic, Plymouth, MN.

271  Efficacy, Safety, Tolerability, and Pharmacokinetics of Human Immune Globulin Subcutaneous, 20% (IGSC 20%): Final Analysis of a Phase 2/3 Study in Patients with Primary Immunodeficiency Disease (PIDD) in North America Daniel Suez, MD, FAAAAI1, Isaac Melamed, MD7, Ifikhar Husain, MD, FAAAAI3, Mark R. Stein, MD, FAAAAI7, Sadhur Gupta, MD, PhD, FAAAAI4, Kenneth Paris, MD, MPH6, Sandor Frisch, PhD7, Christelle Bourgeois, PhD6, Rein Leibl, PhD5, Barbara McCoy, PhD7 and Leman Yel, MD, FAAAAI3, 1Allergy, Asthma and Immunology CL, PA, Irving, TX, 2IMMUNOe Health Centers, Centennial, CO, 3Vital Prospects Clinical Research Institute, PC, Tulsa, OK, 4Allergy Associates of the Palm Beaches, North Palm Beach, FL, 5University of California, Irvine, Irvine, CA, 6LSU Health Sciences Center, New Orleans, LA, 7Baxalta Innovations GmbH, Vienna, Austria, 8Baxalta US, Inc, Westlake Village, CA.

272  Importance of Identifying Pathogenic Causes of Infection in Lung Abscess in Chronic Granulomatous Disease Megan Goebel, MD. The Ohio State University Wexner Medical Center and Peter Mustillo, MD, FAAAAI, Nationwide Children’s Hospital, Columbus, OH

273  Ataxia Telangiectasia Presenting with Absent IgG, IgA, and Elevated IgM Michelle Korah-Sedgwick, MD and Kenneth Paris, MD, MPH, LSU Health Sciences Center, New Orleans, LA

274  Successful Lung Transplant for Bronchiectasis in an Adult Male with Autosomal Recessive Chronic Granulomatous Disease with a Novel NFI Gene Mutation. Ryan B. Israelsen, MD1, Merritt L. Fajji, MD2, Maria M. Crespo, MD3 and Andrej A. Petrov, MD4, 1University of Pittsburgh Medical Center, Pittsburgh, PA, 2University of Pittsburgh Medical Center, Division of Pulmonary, Allergy and Critical Care Medicine, Pittsburgh, PA.

275  Prenatal Findings Leading to Early Diagnosis of X-Linked inhibitor of Apoptosis Protein (XIAP) Deficiency Angela Chang, MD. Joseph Shich, MD, PhD, Morna J. Dorsey, MD, MMsc, FAAAAI and Jennifer M. Pock, MD, Department of Pediatrics, University of California San Francisco and UCSF Benioff Children’s Hospital, San Francisco, CA

276  Natural Killer (NK) Cell Deficiency: Clinical Phenotypes in Presence or Absence of Antibody Deficiency Svjetlana Doloveck, MD. University of Iowa Hospitals and Clinics, Iowa City, Nicholas L. Hartog, MD, Washington University School of Medicine, Saint Louis, MO and Zuhair K. Ballas, MD, FAAAAI, VA Medical Center, Iowa City, IA; University of Iowa Health Care, Iowa City, IA

277  Herpes Zoster Infection Prompting Diagnosis of Job’s Syndrome in a Teenage Patient Sheila M. Bina, MD, Panida Sria-roon, MD and Jennifer W. Leiding, MD, University of South Florida, St. Petersburg, FL

278  Transplant Outcomes for Primary Immunodeficiencies in a Tertiary Center 1995-2015

279  Immune and Clinical Assessment in a Cohort of Pediatric Hispanic Patients with Partial DiGeorge Syndrome: An Institutional Review. Hanady Ale, MD1, Raquel Olavarrieta, MD2, Zaimat Beiro, BS2, William R. Blouin, MSN, ARNP, CPNP2, Vivian P. Hernandez-Trujillo, MD, FAAAAI1 and Jose G. Calderon, MD1, 1Nicklaus Children’s Hospital, Miami, FL, 2Florida International University Herbert Wertheim College of Medicine, Miami, FL.

280  Removal of Immunosuppression Unmasks a Case of Autoimmune Lymphoproliferative Syndrome (ALPS) Mirinda A. Gillespie, MD1, Sheila M. Bina, MD2 and Jennifer W. Leiding, MD1, 1All Children’s Hospital, 2University of South Florida, St. Petersburg, FL

281  Wiskott-Aldrich Syndrome in a Two-Month-Old Boy Presenting with Intussusception and Normal-Sized Platelets. Vanessa L. Bundy, MD, PhD, FAAP, UCLA and Maria Garcia-Loret, MD, FAAAAI, Division of Allergy and Immunology, Department of Pediatrics, David Geffen School of Medicine at UCLA, Los Angeles, CA

282  Replacement Therapy in the Treatment of Immune Defects

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Reversible Hypogammaglobulinemia Due to Dimethyl Fumarate Ummreen Lodli, MD, Division of Pulmonary, Allergy & Critical Care Medicine Emory University School of Medicine, Atlanta, GA, Bradley J. Larson, MD, Northwest Georgia Oncology Centers, PC, Carrollton, GA, Laura L. Larson, MD, Infectious Disease Section, Tanner Medical Group, Carrollton, GA and Theodore M. Lee, MD, FAAAAI, Division of Pulmonary, Allergy, and Critical Care, Emory University School of Medicine, Atlanta, GA; Peachtree Allergy and Asthma Clinic, PC, Atlanta, GA

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Systemic Hypersensitivity to G-CSF in a Healthy Donor Followed by Successful Drug Challenge Allowing Stem Cell Donation. Ki Lee Milligan, MD1, Enchtiseetseg Purev, MD2, Richard Childs, MD2 and Joshua D. Milner, MD3, 1NIH/NIAID, 2NIH/NHLBI, 3Laboratory of Allergic Diseases, NIAID/NIH, Bethesda, MD

4207

Flexible Subcutaneous Immunoglobulin G Dosing in Primary Immunodeficiency - Quality of Life Outcomes Claire Jones and Sadia Noorani, MD, Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, United Kingdom

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Identical Twins with X-Linked Agammaglobulinemia Requiring Differing Amounts of Subcutaneous Immunoglobulin Secondary to Protein Losing Enteropathy Jennifer Lan, MD1, Shelby N. Ekenberg, MD2,3, John Eshun, MD3 and Jay A. Lieberman, MD1, 1Division of Allergy and Immunology, Department of Pediatrics, The University of Tennessee Health Science Center, Memphis, TN, 2Allergy and Asthma Center, 3Division of Gastroenterology, Department of Pediatrics, The University of Tennessee Health Science Center

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Comparison of the Effect of Aspirin and Heparin with or without Intravenous Immunoglobulin in Treatment of Recurrent Abortion with Unknown Etiology: A Clinical Study.
Eosinophilic Gastrointestinal Disorders and Food Allergy

FADDA

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Monday, March 7th, 2016, 9:45 AM - 10:45 AM

473 A Recombinant Cystatin from Ascariis Lumbricoides Has Immunomodulatory Effects
Sandra M Coronado1, Luis Barrios2, Josefina Zulcuk1, Luis Franco2 and Luis Caraballo, MD, PhD, 1Institute for Immunological Research/University of Cartagena, Cartagena, Colombia, 2Department of Pharmaceutical Sciences, University of Cartagena, Cartagena, Colombia

474 IL-33 Is Selectively Expressed By Esophageal Basal Layer Epithelial Cells during Allergic Inflammation
Jared Travers, Mark Rochman, PhD, Ting Wen, PhD and Marc E. Rothenberg, MD, PhD, FAAAAI, Division of Allergy and Immunology, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, University of Cincinnati, Cincinnati, Ohio, USA

475 CXCR4/SDF-1 Axis Promotes EMT Mediated Fibrosis in Eosinophilic Esophagitis (EoE)
Chandrashekar Putahapanah Maladevappa, PhD, Sathisha Upparahanli Venkateshiah, PhD, Murli Manohar and Anil Mishra, PhD, FAAAAI, Department of Medicine, Pulmonary Diseases, Tulane Eosinophilic Disorder Center, Tulane University School of Medicine, New Orleans, LA

476 Half Cow’s Milk-Induced Food Protein Induced Enterocolitis Syndrome (FPIES) Require Amino Acid Feeding
Sibylle Blanc1, Delphine Debossière, MD2, Nicolas Kalach, MD, Ph D3, Pascale Soulaïnes4, Florence Campeotto, MD, PhD2, Marie-Pierre Cordier-Collet, MD2, Clara Mulka5, Isabelle Montaud-Dumas, MD1, Carole Piccini-Bailly, MD1, Lisa Giovannini-Chami, MD, PhD3, Thierry Bourrier, MD1 and Christophe Dupont, MD2, 1Hôpitaux pédiatricques de Nice CHU-Leval, Nice, France, 2Hôpital Necker Enfants Malades, Paris, France, 3Hôpital Saint Vincent de Paul, Groupement des Hôpitaux de l’Institut Catholique de Lille (GH-ICL), Lille, France

477 Investigation of Peristin and TARC Levels in the Search for a Non-Invasive Biomarker in Children and Adults with Eosinophilic Esophagitis
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478 Subcellular Localization of CAPN14 in Human Esophageal Epithelial Cells
Jeffrey K. Rymer1,2, Jared Travers1, Mark Rochman, PhD3, Benjamin P. Davis, MD, PhD4 and Marc E. Rothenberg, MD, PhD, FAAAAI, Division of Allergy and Immunology, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, University of Cincinnati, Cincinnati, Ohio, USA, 3Department of Molecular Genetics, Biochemistry, and Microbiology, University of Cincinnati College of Medicine, Cincinnati, Ohio, USA

479 Microarray Analysis and Transcriptional Phenotypes in Pediatric Patients with Eosinophilic Esophagitis
Russell Ault1, Bennett Smith1, Melissa Robinson1, Asuncion Mejias2, Patrice G. Kruzewski, DO3, Thomas A.E. Platts-Mills, MD, PhD, FAAAAI FRS4, Octavio Ramilo2 and Elizabeth A. Erwin1, 1The Ohio State University, 2 Nationwide Children’s Hospital, 3Emory University, Atlanta, GA, 4University of Virginia Asthma and Allergic Diseases Center, Charlottesville, VA, 5The Research Institute at Nationwide Children’s Hospital

480 Differences in CD4+IL-17+ in Children and Adults with Eosinophilic Esophagitis
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481 Aeroallergen and Food Sensitization Patterns in Adults with Eosinophilic Esophagitis
Hoang Pham, MD, 2016, BSc, BA1, Zave H. Chad, MD, FRCP1, Gordon L. Sussman, MD, FAAAAI2,3, Jacques Hébert, MD3, Charles W. Frankish, MD4, Timothy Olynycz, MD, PhD5, Amargi

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752 Allergic Background and Time to Diagnosis in Children with Eosinophilic Esophagitis in British Columbia

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753 High Incidence of Atopy in Young Children with Eosinophilic Esophagitis

Michelle Tobin, Rupinder K. Gill, Sunny Chang and Susan Schuval, MD, FAAAAI, Stony Brook Children’s Hospital, Stony Brook, NY

754 Presence of Food Allergy Alters the Presentation of Pediatric Eosinophilic Esophagitis

Barry J. Pelz, MD\(^1\), Joshua B. Wechsler, MD\(^2\), Annusha Reddy Gaddam, MS\(^3\), Katie Amsden, MPH\(^4\), Barry Wershil, MD\(^2\), Amir F. Kagalwalla, MD\(^2\) and Paul Bryce, PhD\(^5\), \(^1\)Division of Allergy & Immunology, Ann & Robert H. Lurie Children’s Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL, \(^2\)Division of Gastroenterology, Hepatology, and Nutrition, Ann & Robert H. Lurie Children’s Hospital of Chicago, Northwestern University Feinberg School of Medicine, Chicago, IL, \(^3\)Ann & Robert H Lurie Children’s Hospital of Chicago, Chicago, IL, \(^4\)Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL

755 Aeroallergen, Food and Panallergen Sensitization Patterns in Eosinophilic Esophagitis Patients

Mary Beth Hogan, MD, FAAAAI\(^1\), Vonita Chawla\(^2\), Rebecca Scherr\(^2\), Gayle Allenbuck\(^2\), Alex Wonnapurthoorn\(^2\) and Nevin W. Wilson, MD, FAAAAI\(^2\), \(^1\)Department of Pediatrics, University of Nevada School of Medicine, Las Vegas, NV, \(^2\)University of Nevada School of Medicine, Las Vegas, NV

756 Serum IgG4 Antibodies in Pediatric Subjects with Eosinophilic Esophagitis Treated with Cow’s Milk Elimination Diet or Swallowed Fluticasone: High Levels of Specific IgG4 to Cow’s Milk Components Despite Low to Negative IgE Antibodies

Alexander J. Schuyler, BS BA\(^1\), Anubha Tripathi, MD\(^2\), Patrice G. Kruszewski, DO\(^3\), John M. Russo, MD\(^4\), Lisa J. Workman, BA\(^4\), Thomas A.E. Platts-Mills, MD, PhD, FAAAAI FRS\(^5\) and Elizabeth A. Erwin, MD\(^6\), \(^1\)Division of Asthma, Allergy & Immunology, University of Virginia Health System, Charlottesville, VA, \(^2\)Division of Asthma, Allergy and Immunology, University of Virginia, Charlottesville, VA, \(^3\)Emory University, Atlanta, GA, \(^4\)Nationwide Children’s Hospital, Columbus, OH, \(^5\)University of Virginia Asthma and Allergic Diseases Center, Charlottesville, VA

757 Food-Specific IgG4 Is Associated with Eosinophilic Esophagitis

Benjamin L. Wright, MD\(^1\), Michael D. Kulis Jr., PhD\(^2\), Rishu Guo, PhD\(^3\), Kelly Orgel, BS\(^2\), W. Asher Wolf, MD\(^3\), A. Wesley Burks, MD, FAAAAI\(^3\), Brian P. Vickery, MD, FAAAAI\(^3\) and Evan S. Dellon, MD, MPH\(^1\), \(^1\)Mayo Clinic in Arizona, Scottsdale, AZ, \(^2\)Phoenix Children’s Hospital, Phoenix, AZ, \(^3\)University of North Carolina at Chapel Hill, Chapel Hill, NC

758 Identification of Food Sensitivity in Adult Eosinophilic Esophagitis Patients Lacks Clinical Utility

Ashleigh A. Olson, MD\(^1\), David M. Manthei\(^1\), Chloe Kim, MD\(^2\), Michael D. Evans, MS\(^1\) and Sameer K. Mathur, MD, PhD, FAAAAI\(^1\), \(^1\)University of Wisconsin School of Medicine and Public Health, Madison, WI, \(^2\)William S. Middleton Veterans Hospital, Madison, WI

759 Patch Test and Immediate Hypersensitivity Tests to Foods in Pediatric Patients with Eosinophilic Esophagitis

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760 Amino Acid-Based Diet Induces Histological Remission, Reduces Clinical Symptoms and Restores Esophageal Mucosal Integrity in Adult Eosinophilic Esophagitis Patients

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761 Successful Treatment of Eosinophilic Gastroenteritis with a Multiple-Food Elimination Diet

Yoshiyuki Yamada, MD, PhD\(^1\), Yuka Isoda\(^1\), Akira Nishi, MD\(^1\), Yoko Jinbo\(^1\), Satoru Watanabe\(^1\), Masahiko Kato, MD, PhD, FAAAAI\(^1\), \(^1\)Gunma Children’s Medical Center, Shibukawa, Gunma, Japan, \(^2\)Gunma University Faculty of Medicine of School Health Science, Maebashi, Gunma, Japan, \(^3\)Department of Pediatrics, Tokai University School of Medicine, Isehara, Kanagawa, Japan

762 Long-Term Safety and Efficacy of Reslizumab in Children and Adolescents with Eosinophilic Esophagitis: A Review of 477 Doses in 12 Children over 7 Years

Jonathan E. Markowitz\(^1\), Laura Jobe\(^2\), Michelle Miller\(^1\), Carrie Frost\(^1\) and Ransome Eke\(^3\), \(^1\)Greenville Children’s Hospital, Greenville, SC, \(^2\)University of South Carolina School of Medicine-Greenville, Greenville, SC, \(^3\)Greenville Health System, Greenville, SC

763 Quality of Life in Eosinophilic Esophagitis

Shreyra N. Patel, MD\(^1\), John Oppeneimer, MD, FAAAAI\(^1\), Tamara Feldman, MD\(^2\), Annette Lamsdorp, RN\(^2\), Peter Wilmot, MD\(^2\), Orea Koslowe, MD\(^2\), Joel Rosh, MD\(^2\), Maria Perez, MD\(^2\), Barbara Verga, MD\(^2\), Alysia Leiby, MD\(^2\) and Neha Pandey, MD\(^2\), \(^1\)Rutgers-New Jersey Medical School, Newark, NJ, \(^2\)Atlantic Health, Goryeb Children’s Hospital, Morristown, NJ

764 Long-Chain Polyunsaturated Fatty Acid Intake in Children with Eosinophilic Esophagitis

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765 Food Allergy in Infancy Is Associated with Dysbiosis of the Intestinal Microbiota

Rima A. Rachid, MD, FAAAAI\(^1\), Georg Gerber, MD, PhD, MPh\(^2\), Ning Li, PhD\(^3\), Dale T. Umemoto, MD, PhD, FAAAAI\(^4\), Lynn Bry, MD, PhD\(^5\) and Talal A. Chaira, MD, MSc\(^5\), \(^1\)Division of
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**766** Peanut Sensitivity in Children Is Highlighted By Increased IL-13 Production and Cypil11a1 Expression

Erwin W. Gelfand, MD, FAAAAI, Mei Qin Wang, MD, PhD, Carah Santos, MD, Jennifer Fish, PNP, and Bruce J. Lancer, MD, 1National Jewish Health, Denver, CO; 2Pediatrics, National Jewish Health, Denver, CO

**767** Arctigenin Isolated from Arctium Lappa L. Inhibits IgE Production

Changda Lia, PhD, 1Kamal D. Srivastava, PhD, 2Nan Yang, PhD, 3Madisyn A. Primas, 4Renna Bushko, Kyle Chin, Matthew Battick, and Xia-Min Li, MS, 1Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY; 2Department of Pediatrics, Icahn School of Medicine at Mount Sinai, New York, NY, USA; 3Pediatric Allergy and Immunology, Icahn School of Medicine at Mount Sinai, New York, NY; 4Icahn School of Medicine at Mount Sinai

**768** Effects of the Toll-like Receptor 4 (TLR4) Agonist Glucopyronosyl Lipid a (GLA) on Allergen-Induced Inflammation and Anaphylaxis in a Mouse Model of Peanut Allergy


**769** Identification of Japanese Apricot Peamacoine As a New Allergen Related to Food-Dependent Exercise-Induced Anaphylaxis Due to Japanese Apricot: Cross-Reactivity to Pru p 7

Naoko Inomata, Mami Miyakawa, Akihisa Hotta and Michiko Aihara, Dept. of Dermatology, Yokohama City University

**770** Effects of Pressure and Temperature Processing on the Allergic Reactivity of the Chestnut

Natividad De Las Cuevas, PhD, 1Karen M Lozano, MD, 2Ramón Vives Conesa, MD, 3Jesus F Crespo, MD, PhD and Maria Del Carmen Dieguez, MD, PhD, 1Hospital Universitario de 12 de Octubre, Madrid, Spain; 2Instituto de Salud Carlos III, Madrid, Spain

**771** Cross-Reactivity Among Peanut and Tree Nut Allergens

Sohelia J. Malek, MD, FAAAAI, Hsiao-Po Cheng, MD, John C. Wolf, Suzanne S. Tesher, MD, FAAAAI, Catherine Schein, PhD, 2Cassy C. Grim, PhD and Barry K. Hurlbut, PhD, 3USDASRSRC, New Orleans, LA; 4USDASRS-RSRC, UC Davis School of Medicine, Davis, CA; 5Foundation for Applied Molecular Evolution, Gainesville, FL; 6UTMB

**772** Walnut Food Allergenic Extracts

Greg A. Plunkett, PhD, ALK-Abelló, Inc, Round Rock, TX and Brad Mire, ALK-Abelló, Round Rock, TX

**773** Study of Relevant Allergens in Children and Adults with Lentil Allergy in a Population of Madrid Compared to Those with Allergy to Lentil and Peanut

Maria Luisa Somoza, MD, 1Natalia Blanca-López, MD, PhD, 2Maria Perez Alzate, MD, 3Maria Isabel Gargamartin, MD, 4Francisco Javier Ruano, 5Maria Vazquez De La Torre, MD, 6Elisa Haroun, MD, 7Francisca Gómez, MD, PhD, Cristina Bullón, Mayorga, PhD, 8Ana Aracna, PhD, 9Miguel Blanca, MD, PhD and Gabriela Canto, MD, PhD, 1Allergy Unit, Infanta Leonor University Hospital, Madrid, Spain; 2Allergy Unit, IBIMA-University Hospital of Malaga, Malaga, Spain; 3Research Laboratory, IBIMA-University Hospital of Malaga, Malaga, Spain

**774** Cross-Reactivity Among Cereal Grains

Juliana Guimaraes Mendonça, 1Roberta Almeida Castro, 1Pablo Torres Cordova, 2Paula Rezende Meireles, 3Danielle Danella Figo, 4Keicy Souza Santos, PhD, 5Jorge Kalil, MD, PhD, 6Fabio Fernandes Morato Castro, MD, PhD and Ariana C. Yang, MD, PhD, 1São Paulo University, 2São Paulo University, São Paulo, Brazil, 3Cerequera Cesar, São Paulo University School of Medicine, São Paulo - SP, Brazil, 4Clinical Immunology and Allergy Division, University of São Paulo, São Paulo, Brazil, 5São Paulo University-Allergy and Immunopathology Division, São Paulo University-Allergy and Immunopathology Division, Brazil

**775** Sensitization Profile of Individuals to Shellfish in the Chesapeake Bay Area

Aishah Ali, MD, Department of Medicine, Division of Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, MD, Robert G. Hamilton, PhD D.ABMLI FAAAAI, Johns Hopkins University School of Medicine, Baltimore, MD and Sabir Ji S. Sani, MD, FAAAAI, Department of Medicine, Division of Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD

**776** Removing Peanut Allergen Ara h 1 from Peanut Extracts Using p-Aminobenzamidine

Si-Yin Chung, PhD and Shawnarika Reed, USDA-ARS, New Orleans, LA

**777** Impacts on Rice Allergenic Proteins with Different Methods of Food Processing

Xiaoluan Li, the 1st hospital of Hebei Medical University, Shijiazhuang, China and Ying Xie, The 1st hospital of Hebei Medical University, Shijiazhuang, China

**778** Co-Sensitization Patterns of Crustaceans and Mollusks

Travis M. Sifers, MD, University of Missouri - Kansas City, Department of Pediatrics - Children’s Mercy Hospital, Kansas City, MO, Ashley K Sherman, Children’s Mercy Hospital and Clinics, Charles S. Barnes, PhD, Division of Allergy & Immunology, Children’s Mercy Hospitals and Clinics, Kansas City, MO and Christina E. Ciaccio, MD, MSc, FAAAAI, The University of Chicago, Chicago, IL

**779** A Retrospective Study of Clinical Shrimp Allergy in the Setting of Shrimp, Cockroach and Dustmite Sensitization

Mili Shum, MD, 1, 2Danielle C Brooks, 3Shanmuga Priya Jothi, 4Ashley Quevedo and Rauno Joks, MD, 1, 2State University of New York Downstate Medical Center, Brooklyn, NY; 3Center for Allergy and Asthma Research at SUNY Downstate Medical Center, 4SUNY Downstate Medical Center, Brooklyn, NY, Brown University, 5Center for Allergy and Asthma Research at SUNY Downstate Medical Center, Brooklyn, NY

**780** Natural Variability of Allergen Levels in Soybeans Across North and South Americas from Five Growing Seasons

Tao Geng, PhD, Monsanto Company, St. Louis, MO

**781** Quality of Life and Feeding Difficulties Associated with Childhood Epids and IgE-Mediated Food Allergies

Marion E. Groetch, MS RD, 1Zara Atal and Anna H. Nowak-Wegrzyn, MD, FAAAAI, 1Icahn School of Medicine at Mount Sinai, New York, NY; 2Icahn School of Medicine at Mt. Sinai

**782** Case Series of 5 Patients with Anaphylaxis to Hemp Seed Ingestion

Kristen Bortolin, BS, 1Moshe Ben-Shoshan, MD, MSc, 2Chrystyna Kalicinskiy, MD, FRCPC, 3Elana Lavine, MD, FRCPC, 4Christine Leitenyi, MD, FRCPC, 5Richard J. Warrington, MD, PhD, FAAAAI and Tracy Pitt, MD, FRCPC, 6Ross University School of Medicine, Miramar, FL; 7The Research Institute of the McGill University Health Centre, MacInnis-Christie Laboratories, Division of Paediatric Allergy and Clinical Immunology, Department of Paediatrics, Montreal Children’s Hospital, Montreal, QC, Canada; 8Section of Allergy & Clinical Immunology, Health Sciences Centre, Winnipeg, MB, Canada, 9Queen’s University, Kingston, ON, Canada; 10Division of Allergy, Montreal Children’s Hospital, Montreal, QC, Canada

**783** The Clinical Prehistory of Food-Protein Induced Enterocolitis Syndrome (FPIES)

Valentina Pecora, 1Lamia Dahdah, 2Oscar Mazzina, 3Daniela Vescichio and Alessandro G. Fiocchi, MD, 1Paediatric Hospital
Factors Affecting the Attainment of Tolerance Status in a Cohort of Food Protein-Induced Enterocolitis Patients
Eric C.K. Lee, BSc (Hons)1,2, Dianne E. Campbell, MD, FRACP, PhD3,2 and Sam S. Mehr, MBBS, BMedSci, FRACP, FRCPath1
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Economic Impact of Childhood Eczema and IgE-Mediated Food Allergies
Anna H. Nowak-Wegrzyn, MD, FAAAAI. Icahn School of Medicine at Mount Sinai, New York, NY and Zara Atal, Icahn School of Medicine at Mt. Sinai

Plasma Cytokine/Chemokine Profiles in Non-IgE-Mediated Gastrointestinal Food Allergy
Kanami Orihara, PhD1,2, Ichiro Nomura, MD, PhD1, Tetsuo Shoda, MD, PhD2, Hideaki Morita, MD, PhD1, Hiroko Suzuki, MD, PhD3, Akio Matsuda, PhD4, Hirohisa Saito, MD, PhD5 and Kenji Matsumoto, MD, PhD6. 1Department of Allergy and Clinical Immunology, National Research Institute for Child Health and Development, Tokyo, Japan. 2Waseda Institute for Advanced Study, Waseda University, Tokyo, Japan

Clinical Characteristics of Non-IgE-Mediated Gastrointestinal Food Allergy: Analysis of Nation-Wide Web-Based Online Patient Registry
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IgE Casein/IgE F1-Lactoglobulin in Gastrointestinal Phenotype of Cow’s Milk Allergy
Victor Mathieu, MD, PhD1,2, Paloma Pozo-Guedes, MD1,2, Inmaculada Sanchez-Machin, MD3,4, Yvelise Barrios, MD, PhD5, Andres Franco, MD3 and Ruperto Gonzalez, MD, PhD6,7,1, Hospital Universitario de Canarias, La Laguna, Spain. 2Hospital Quiron Tenerife, Santa Cruz de Tenerife, Spain. 3AllergoCan, Santa Cruz de Tenerife, Spain. 4Hospital Quiron, Santa Cruz de Tenerife, Spain. 5Inmunología, Hospital Universitario de Canarias, LA LAGUNA, Spain

Urticaria and Angioedema

FADDA

4206
Monday, March 7th, 2016, 9:45 AM - 10:45 AM

The Effectiveness of Allergy Evaluation in Patients with Chronic Spontaneous Urticaria
Roy A. Orden, MD1, Yi-Chen Liu, MD, PhD2, Yea-Jeu Hou, M.D., MHA2 and Jodi B Segal, MD, MPH1,2. 1Johns Hopkins University School of Medicine, Baltimore, MD. 2Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Exploring the Real-World Profile of Refractory and Non-Refractory Chronic Idiopathic Urticaria Patients in the US
Susan Gabriel, MS3, Meryl Mendelson, MD4, Alexander J. Gillespie5 and Ben Hoskin6, 1Novartis Pharmaceuticals, East Hanover, NJ. 2Adelphi Real World

Diagnostic Utility of Challenge Procedures for Physical Urticaria/Angioedema Syndromes: A Systematic Review
Lyda Cuervo Pardo, MD, Cleveland Clinic Foundation, Cleveland, OH, Alexei Gonzalez-Estrada, MD, Cleveland Clinic Foundation and David M. Lang, MD, FAAAAI, 9500 Euclid Avenue - A90, Cleveland Clinic, Cleveland, OH

A Randomized Trial of Icatibant in ACE-Inhibitor–Induced Angioedema
Ulrich Strassen1, Jens Greve2, Klaus Stelter3, Miriam Havel4, Nicole Rotter5, Johannes Veit5, Beate Schossow5, Alexander Hapelmeier6, Victoria Keh6, Georg Kojda7, Thomas K. Hoffmann8 and Murat Bas, MD, 1Department of Otorhinolaryngology, Klinikum rechts der Isar, Technische Universität München, Munich, Germany. 2Department of Otorhinolaryngology, Head and Neck Surgery, Ulm University Medical Center, Ulm. 3Department of Otorhinolaryngology, Grosshadern Medical Center of the University of Munich, 4Münchner Studienzentrum, Klinikum rechts der Isar, Technische Universität München, 5Institut für Medizinische Statistik und Epidemiologie, Klinikum rechts der Isar, Technische Universität München, 6Institute of Pharmacology and Clinical Pharmacology, University Hospital Düsseldorf, 7Department of Otorhinolaryngology, Klinikum rechts der Isar, Technische Universität München

Safety of a C1 Esterase Inhibitor Concentrate in Pregnant Women with Hereditary Angioedema: Findings from the International Berinert Patient Registry
James A. Fox, MD, FAAAAI, Inmaculada Martinez-Saguerr2, Arthur B. Vech, MD, FAAAAI, Walter A. Willis, PhD, MD, Jonathan M. Edelman, MD2, Debora Williams-Herman, MD2, Mikhail Rojvin, PhD2 and Tanja Rosenberg, MD2. 1Fox Skin and Allergy Associates, Branchberg, NJ. 2Haemophilia Centre Rhein Main, Mörfelden-Walldorf, Germany. 5Puget Sound Allergy, Asthma, and Immunology, Tacoma, WA. 4Luzerner Kantonsspital, Luzern, Switzerland. 5CSL Behring, King of Prussia, PA. 6CSL Behring, Marburg, Germany

Novel Association of GAD65-Positive Autoimmune Inner Ear Disease with Autoimmune Urticaria
Jack G. Ghably, MD, Sara Atwater, MD, Mark Guido, MD, Aman Nasir, MD and Guha Krishnaswamy, MD, FAAAAI, CC-D, ABHHM, 1University of Alabama at Birmingham, Birmingham, AL. 2Wake Forest Baptist Medical Center, Wake Forest Baptist Medical Center, Winston Salem, NC

Angiotensin Converting Enzyme Inhibitors and Angiotensin II Receptor Blockers-Induced Angioedema at the Emergency Department
Sarah Micozzi, MD, Marta Seoane, MD, Dasha Rou Medellin, MD, Maria Elisa Caralli, MD, Ana Rodriguez, MD, Mercedes Sánchez de Santa María, MD, María L. Baeza, MD, PhD and Inés Torrado, MD, University General Hospital Gregorio Marañón

Frequency and Characteristics of Systemic Complaints Among Chronic Idiopathic/Sporadic Urticaria Patients
Judy Doong, BS1, Eric Oliver, MD2 and Sarbiji S. Saini, MD, FAAAAI, 1Johns Hopkins University School of Medicine, Baltimore, MD. 2Department of Medicine, Division of Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD

Importance of Patch Test in Diagnosing Chronic Spontaneous Urticaria
Maged Refaat, MD, Rasha Shaban, MD, Asmaa Monstafa, MD and Walaa Abu El-Yazeed, MB, BCH, Department of Allergy and Clinical immunology, Ain Shams university, Cairo, Egypt

Pediatric Use of a C1 Esterase Inhibitor Concentrate for Hereditary Angioedema: Findings from the International Berinert® (C1-INH) Registry
Inmaculada Martinez-Saguerr, Haemophilia Centre Rhein Main, Mörfelden-Walldorf, Germany, James W. Baker, MD, FAAAAI,
Report of Colombian Registry for Hereditary Angiodemla
Maria Margarita Olivaes, MD\textsuperscript{1}, Rosa Farfan, MD\textsuperscript{2}, Carlos E Otomos, MD\textsuperscript{3}, Catalina Gomez, MD\textsuperscript{2}, Jorge Sanchez, MD\textsuperscript{2,5}, Maria C Ortega-Lopez, MD\textsuperscript{2,7}, Jairo A Rodriguez, MD, PhD\textsuperscript{8}, Jorge Rabal, MD\textsuperscript{9}, Mauricio Sarzolas, MD\textsuperscript{10}, Susana Diaz-Zuloaga, MD\textsuperscript{11,12}, Alejandro Carreno, MD\textsuperscript{3}, Alejandro Echenique, MD\textsuperscript{3}, Eduardo Jr De Zubiria, MD\textsuperscript{14} and Gerardo Ramirez, MD\textsuperscript{15}, \textsuperscript{1}Clinica Medellin sede Poblado, Medellin, Colombia, \textsuperscript{2}Unidad Alergologia, Medellin, Colombia, \textsuperscript{3}CAYRE IPS, Bogota, Colombia, \textsuperscript{4}Group of clinical and experimental Allergy (GACE), University of Antioquia, medellin, Colombia, \textsuperscript{5}Foundation for the Development of Medical and Biological Science (FUNDEMEB), Medellin, Colombia, \textsuperscript{6}Hospital Militar Central, Bogota, Colombia, \textsuperscript{7}Hospital Universitario Infantil de San Jose, Bogota, Colombia, \textsuperscript{8}Universidad Surcolombiana, Neiva, Colombia, \textsuperscript{9}Organizacion Clinica General del norte, Barranquilla, Colombia, \textsuperscript{10}Clinica San Jose, Cucuta, Colombia, \textsuperscript{11}Universidad de Antioquia, Medellin, Colombia, \textsuperscript{12}IPS Universitaria Universidad de Antioquia, Medellin, Colombia, \textsuperscript{13}Centro de alergia y Angioedema, SAS, Santa Marta, Colombia, \textsuperscript{14}Centro de Alergia e Inmunologia, Bogota, Colombia, \textsuperscript{15}Centro medico Carlos Ardiia Lulle, Bucaramanga, Colombia.

Refined Method for Collection of Plasma Samples to Evaluate the Role of Plasma Kallikrein in Various Disease States
Jonathan A. Bernstein, MD\textsuperscript{,}1, H. James Wedner, MD, FAAAAI\textsuperscript{a}, Paula J. Busse, MD, FAAAAAM, Aleena Banerji, MD, Marco Ciardi\textsuperscript{c}, C. Sufritter\textsuperscript{d}, Edward G. Brooks, MD, Adam Cheifitz\textsuperscript{2}, Lawrence B Schwartz, MD, PhD, FAAAAI\textsuperscript{a}, Cem Akin, MD, PhD, FAAAAAI\textsuperscript{a}, Daniel Sexton\textsuperscript{b}, Chris Stevens\textsuperscript{c}, Leslie E. Stohl\textsuperscript{c}, Malini Viswananth\textsuperscript{b}, Ryan Faccett\textsuperscript{c}, Joseph C. Biesiekirski\textsuperscript{c}, Yung H. Chyung\textsuperscript{c} and Burt Adelman\textsuperscript{c}.1, University of Cincinnati College of Medicine, Cincinnati, OH, 2Washington University School of Medicine, St. Louis, MO, 3Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, NY, 4Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA, 5Department of Biomedical and Clinical Sciences “Luigi Sacco”, University of Milan, Luigi Sacco Hospital, Milan, Italy, Italy, 6University of Milan, Milan, Italy, 7Univ. Texas Health Science Center San Antonio, San Antonio, TX, 8Beth Israel Deaconess Medical Center, Boston, MA, 9Virginia Commonwealth University, Richmond, VA, 10Harvard Medical School, Brigham and Women’s Hospital, Boston, MA, 11Dyax Corp., Burlington, MA.

Hydroxychloroquine As a Steroid-Sparing Agent in an Infant with Chronic Urticaria
Onyinye I Iweala, MD, PhD\textsuperscript{,}1 Christopher C. Copenahaver, MD\textsuperscript{,}2 Eveline Y. Wu, MD\textsuperscript{,}1 and Timothy P Moran, MD, PhD\textsuperscript{,}1, University of North Carolina, Chapel Hill, NC, 2Allergy Partners of Western North Carolina, Asheville, NC.

CORTH2 and Aspirin/NSAID Intolerance in Chronic Spontaneous Urticaria
Eric T. Oliver, MD, Kristin Chichester, MS, Patricia M. Sterba, MS, Kelly Devine, RN and Sarbjit S. Saini, MD, FAAAAI, Department of Medicine, Division of Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD.

Differential Expression of Micro-RNAs in Circulating Blood of Chronic Idiopathic Urticaria Patients with Hives
C.K. E Lin, PhD.\textsuperscript{1} John S. Kaptein, PhD\textsuperscript{1} and Javed Shibli, MD, FAAAAI\textsuperscript{,}1 Southern California Permanente Medical Group, Los Angeles, CA, 2Kaiser Permanente Los Angeles Medical Center.

Improvement of Chronic Urticaria with Vitamin D Repletion Is Associated with Baseline Markers of Autoimmunity
Shaan Waqar, MD, Robert J. Sporter, MD and Sherry Farzan, MD, Departments of Pediatrics and Internal Medicine, Division of Allergy & Immunology, Hofstra North Shore-LIJ School of Medicine, Great Neck, NY.

The Role of Component Resolved Diagnostics for Assessing Hidden Allergens of Idiopathic Urticaria in Childhood
Jae-Won Chang, Ho-Na Kang and Young-Jin Choi, Hanyang University Guri Hospital, Guri, South Korea

Use of a C1 Esterase Inhibitor Concentrate in Elderly Patients with Hereditary Angioedema: Findings from the International Berinert® (C1-INH) Registry
Anette Bygum, MD\textsuperscript{,}1 Immaculada Martinez-Saguer, MD\textsuperscript{,}2 Murat Bas, MD\textsuperscript{,}3 Jeffrey M. Rosch, MD, FAAAAAM, Jonathan M. Edelman, MD\textsuperscript{,}4 Mikhail Rovajin, PhD\textsuperscript{,}5 and Debora Williams-Herman, MD\textsuperscript{,}6 Odense University Hospital, Department of Dermatology, Denmark, 7Haemophilia Centre Rhone Main, Marfelden-Walldorf, Germany, \textsuperscript{8}Klinikum rechts der Isar, Technische Universitat Muenchen, Hals-Nasen-Ohrten Klinik, Munich Bayern, Germany, \textsuperscript{9}Centre PA Ashuma & Allergy Care, Altoona, PA, \textsuperscript{10}CDSL Behring, King of Prussia, PA.

Role of Urinary N-Methylhistamine in Chronic Urticaria
Bhavisha Patel, MD and Robin D. Divekar, MBBS, PhD, Mayo Clinic, Rochester, MN

HAE with Normal C1-INH with Inconsistent Response to C1 Esterase Inhibitor Infusion but Reliably Responsive to InCREMENTh Staniilcescu, RN\textsuperscript{,}1 Hoong Pham, MD 2016, BSc, BA\textsuperscript{a},2 and William H. Yang, MD\textsuperscript{,}1,3 Ottawa Allergy Research Corporation, Ottawa, ON, Canada, \textsuperscript{4}University of Ottawa, Faculty of Medicine, Ottawa, ON, Canada, \textsuperscript{5}University of Ottawa Medical School, Faculty of Medicine, Ottawa, ON, Canada

A Case of Successful Treatment of Autoinflammatory Syndrome-Associated Chronic Urticaria with Anakinra
Young-II Koh, MD\textsuperscript{,}1 Min-hoo Ahn, MD\textsuperscript{,}2 Ji Eun Yu, MD\textsuperscript{,}2 and Jiung Jeong, MD\textsuperscript{,}3 Chonnam National University Medical School, Gwangju, South Korea, \textsuperscript{4}Chonnam National University Hospital, Gwangju, South Korea.

Aspirin Desensitization in Two Patients with Refractory Urticaria
Positive Chronic Urticaria Index, and Elevated Mast Cell Mediators
Oguchuku S. Ndum, MD,1 Kiela Samuels, PharmD\textsuperscript{,}2 Georgiana M. Sanders, MD, MS FAAAAI\textsuperscript{a} and Christine L. Holland, MD\textsuperscript{,}3 University of Michigan Medical Center, Division of Allergy and Clinical Immunology, Ann Arbor, MI, \textsuperscript{4}University of Michigan Health System, Ann Arbor, MI, \textsuperscript{5}University Michigan Medical Center, Division of Allergy and Clinical Immunology, Ann Arbor, MI.

Mimics of Angioedema
Jacqueline Hirsh, Yale-New Haven Hospital and Christine C. Price, MD, Yale University School of Medicine, New Haven, CT.

Assessment of Inhibitory Antibody Formation in Subjects with Hereditary Angioedema Treated with Plasma-Derived C1-Esterase Inhibitor Concentrate (Berinert®)
Henriette Farkas, MD, PhD, DSc\textsuperscript{a}, Dumitru Moldovan, MD, PhD\textsuperscript{2}, Krystyna Obtowicz, MD\textsuperscript{,}3 T Shirov, MD, PhD\textsuperscript{4}, Jonathan M. Edelman, MD, DEBOhara Williams-Herman, MD\textsuperscript{5} and Mikhail Rovajin, PhD\textsuperscript{,}2 Semmelweis University, Budapest, Hungary, 3Department of Allergology-Immunology, Mures County Hospital, Tirgu-Mures, Romania, 4Jagiellonian University, Krakow, Poland, 5MHT- i Tsaritsa Yoanna - ISUL, Sofia, Bulgaria, 6CDSL Behring, King of Prussia, PA.

Low Levels of Melatonin Increase Nitric Oxide Production from IFN-Gamma/Vitamin D Stimulated PBMC and May Contribute to Seasonal Increase in Angioedema in Summer
Karyn Winkler, MD\textsuperscript{,}1,2 Dylan Martin, BS\textsuperscript{,}3 Maja Nowakowski, PhD\textsuperscript{,}3 and Rauno Joks, MD\textsuperscript{,}1,2 Center for Allergy and Asthma Research, \textsuperscript{2}Department of Pediatrics, \textsuperscript{3}College of Medicine, \textsuperscript{4}Department of Pathology, \textsuperscript{5}Department of Medicine, SUNY Downstate Medical Center, Brooklyn, NY.
Cytokine and Estrogen Stimulation of Endothelial Cells Activates a Second-Interleukin-1-Mediated Protection of Endothelial Cells by the Adipose-Tissue Derived Cells. Developmental Immunology (HAE)
Kusumam Joseph, PhD, Baby G. Tholainakunnel, PhD and Allen P. Kaplan, MD, FAAAAI, Medical University of South Carolina, Charleston, SC. 2Medical University of South Carolina
Clinical Features of Patients with Hereditary Angioedema with Normal C1 Inhibitor: A Study of Seventy-Four Brazilian Individuals Belonging to Nine Unrelated Families.2
Juliana A. Sella, MD, Luana Delcavo, BSc, Janaina M. L. Melo, MD, Thais M Nociti, MD, Marina M Dias, Chem, Solange R Valle, MD, PhD, Alceu T Franca, MD, Soloni Levy, MD, Fabrícia Sarquis Serpa, MD, Mariana PL Ferriani, MD, Adriana S Moreira, PhD and Luisa Karla P. Arruda, MD, PhD, FAAAAI, 1Ribeirão Preto Medical School - University of São Paulo, Ribeirão Preto, Brazil. 2Clementino Fraga Filho University Hospital- UFRJ, Rio de Janeiro, Brazil. 3EMESCAM, Vitoria, Brazil
C1-Esterase Inhibitor Concentrate for Acute Laryngeal Hereditary Angioedema (HAE) Attacks: Different Treatment Response Based on Dosing Regimen?2
Konrad Bork, Department of Dermatology, Johannes Gutenberg University, Mainz, Germany. Jonathan A. Bernstein, MD, University of Cincinnati College of Medicine, Cincinnati, OH, Thomas Machnig, CSL Behring GmbH, Marburg, Germany and Timothy J. Craig, Penn State University College of Medicine, Hershey, PA
Subcutaneous Icatibant for the Treatment of Acute Attacks of Hereditary Angioedema: Comparison of Self-Administration to Administration at a Medical Facility.2
Iris Otani, MD, Massachusetts General Hospital, Boston, MA, William R. Lumry, MD, FAAAAI, AARA Research Center, Dallas, TX, Allergy and Asthma Specialists, Dallas, TX, Huaamin Henry Li, MD, PhD, FAAAAI, Institute for Asthma and Allergy, Chey Chase, MD, Timothy J. Craig, DO, FAAAAI, Professor, Penn State University, Department of Medicine and Pediatrics, Hershey, PA, Marc A. Riedl, MD, MS, University of California, San Diego, La Jolla, CA, Bruce L. Zuwar, MD, University of California, San Diego, San Diego, CA and Aleena Banceri, MD, Division of Rheumatology, Allergy and Immunology, Department of Medicine, Massachusetts General Hospital, Harvard Medical School, MA
Targeting Factor 12 (F12) with a Novel RNAi Delivery Platform As a Prophylactic Treatment for Hereditary Angioedema (HAE)2
Stacey Medquist,1 Darren Wakefield,1 Holly Hamilton1, Qili Chu1, Aaron Almeida,1 Lauren Almeida,1 Megan Walters,1 Jessica Montez,1 Julia Heggs,2 Jason Klein,1 Christine Hazzlet1, Tracie Mierarch1, Stefanie Bertin1, Aaron Anderssen1, Edie Doss1, Rachael Schnidt1, Linda Goth1, Sheryl Ferger1, David Rozema1, James Hamilton1, David Lewis1 and Steven Kanner1,1Arrowhead Research Corporation, Madison, WI. 2Arrowhead Research Corporation, Pasadena, CA
Relationship Between Drug Exposure and Clinical Response Observed in the Phase 1b Study of DX-2930 in Subjects with Hereditary Angioedema.2
Joshua S. Jacobs, MD, Paula J. Busse, MD, FAAAAI, Aleena Banceri, MD, Musfata Shnakk, William R. Lumry, MD, FAAAAI, Mark A. Davis-Lorton, MD, FAAAAI, H. James Wedner, MD, FAAAAI, James W. Baker, MD, FAAAAI, Jonathan A. Bernstein, MD, Richard F. Lockey, MD, H. Henry Li, MD, PhD, Timothy J. Craig,2 Marco Cicardi,3 Marc A. Riedl, MD, MS, Ahmad Al-Ghazawi,2 Carolyn Soo4, Ryan Iarobino3, Daniel Sexton3, Christopher TenHoor3, Ryan Faucette3, Joseph C. Biedenkapp3, Yung H. Chung1 and Burt Adelman1,1Winthrop University Hospital, Mineola, NY. 2University of South Florida Morsani College of Medicine, Tampa, FL. 3Institute for Asthma and Allergy, Chey Chase, MD, Penn State University College of Medicine, Hershey, PA. 4University of Cincinnati College of Medicine, Cincinnati, OH. 5Department of Internal Medicine, University of South Florida, Morsani College of Medicine, Tampa, FL. 6Institute for Asthma and Allergy, Chey Chase, MD, 7Penn State University College of Medicine, Hershey, PA. 8Department of Biomedical and Clinical Sciences Luigi Sacco, University of Milan, Luigi Sacco Hospital, Milan, Italy, Milan, Italy. 9University of California, San Diego, La Jolla, CA. 10DxCorp., Burlington, MA
C1 Inhibitor for Routine Prophylaxis in Patients with Hereditary Angioedema: Interim Results from a European Registry Study.2
Emel Aygiren-Pürsün1, Markus Magen1, Immaculada Martinez-Saguer2, Hilary J. Longhurst2, Ulrich Straflun3, Ludovic Martin4, Teresa Caballero, MD, PhD, Petra Staubach5, Marcus Maurer5, Mohamed Hamdan1 and Irmgard Andresen6,1Department for Children and Adolescents, Angelouedera Centre, University Hospital Frankfurt, Goethe University, Frankfurt, Germany. 2Department of Dermatology and Allergy, Charité – Universitätsmedizin, Berlin, Germany. 3Haemophilia Centre Rhine Main, Moerfelden-Walldorf, Germany. 4Department of Immunology, Barts Health NHS Trust, London, United Kingdom. 5Department of Otorhinolaryngology, Head and Neck Surgery, Technical University of Munich, Munich, Germany. 6National Reference Centre for Angioedema, CREAK, Angers, France. 7Allergy Department, Hospital La Paz Institute for Health Research (IdiPaz), Biomedical Research Network on Rare Diseases (CIIBERER, U754), Madrid, Spain. 8Department of Dermatology, University Medical Center, University of Mainz, Mainz, Germany. 9Shire, Lexington, MA. 10Shire, Zug, Switzerland
Pharmacodynamic Effect of DX-2930 on Plasma Kallicrein in Hereditary Angioedema Patients.2
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Modeling and Analyses to Identify Potential Dosing Regimens of DX-2930 for the Long-Term Prophylaxis of Hereditary Angioedema.2
H. James Wedner, MD, FAAAAI, Paula J. Busse, MD, FAAAAI, Aleena Banceri, MD, Musfata Shnakk, William R. Lumry, MD, FAAAAI, Mark A. Davis-Lorton, MD, FAAAAI, Joshua S. Jacobs, MD, James W. Baker, MD, FAAAAI, Jonathan A. Bernstein, MD, Richard F. Lockey, MD, H. Henry Li, MD, PhD, Timothy J. Craig,2 Marco Cicardi,3 Marc A. Riedl, MD, MS, Ahmad Al-Ghazawi,2 Carolyn Soo4, Ryan Iarobino3, Daniel Sexton3, Christopher TenHoor3, Ryan Faucette3, Joseph C. Biedenkapp3,
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832 Gender Analysis of Iticibaint-Treatment Outcomes of Acute Angioedema Attacks in Patients with Hereditary Angioedema Type I and II: Results from the Iticibaint Outcome Survey
Teresa Caballero, MD, PhD, 1Laurence Bouiller2, Hilary J Longhurst2, Werner Aberer2, Marcus Maurer2, Andrea Zanichelli6, Amandine Perrin4 and IrregularAndreassen4, 1Allergy Department, Hospital La Paz Institute for Health Research (IdiPaz), Biomedical Research Network on Rare Diseases (CIBERER, U754), Madrid, Spain, 2National Reference Centre for Angioedema, Internal Medicine Department, Grenoble University Hospital, Grenoble, France, 3Department of Immunology, Barts Health NHS Trust, London, United Kingdom, 4Department of Dermatology and Venerology, Medical University of Graz, Graz, Austria, 5Department of Dermatology and Allergy, Charité - Universitätsmedizin Berlin, Germany, 6Department of Biomedical and Clinical Sciences "Luigi Sacco", University of Milan, Luigi Sacco Hospital, Milan, Italy, 7Shire, Zug, Switzerland

824 Radial Immunodiffusion Method for Evaluation of C1-Esterase Inhibitor Function
Emily Kay, MD, 1Rebecca Pratt, MD, 1Susan Waserman, MD, FAAAAI2, Wailul Khan, MD3 and P. Hudeck3, 1McMaster University, 2Department of Medicine, McMaster University, Hamilton, ON, Canada, 3Hamilton Health Sciences Centre

825 Perioperative Management and Postoperative Outcomes in Patients with Hereditary Angioedema
Dale S. DiSalvo, BS, Robert Saadi, BS and Timothy J. Craig, DO, FAAAAI, Professor, Penn State College of Medicine, Hershey, PA

826 Subcutaneous Use of the Plasma Derived C1 Inhibitor Berinert in a Complicated Hereditary Angioedema Case
Amin S. Kanani, MD, University of British Columbia, Vancouver, BC, Canada

827 C1-INH Therapy in Aced/Arb Acquired Angioedema
Vipul Jain, MD, University of Manitoba, Winnipeg, MB, Canada

828 Oral Intake of Anti-Hangover Substance Increases Metabolizing Capacity of Aldehyde Dehydrogenase 2 in Rat Model: New Therapeutic Potentials for Chronic Itch?
Bosung Kang1, Chue-Young Bang2, Se-Young Chong2 and Kyungwoo Choi2, 1Department of Emergency Medicine, Hanyang University Guri Hospital, South Korea, 2Department of Preventive Pharmacy and Toxicology, College of Pharmacy, Kyounghee University, South Korea, 3Pico Entech, South Korea, 4Managing Director, ChemBang, South Korea

829 Tamoxifen, a Trigger Factor of Hereditary Angioedema with Normal C1-INH with a Specific Mutation in the F12 Gene (HAE-F12X1)
Stephan Rietz1, Konrad Bork1, Karin Wulf2, Guenther Witzke1 and Jochen Hardt1, 1Department of Dermatology, Johannes Gutenberg University, Mainz, Germany, 2University Medicine, Ernst Moritz Arndt University, Greifswald, Germany, 3Department of Medical Psychology and Medical Sociology, Johannes Gutenberg University, Mainz, Germany

830 An Invesigational RNAi Therapeutic Targeting Factor XII (ALN-F12) for the Treatment of Hereditary Angioedema
Akin Akine, Jingxuan Liu, June Qin, Adam Castoreno, Mark Schlegel, Martin Maier, Kevin Fitzgerald and Rachel Meyers, Alny- lam Pharmaceuticals

Are Angiotensin Converting Enzyme Inhibitors the Main Elicitors of Tongue Angioedema?
Dasha Roa Medellin, MD, Ana Rodriguez Fernandez, MD, Sarah Micozzi, MD, Mercedes Saenz de Santa Maria, MD, Marta Seoane, MD and Maria L. Baeza, MD, PhD, Hospital General Universitario Gregorio Maranón. Department of Allergy, Madrid, Spain

New Approaches to Tracking Health Outcomes
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832 Skin Prick Testing Alone Is Not a Good Predictor of Allergy Symptom Severity in Grass Allergic Patients
Sameer Patel, MD, Victoria Nelson, M.Sc, Tara Sadoway, M.Sc., Peter Couroux, MD and Anne Marie Salapatek, PhD, Inflammax Research, Mississauga, ON, Canada

833 Quality of Life in Patients during Oral Immunotherapy for Food Allergy
Na’ama Epstein Righi1, Yitzhak Katz, MD, FAAAAI2, Michael Goldberg, MD, PhD3, Michael B. Levy, MD, FAAAAI4, Liat Nachshon, MD3 and Arnon Elizur, MD3, 1Assaf Harofeh Medical Center, Zerifin, Israel, 2Department of Pediatrics, Sackler School of Medicine, Tel Aviv, Israel

834 Impact of Parent-Reported Food Allergies on Children’s Growth and Quality of Life of the Caregivers
Tanya Kajornrattana, Department of Pediatrics, Faculty of Medicine, Prince of Songkla University, Songkhla, Thailand, Pasuree Sangsupawannich, MD, PhD, Prince of Songkla University, Hatyai, Thailand and Anaya Yuenyongwijut, MD, Prince of Songkla University, Songkhla, Thailand

835 Food Allergy and Health-Related Quality of Life in a Racially Diverse Sample
Linda Herbert, PhD1, Elizabeth Fiory, BS1 and Hennant P. Sharma, MD, MHS FAAAAI, 1Children’s National Health System, Washington, DC, 2Children’s National Medical Center, Division of Allergy and Immunology, Washington, DC

836 Anxiety and Depression in Adults with Primary Immunodeficiencies (PID’s)—How Much Do These Patients Experience and What Factors May Increase Patients’ Risk?
Jacqueline L. Heath, MS, Penn State University, College of Medicine, Hershey, PA, Erika FH Saunders, MD, Associate Professor, Penn State University, Department of Psychiatry, Hershey, PA, Erik Lehman, M.S., Penn State University, Department of Public Health Sciences, Hershey, PA and Timothy J. Craig, DO, FAAAAI, Professor, Penn State University, Department of Medicine and Pediatrics, Hershey, PA

New Insights into Medication-Related Outcomes
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837 The Arietta Study: Exploring Severe Asthma Biomarkers in a Real-World Setting
Nicola A. Hanania, MD1, Stephanie Korn2, Andrew Menzies-Gow3, Michel Aubier4, Kenneth R. Chapman5, Giorgio Walter
Canonica, MD2, Cesar Picado, MD, PhD2, Nicolas Martin3, Ramón A Escobar9, Stephan Koromin and Roland Buhl,2 Pulmonary, Critical Care and Sleep Medicine, Baylor College of Medicine, Houston, TX, 2Pulmonary Department, University Hospital, Johannes Gutenberg-University, Mainz, Germany, 3Royal Brompton Hospital, London, United Kingdom, 4Service de Pneumologie A, Hôpital Bichat, Paris, France, 5Asma & Airway Centre, Toronto, ON, Canada, 6Allergy and Respiratory Diseases, Department of Internal Medicine, University of Genoa, Genou, Italy, 7Hospital Clinic de Barcelona, University of Barcelona, Barcelona, Spain, 8, 9Hoffmann-La Roche Ltd, Basel, Switzerland

838 Pharmacodynamic Model to Predict Ocular Itching Outcomes at 24 Hours Post-Treatment with Olopatadine (0.77% or 0.2%) Matthew J. Fidler, M. Stat., PhD, Abhijsit Narvekar, MS, MBBS, David Covert and Ramesh Sarangapani, PhD, Alcon, Fort Worth, TX

839 Three and a Half Years of Multi-Allergen Subcutaneous Immunotherapy Is Associated with a 50% Reduction in Asthma Symptom Scores Effen L. Rael, MD, FAAAAI, Stanford University. Sean N. Parker Center for Allergy and Asthma Research, Mountain View, CA and Fauzd T. Ishmael, MD, PhD, FAAAAI, Penn State University, Hershey, PA

840 AGM- Antihistamine Allergies in General Medicine Jason A. Trubiano, MD,2 Rehka Pai Mangalore, MD, PhD2, Yi-Wei Baey3, Duy Le2, Linda Graudins, BPPharm3, Patrick Charles, MD, PhD3, Douglas F Johnson, MD, PhD2 and Ar K Aung, MD2, 1Austin Health, Melbourne, Australia, 2Austin Health, Australia, 3Monash University, Australia, 4Alfred Health, Australia, 5Austin Health

841 Hemolysis Associated with IVIG Therapy Tamar Rubin, MD, Alfred I. Lee, MD, Eric Gehrie, MD and Florence Ida Hsu, MD, Yale University School of Medicine, New Haven, CT

842 Quality of Life Assessment in Patients with Chronic Urticaria Kelly Yoshimi Kanamori1, Carolina Tavares Aleantara2, Antonio Abilio Motta, MD, PhD3, Jorge Kalil, MD, PhD4 and Rosana C. Agondi, MD, PhD3, 1Clinical Immunology and Allergy Division, University of Sao Paulo, Brazil, 2Clinical Immunology and Allergy Division, University of Sao Paulo, 3Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil, 4Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil

Korea and Ja Hyoong Kim, MD, University of Ulsan College of Medicine, Ulsan University Hospital, Ulsan

845 Role of Fibrocytes in Allergic Rhinitis Marie-Eve Cote1, Marie-Eve Boulay, MD, Sc2, Sophie Plante1, Jamila Chakir, PhD1 and Louis-Philippe Boulet, MD2, 1Institut Universitaire de Cardiologie et de Pneumologie de Quebec, Quebec City, QC, Canada, 2Institut Universitaire de Cardiologie et de Pneumologie de Quebec, Quebec, QC, Canada

846 Correlation of Symptom Scores, Nasal Airflow, and Nasal Resistance in Dust Mite Sensitized Allergic Rhinitis Children Natchanun Klankaglaya, MD, Wiparat Manuyakorn, MD, PhD, Suwatt Benjapopitik, MD and Wasa Kamchaitsaith, MD, Division of Pediatric Allergy and Immunology, Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand

847 An Exploratory Analysis of the Correlation Between Erythema Size and Total Nasal Symptom Scores in the Environmental Exposure Unit Lisa M. Stancy, BS1, Terry J. Walker, BA1, Barnaby Hobbswan1, Daniel Adams, BSc1, Abhijsit Joshi, B.Pham, MBA2, Atul Raut, MD, PhD2 and Anne K. Ellis, MD, MSc, FAAAAI1, 1Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, 2Sun Pharma Advanced Research Company Ltd., Mumbai, India, 3Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada

848 Patient-Reported Symptoms Induced By Allergic and Non-Allergic Triggers in Randomized Controlled Trials of MP-Azelu (Dymista) in Seasonal Allergic Rhinitis (SAR) Patients Dominique Brandt, MA, University Cincinnati Medical Center, Cincinnati, OH and Jonathan A. Bernstein, MD, University of Cincinnati College of Medicine, Cincinnati, OH; University of Cincinnati College of Medicine, Cincinnati, OH

849 Relationship Between Nasal Symptom Scores, IgE Class and Skin Prick Test (SPT) Size in the Environmental Exposure Unit (EEU) – Relevance of IgE Class and Spt Diameter Dan Adams1, Mena Soliman, MBChB, MSc (candidate)1,2, Lisa M. Stancy, BSc1, Terry J. Walker, BA1, Barnaby Hobbswan1, Jenny Thiele, MSc1,2 and Anne K. Ellis, MD, MSc, FAAAAI1, 1Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, 2Departments of Medicine and Biomedical & Molecular Science, Queen’s University, Kingston, ON, Canada

850 Efficacy of MP-Azelu in the Treatment of Postnasal Drip and Rhinorrhea in Patients with Seasonal Allergic Rhinitis (SAR) Ellen R. Sher, MD, FAAAAI, Atlantic Allergy, Asthma and Immunology Associates, Ocean, NJ; Drexel University Medical School Clinical Assist Professor, Philadelphia, PA, Sandra M. Gawish, DO, FAAAAI, Asthma and Allergy Associates, Chester, PA, William E. Berger, MD, MBA, FAAAAI, Allergy & Asthma Associates of Southern California, Mission Viejo, CA and Eli O. Meltzer, MD, FAAAAI, Asthma and Allergy Medical Group & Research Center, San Diego, CA

851 Clinical Utility of Feno in Preschool Children with Allergic Rhinitis Keum Hee Hwang1, Jinsun Yoon2, Yeon Jung Choi2, Eun Lee4, Hyun-Ju Cho, MD3, Song I. Yang, MD3, Young Ho Kim, MD3, Young-Ho Ho Jung, MD2, Ju-Hee Seo, MD2, Ji-Won Kwon, MD2, So Yeon Lee, MD, PhD2, Bong-Seong Kim, MD and Soo-Jong Hong, MD, PhD2, 1Department of Pediatrics, Childhood Asthma Atopey Center, Research Center for Standardization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, Seoul, South Korea, 2Department of Pediatrics, Childhood Asthma Atopey Center, Research Center for Standardization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, 3Department of Pediatrics, Childhood Asthma Atopey Center, Research Center for Standardization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, 4Department of Pediatrics, Childhood Asthma Atopey Center, Research Center for Standardization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, 5Department of Pediatrics, Childhood Asthma Atopey Center, Research Center for Standardization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea

Rhinitis, Diagnosis and Therapy

IRSO

4209

Monday, March 7th, 2016, 9:45 AM - 10:45 AM

843 Comparison of Skin Test Reactivity of Sublingual Immunotherapy Tablets to Commercial Extracts Marc F. Goldstein, MD, FAAAAI1, Gregory J. Hilditch2, Ina F. Frankel3, Alex L. Goldstein, PhD, Donald J. Dvorin, MD, FAAAAI1 and George A. Belecanech, MD1, 1Allergic Disease Associates, PC, 2Drexel University College of Medicine

844 Changes of Feno and Nasal NO Levels after Treatment in Pediatric Allergic Rhinitis Jin-A Jung, MD, Dong-A University College of Medicine, Busan, South Korea, Woo Yong Bae, MD, Department of Otorhinolaryngology, College of Medicine, Dong-A University, Busan, South Korea
Standization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea, 3Department of Pediatrics, Childhood Asthma Atope Center, Research Center for Standardization of Allergic Diseases, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, 3Department of Pediatrics, Hallym University Sacred Heart Hospital, Hallym University College of Medicine, Anyang, Korea, 3Department of Pediatrics, Hallym University College of Medicine, Anyang, Korea, 3Department of Pediatrics, Bundang CHA Hospital, College of Medicine, Pochon CHA University, Seongnam, Korea, 3Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, 3Department of Pediatrics, Seoul National University Bundang Hospital, Seongnam, South Korea, 3Department of Pediatrics, Hallym University College of Medicine, Seoul, South Korea, 3Department of Pediatrics, Gagneung Asan Hospital, University of Ulsan College of Medicine, 1Childhood Asthma Atope Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea

852 LOCAL. Allergic Rhinitis: Entropy or Spontaneous Response? Matteo Gelardi1, Antonio Guglielmi1, Lucia Iannuzzi1, Vitaliano Quarta1, Nicola Quaranta1, Francesco Marasci1, Massimo Landi1, Mario Corneale1, Annamaria Sonnanite1, Margherita Rosisi1, Maria Addolorata Mariggiò1, Giorgio Walter Canonica, MD1 and Giovanni Pussalacqua, MD1, 1Section of Otolaryngology, Bari, Italy, 2School of Medicine, Italy, 3University of Perugia, Italy, 4National Paediatrics Healthcare, Turin, Italy, 5Clinical Pathology, Bari, Italy, 6Allergy and Respiratory Diseases, Department of Internal Medicine, University of Genoa, Genoa, Italy, 7Allergy and Respiratory Diseases, IRCSS San Martino Hospital-IST-University of Genoa, Genoa, Italy

853 Reduction of Substance-P Mediated Neuronal Hyper-Reactivity By Dymista® (Azelaite & Fluticasone) Correlates with Decreased Cough-Frequency in Non-Allergic Rhinitis Unmesh Singh, MD, PhD1, Jonathan A Bernstein, MD1, Holly Lorentz, PhD2, Tara Sadoway, MSc2, Victoria Nelson, MSc2, Payush Patel, MD, FRCP2 and Anne Marie Salapatek, PhD2, 1University of Cincinnati, Cincinnati, OH, 2Inflamx Research, Mississauga, ON, Canada

854 Comparison of Commercial Cat and Dog Extracts in Skin Prick Testing and Protein Electrophoresis Reese Bryan Lennarson1,2, Gregory M. Metz, MD1, 2Shahan Stutes, MD1, 2 and Warren V. Willey, MD, FAAAAI1, 2, 1Oklahoma Allergy and Asthma Clinic, Oklahoma City, OK, 2University of Oklahoma Health Sciences Center, Oklahoma City, OK

855 Cytokine Profiles in Monosensitized and Polysensitized Allergic Rhinitis Patients Treated with Sublingual Immunotherapy L. M. Slouka, Medical Academy of Postgraduate Education, Minsk, Belarus, Leonid P. Titov, MD, PhD, Republican Research and Practical Center for Epidemiology and Microbiology, Minsk, Belarus and Lawrence M. DuBuske, MD, FAAAAI, Immunology Research Institute of New England, Gardner, MA; George Washington University School of Medicine, Washington, DC

856 Validation and Verification of Grass Allergen Challenge in the Allergen Biocube (ABC) Endri Angjeli1, Keith Lane2, Emily Schoenmiller1, Yesha Raval1 and Paul Gomes2, 1Iora Inc, Andover, MA, 2Iora Inc., MA, 3Iora Inc, 4Iora Inc.

**Immunotherapy, Rhinoconjunctivitis**

**IRSO**

Friday, March 7th, 2016, 9:45 AM - 10:45 AM

**Contrast Agent Reduces Allergic Rhinitis Symptoms**

Erik Viirre, MD, PhD, 1J. Ernest Villafana, PhD, 1S. David Miller, MD, 2Paul Gomes3 and Elliott Lasser, MD, 13E Therapeutics Corporation, La Jolla, CA, 1North-East Medical Research Associates, 2Ora Inc.

**Three Complementary Pathways Characterize the Suppressive Properties of Epit-Induced Tregs**

Benjamin Pelleiter, Master degree1, Lucie Mondoulet, PhD, 1Emilie Puteaux1, Melanie Ligouis1, Véronique Dhétil1, Camille Plaquet1, Christophe Dupont, MD, PhD2 and Pierre-Henri Benhassa3, MD1, 1DBV Technologies, Bagneux, France, 2Hospital Necker Enfants Malades, Paris, France

**SEM/AAA Contributes Eosinophilic Phenotypes in Asthma and Chronic Rhinosinusitis with Nasal Polypos (CRSwNP)**

Yohei Maea1, Masaki Hayama1, Kazuya Takeda1, Atsushi Kamanogoh and Hidenori Ishihara1, 1Osaka university graduate school of medicine, Saita, Japan, 2Osaka University, Saita, Osaka, Japan

**Treatment of Persistent Blepharitis and Keratoconjunctivitis with Intraocular and Topical Use of Tacrolium 0.03% Ointment.**

Konstantinos Syrigos1, Nikolaos K Syrigos2, Maria Vasiliiou3, Maria Zande1 and Ekaterini L Syrigou, PhD2, 1Athens School of Medicine, Greece, 2Department of Allergy, Sotiria General Hospital, Athens, Greece

**Demonstrating the Repeatability of the Nasal Allergen Challenge Protocol Utilized By the Allergic Rhinitis – Clinical Investigator Collaborative (AR-CIC)**

Mena Soliman, MBChB, MSc (candidate)1, Jenny Thiele, MSc1, Daniel Adams, BSc2, Lisa M. Stacey, BSc2 and Anne K. Ellis, MD, MSc, FAAAAI1, 2Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada, 3Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada

**Patients' Knowledge and Attitude about Allergen Immunotherapy**

Young-Hee Nam, MD1, Soo-Keol Lee, MD2 and Dong-Sub Jeon1, 1Department of Internal Medicine, College of Medicine, Dong-A University, Busan, South Korea, 2Dong-A University College of Medicine, Pusan, South Korea

**Characteristics of Systemic Reactions in the Setting of Modified Environmental Rush Immunotherapy Protocol (MERIT)**

Stacy L. Rosenberg, MD1, Merritt L. Fujii, MD2, Russell Traister, MD, PhD1 and Andrej A. Petrov, MD2, 1University of Pittsburgh Medical Center, 2University of Pittsburgh Medical Center, Division of Pulmonary, Allergy and Critical Care Medicine, Pittsburgh, PA

**Co-Seasonal Initiation of Allergen Immunotherapy: A Systematic Review**

Peter S. Creticos, MD, FAAAAI1, 2, David I. Bernstein, MD3, Thomas B. Casule, MD, FAAAAI1, Richard F. Lockey, MD2 and Hendrik Nolte, MD, PhD2, 1Creticos Research Group, Baltimore, MD, 2Division of Allergy & Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD, 3Bernstein Allergy Group, Cincinnati, OH, 3Division of Immunology, University of Cincinnati, Cincinnati, OH, University of South Florida Morsani College of Medicine, Tampa, FL, 4Merek & Co., Inc., Kenilworth, NJ

**Adherence to Topical Medications for Chronic Rhinosinusitis: Medication Possession Ratio and Description of Adherence Barriers**

Brittany T Hines, MD1, Devyani Lal, MD2, Matthew A. Rank, MD, FAAAAI1, John C Lewis, MD2 and Harry G. Teaford, MD2, 1Mayo Clinic, Scottsdale, AZ, 2Mayo Clinic, Phoenix, AZ, 3Mayo Clinic Arizona, Scottsdale, AZ
T Cells and Allergens

MAAI

4211

Monday, March 7th, 2016, 9:45 AM - 10:45 AM

866 Prediction and Classification of Allergenicity within Protein Families
Surendra Negi, PhD1, Terumi Midoro-Horinti, MD, PhD, FAAAAI1, Chris Kearney, PhD2, Randall M. Goldblum, MD3 and Werner Braun, PhD1. 1University of Texas Medical Branch, Galveston, TX; 2Bayor University, Waco, TX

867 Characterising Unintended Effects of Genetic Modification on Expression of Gluten Proteins Involved in IgE-Mediated Allergies and Coeliac Disease Using Proteomics
Sophie NL Bromilow, BSc, Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; Institute of Food Research, Norwich, United Kingdom, Lee Gethings, PhD, Waters Corporation, United Kingdom, Peter Shewry, BSc PhD, Rothamsted Research, Harpenden, United Kingdom, Mike Bromley, PhD, Synergy Health, Derby, United Kingdom, Michael Buckley, University of Manchester, Manchester, United Kingdom and E.N.Clarke Mills, Bsc PhD, Institute of Inflammation and Repair, Manchester, United Kingdom

868 Association of Peripheral Blood Naive and Memory T Cells Markers from Immigrants to Brooklyn Who Develop Asthma/Allergies with Family History of Cancer
Irina Katayeva, MD, SUNY Downstate Medical Center, Brooklyn, NY; SUNY-HSC, Brooklyn, NY, Maria-Anna Vastandi, MD, Lutheran Medical Center, Brooklyn, NY and Rauno Joks, MD, Department of Medicine at SUNY Downstate Medical Center, Brooklyn, NY

869 Clinical Characteristics of NSAID Drug Allergies and Predictive Value of the History for Oral Drug Challenge Outcomes
Rebecca Koransky, MD, Department of Medicine, Montefiore Medical Center, Bronx, NY, Denise Ferastaetoa, MD, MSc, Allergy - Immunology, Albert Einstein/Montefiore Medical Center, Bronx, NY and Elina Jerschow, MD, MSc, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY

870 TLR4 Agonist GLA Modifies Th1/Th2 Cytokine Profiles in PBMC from Patients with Pollen Allergy
Hailing Lu, MD, PhD1, Richard Roque1, Jan ter Meulen, MD1 and Christophe Clegg, PhD. 1Immunex Design, Seattle, WA; 2Tria Bioscience, Seattle, WA

871 Control of Steroid Responsiveness of Th Cells in Asthma
Akio Mori, MD, PhD1, Satoshi Kouyama, MSc1, Miyako Yamaguchi1, Yo Iijima1, Akemi Ohtomo-Abe, PhD2, Arisa Kinoshita1, Yosuke Kami1, Hiroki Hayashi, MD2, Kentaro Watai, MD3, Chihiro Kamida, MD2, Chiyako Oshikawa, MD1, Kiyoshi Sekiya, MD1, Takahito Tsuruara, MD2, PhD1, Mamoru Ohtomo, MD1, Yuma Fukutomi, MD, PhD2, Masami Taniguchi, MD2, Takayuki Ohtomo, PhD3 and Osamu Kaminuma, PhD, 1National Hospital Organization, Sagamihara National Hospital, Sagamihara, Japan; 2Clinical Research Center for Allergy and Rheumatology, Sagamihara National Hospital, Sagamihara, Japan; 3Tokyo University of Pharmacy and Life Science, Tokyo, Japan, 4Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan

872 Termitic Proteins Cross-React with Cockroach Allergens
Christopher P. Mattison, PhD1, Tanusha Khurana, PhD2, Matthew Tarver, PhD1, Christopher Florance, MS1, Casey C. Grimm, PhD1, Suman Pakala, PhD3, Carrie Cotton, PhD3, Claudia Riegel, PhD and Jay E. Slater, MD3, 1USDAS-ARS-SRRC, New Orleans, LA; 2FDA/CBER/OVRR/DBBAP, Silver Spring, MD; 3Bayer CropScience, West Sacramento, CA, 4University of Georgia, Athens, GA; 5New Orleans Mosquito, Termitic and Rodent Control Board, New Orleans, LA

873 Prediction and Identification of Korean Pine (Pinus koraiensis) Vicilin As a Food
Yuzhu Zhang, PhD1, Wen-Xian Du1, Yuting Fan2, Kari C. Nadeau, MD, PhD, FAAAAI and Tara H McHugh1, 1USDA-ARS-PWA-WRR, Albany, CA; 2Tsinghua University, Wuxi, China; 3Pediatric Allergy Immunology, Stanford University School Medicine, CA

874 Anti-Atherosclerotic Vaccination with T-Cell Peptides Is Most Effective in Reducing Plaque in the Thoracic Aorta
Kevin Tse, MD1, Takayuki Kimura, MD2, Harley Tse, PhD3, Alessandro Sette, Dr. Biol. Sci.4, Klaus Ley, MD5 and John Sidney6, 1Southern California Permanente Medical Group, San Diego, CA; 2La Jolla Institute for Allergy and Immunology, 3Wayne State University, 4La Jolla Institute for Allergy and Immunology, La Jolla, CA

875 The Sensitization Model and Correlation of Bermuda Grass and Timothy Grass Pollen Allergen in Respiratory Allergic Disease Patients in Southern China
Luo Wenting, National Clinical Research Center for Respiratory Disease, Guangzhou Institute of Respiratory Diseases, First Affiliated Hospital of Guangzhou Medical University, Guangzhou, China and Baoqing Sun, National Clinical Research Center for Respiratory Disease, Guangzhou Institute of Respiratory Diseases, First Affiliated Hospital of Guangzhou Medical University, Guangzhou, China

876 Structural, Serological, and Genomic Analyses of the Major Allergen Der p 23
Geoffrey Mueller, PhD1, Thomas A Randall1, Jill Glesner, BS2, Lars Pedersen1, Latif Perera1, Lori L. Edwards, Eugene DeRose1, Martin D. Chapman, PhD, FAAAAI1, Robert London1 and Anna Pomès, PhD, FAAAAI1, 1National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC; 2Indoor Biotechnologies, Inc., Charlottesville, VA

877 A Role for Glycans in Bla g 2 Cockroach Allergen-Induced Allergic Responses
Danh Do, PhD1, Shuang Yang, PhD2, Robert G. Hamilton, PhD D.ABMIL FAAAAI1, John T. Schroeder, PhD3 and Peisong Gao, MD, PhD1, 1Division of Allergy & Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD; 2The Johns Hopkins University, Department of Pathology, Clinical Chemistry, Baltimore, MD; 3Johns Hopkins University School of Medicine, Baltimore, MD; 4Johns Hopkins University, Baltimore, MD

878 Are Dust Mite Allergens More Abundant or More Stable Than Other Dermatophagoides Pteronyssinus Proteins?
Thomas A Randall1, Ryeeme N Ogbum2, Yingxue Xu2, Julia H Roberts3, Marjorie S. Morgan, PhD2, S Dean Rider1, Robert London1, Larry G. Arlian, PhD, FAAAAI1, Michael C Fitzgerald1, Geoffrey Mueller, PhD and DiAnn L. Vyszenski-Moher, MS1, 1National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC; 2Duke University, 3Wright State University, Dayton, OH

879 Ligand Binding Preferences of Pathogenesis-Related Class 10 (PR-10) Allergens
Barry K. Hurlbutt, PhD1, Jane McBride1, Swandani Pote2, Mak-samin Chruszcz, PhD2 and Soheila J. Maleki, PhD, FAAAAI1, 1USDAS-ARS-SRRC, New Orleans, LA; 2University of South Carolina, Columbia, SC

880 Molecular and Immunological Characterization of Gamma Glidins As Major Allergens in Wheat Food Allergy
Sandra Wieser, PhD1, Alexandra Baer, PhD1, Bharrani Srinivasan, PhD1, Nikolao G. Papadopoulos, MD, FAAAAI2, Stavroula Giavi, MD, PhD2, Mika Makela, MD, PhD3, Anna Pelkonen, MD, PhD4, Christof Ebner, MD2, Josef Thalhammer, PhD2, Susanne Vrata, PhD2 and Rudolf Valenta, MD1, 1Division of Immunopathology, Department of Pathophysiology and Allergy Research, Center of Pathophysiology, Infectiology and Immunology, Medical
University of Vienna, Vienna, Austria, 2Allergy Research Center, Athens, Greece, 3Allergy Department, 2nd Pediatric Clinic, University of Athens, Athens, Greece, 4Skin and Allergy Hospital, Helsinki University Central Hospital, Helsinki, Finland, 5Ambulatory for Allergy and Clinical Immunology Vienna, Vienna, Austria, 6Department of Molecular Biology, Division of Allergy and Immunology, University of Salzburg, Salzburg, Austria, 7Department of Pathophysiology and Allergy Research, Austria

881 Assessing the Impact of Lipids on the Allergic Potential of Peanuts Using a Germ-Free Murine Model of Food Allergy
Kwame Andoh-Kumi, MS1, Janina A Krumbeek, MS1, Nathan L. Marsteller, PhD2, Joe L. Baunert, PhD2 and Richard E. Goodman, FAAAAI2, 1University of Nebraska-Lincoln, Lincoln, NE, 2Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE

882 Dynamics of Regulatory T Cell-Mediated Control of Antigen Responses and Autoimmune Neuroinflammation
Michael D. Cahalan, PhD1, Shivashankar Othy, DVM, PhD1, Jonathan Skupsky, MD, PhD1 and Ian Parker, PhD1, University of California, Irvine, Irvine, CA

883 Prostaglandin D2 Receptor (IP) Signaling Increases Regulatory T (Treg) Cell Induction and Function and Renders T Effector (Teff) Cells More Susceptible to Treg-Mediated Suppression
Melissa H. Bloodworth, B.S.3, Kasia Goleniewska, M.S.3, and R. Stokes Peebles Jr, MD, FAAAAI3, 1Vanderbilt University Medical Center, Nashville, TN, 2Vanderbilt University Medical Center, Nashville, TN

884 T-Cell Epitope Optimization to Maximize Allergic Donor Responses
Luisa Sternberg1, Pau Perez-Escrig2, Bjørn Peters, PhD2 and Alessandro Sette, Dr. Biol. Sci.1, 1La Jolla Institute for Allergy & Immunology, La Jolla, CA, 2La Jolla Institute for Allergy and Immunology, San Diego, CA, 3La Jolla Institute for Allergy and Immunology, La Jolla, CA

885 Regulatory T Cell Immunophenotype Is Influenced by Food Allergy Status
Ashley L. Devonshire, MD, MPH1, Kristin A Erickson2, Benjamin T Prince, MD3, Dalia Fuleihan3, Christine Szychlinski3 and Anne Marie Singh4, 1Department of Pediatrics, Ann & Robert H. Lurie Children’s Hospital of Chicago, Northwestern Feinberg School of Medicine, Chicago, IL, 2Department of Medicine, Northwestern Feinberg School of Medicine, Chicago, IL, 3Division of Allergy-Immunology, Department of Pediatrics, Northwestern University Feinberg School of Medicine, Chicago, IL, 4Division of Allergy-Immunology, Department of Pediatrics, Northwestern University Feinberg School of Medicine, Chicago, IL, 5Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL

886 Recognition of Bla g 2 T Cell Antigens Varies As a Function of Allergic Asthma Versus Rhinoitis
Alessandro Sette, Dr. Biol. Sci.1, Myles B. Dillon, PhD1, Véronique M. Schulten, PhD1, Carla Oseroff1, Laura Dullanty1, April Frazier, PhD2, Xavier Belles, PhD2, Maria-Dolors Plutachs, PhD2, Cynthia Visnes, PhD, MPH1, Leonard B. Bacharier, MD, FAAAAI, Gordon R. Bloomberg, MD, FAAAAI, Paula J. Basse, MD, FAAAAI, John Sidney1 and Bjorn Peters, PhD1, 1La Jolla Institute for Allergy and Immunology, La Jolla, CA, 2Institut de Biologia Evolutiva (CSIC-Universitat Pompeu Fabra), Barcelona, Spain, 3Rho Federal Systems Division Inc., Chapel Hill, NC, 4Division of Allergy, Immunology and Pulmonary Medicine, Department of Pediatrics, Washington University School of Medicine and St. Louis Children’s Hospital, Saint Louis, MO, 5Campus Box 8116, St. Louis Children’s Hospital, Saint Louis, MO, 6Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, NY

887 Substance P (subP) Suppresses Induction of Specific Memory IgE Responses By PBMC of Ragweed Sensitized IgE+ Humans, but NOT CD4+IL-4 or CD8+CD60+IL-4 T CELLS or IL-4.
Bryan McCarthy, MD1, Charles J. Kim, BS2, Seo M Chice, MS3, Isabella DeGregorio, Vahe Amanian, MD4, Mark Stewart, MD, PhD5, Maja Nowakowski, PhD6, Yitzchok M. Norowitz, BS6, Tamar A. Smith-Norowitz, PhD1, Rauno Joks, MD5 and Helen G. Durkin, PhD1, 1Center for Allergy and Asthma Research at SUNY Downstate Medical Center, 2Center for Allergy and Asthma Research at SUNY Downstate Medical Center, 3Department of Pathology, 4Ridgewood High School, 5Department of Physiology-Pharmacology/Neurology, 6Center for Allergy and Asthma Research at SUNYDownstate Medical Center, 1Department of Pediatrics, SUNY Downstate Medical Center, Brooklyn, NY, 2Department of Medicine at SUNY Downstate Medical Center, Brooklyn, NY, 3Department of Pathology/Medicine

888 Non-Atopic Individuals Exhibit a Distinct Immune Reactivity Patterns in Response to Timothy Grass Pollen in and out-of-Season
Denise Hinz1, Gregory Seunou1, Jason Greenbaum2, Brandie White1, Veronique M. Schulten1, David H. Brodie, MB ChB FAAAAI1, John Sidney1, Carla Oseroff1, Erik R. Wambre, PhD, MBE5, Eddie A. James, PhD1, William W. Kwok, PhD1, Pandurangan Vijayanand2, Bjørn Peters, PhD1 and Alessandro Sette, Dr. Biol. Sci.1, 1La Jolla Institute for Allergy and Immunology, La Jolla, CA, 2La Jolla Institute of Allergy and Immunology, La Jolla, CA, 3Department of Medicine, University of California, San Diego, San Diego, CA, 4Benaroya Research Institute, Seattle, WA, 5Benaroya Research Institute at Virginia Mason, Seattle, WA

Microbiome, Immunogenetics, Molecular Biology

MAAI

4212
Monday, March 7th, 2016, 9:45 AM - 10:45 AM

889 Pulmonary MicroRNA Expression Profiles Associated with Subchronic Aspergillus fumigatus Exposure
Tara L. Croston, PhD1, Ajay P. Nayak, PhD1, Angela R. Lemons, MS1, W. Travis Goldsmith, BSCPE1, Michael L. Kashon, PhD1, Dori M. Gormolec, PhD1, Donald H. Beezhold, PhD, FAAAAI1, and Brett J. Green, PhD, FAAAAI1, 1Allergy and Clinical Immunology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV, 2Engineering and Control Technology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV, 3Biostatistics and Epidemiology Branch, Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV, 4Toxicology Branch, Division of the National Toxicology Program, National Institute of Environmental Health Sciences, Research Triangle Park, NC, 5Health Effects Laboratory Division, National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, Morgantown, WV

890 Methylation Sites Associated with Alteration in Gene Expression in the ZPP2/GSDMB/ORMDL3 Locus
Parul H. Kothari, MD, PhD1,2, Weiiliang Qiu, PhD2, Damien C. Croteau-Chouka, PhD2, Vincent J. Carey, PhD2 and Benjamin A. Raby, MD, MPH1, 1Division of Rheumatology, Immunology and Allergy, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, 2Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, 3Pulmonary
Asthma Immunology and Inflammation

**ADT**

4601

Monday, March 7th, 2016, 2:00 PM - 3:15 PM

**Th17/Treg Disregulation in Allergic Asthmatic Children Is Associated with Elevated Notch Expression**

W. X. Zhang, MD, PhD1, Anqun Sheng, MD1, Xiaoya Zhang, MD1, Tingting Zhu, MD1, Cuiye Weng, MD1, Changchong Li, MD1 and Wei Zhao, MD, PhD1.

1Yuying Children’s Hospital, Wenzhou, China, 2Division of Allergy and Immunology, Department of Pediatrics, Virginia Commonwealth University, Richmond, VA

**The Effect of Age on Airway Inflammation in Older Versus Younger Patients with Asthma**

Janette Birmingham, MS1, Joseph Manzini1, Anna Goryachkovskaya1, Giselle Fontela1, Juan P Wisnivesky, MD, DrPH1 and Paula J. Busse, MD, FAAAAI2, 3Mount Sinai School of Medicine, 4Mount Sinai School of Medicine, New York, NY

**Eosinophilia-Associated Coronary Artery Vasospasm in Patients with Aspirin-Exacerbated Respiratory Disease**

Neelam H. Shah, MD1,2, Thomas R. Schneider3, Katherine N. Cahill, MD1,4 and Tanya M. Laflaw, MD, FAAAAI1,2,4, 1Brigham and Women’s Hospital, Boston, MA, 2Boston Children’s Hospital, Boston, MA, 3Brigham and Women’s Hospital, Division of Rheumatology, Immunology and Allergy, Boston, MA, 4Harvard Medical School, Boston, MA

**Airway but Not Blood Type 2 Innate Lymphoid Cells (ILC2s) from Asthmatic Patients Are Steroid-Resistant, Which Is Induced by IL7R-Alpha Ligands**

Rafeul Alam, MD, PhD, FAAAAI, Suci Liu, Verma Mukesh, Weimiu Liu, Magdalena M Gorskla, MD, PhD, James Good, MD and Donald Rollins, MD, National Jewish Health, Denver, CO

**Mast Cell-Derived PAI-1 Promotes Airway Inflammation and Remodeling in a Murine Model of Asthma**

Ara Jo1, Sun Hye Lee, PhD2, Dong-Young Kim3, Hyun Young Koo4, Dae Woo Kim, MD1, Mesut Eren, Douglas E Vaughan5 and Seong Ho Cho, MD, FAAAAI1,4, 1Division of Allergy-Immunology, Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL, 2Division of Allergy and Immunology, Department of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL, 3Division of Cardiology, Department of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL, 4Division of Allergy and Immunology, Department of Internal Medicine, Morsani College, University of South Florida, Tampa, FL

Severe Combined Immunodeficiency (SCID)

BCI

4602

Monday, March 7th, 2016, 2:00 PM - 3:15 PM

**Using EMR Data Collections to Outline SCID Clinical Phenotypes**

Shradha Agarwal, MD, FAAAAI, Peter Sidi and Charlotte Cunningham-Rundles, MD, PhD, Icahn School of Medicine at Mount Sinai, New York, NY

**Predicting Optimal Timing of Halting IVIG Therapy after HSCT for SCID**

Sarah E. Henrickson, MD/PhD1, Nancy Bunin, MD2, Alik E Seif, MD, MPH2, Soma Jyonsuchi, MD2, Kathleen E. Sullivan, MD, PhD, FAAAAI2 and Jennifer Heimall, MD2, 1Children’s Hospital of Philadelphia, Philadelphia, PA, 2The Children’s Hospital of Philadelphia, Philadelphia, PA

**Use of Rabies Virus Vaccine As a Neoantigen to Evaluate Humoral Immune Function in Patients with Primary Immunodeficiency Disorders Receiving Immunoglobulin Replacement Therapy**

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11q13 Is an Allergic Risk-Locus That Increases Eoe Risk and Increases LRRCC2 Expression
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Group 2 Innate Lymphoid Cells and IL-9 Receptor Are Increased in Active Eosinophilic Esophagitis
Ashni Doshi, MD1,2, Rachel Baum, BS3, Paul Holanda4, Kellen Cavagnero, BS3, Braxton Bell3, Lucas Dohi5, Robert Newbury, MD6, Melissa Aquino, BS1, Richard Kurten, PhD1, Taylor Doherty, MD, FAAAAAI7 and Seema Sharma Aceves, MD, PhD, FAAAAAI1, 1Rady Childrens Hospital, San Diego, CA, 2University of California, San Diego, La Jolla, CA, 3University of California San Diego, La Jolla, CA, 4University of California, San Diego, La Jolla, CA, 5University of California, San Diego, LA JOLLA, CA, 6Rady children’s Specialists of San Diego, San Diego, CA, 7Division of Pathology, Arkansas Children’s Hospital Research Institute, Little Rock, AR, 8Pediatics, University of California San Diego, La Jolla, CA

Eosinophil-Related Gene Expression in Children with Eosinophilic Gastrointestinal Disorders (EGIDs)
Tetsuo Shoda, MD, PhD1,2, Ichiyo Nomura, MD, PhD1,2, Kasahiro Arai, MD, PhD1,2, Hirohisa Shimizu, MD, PhD2, Yoshiyuki Yamada, MD, PhD1,2, Kanami Orihara, PhD1,4, Hideaki Morita, MD, PhD1,2, Akio Matsuda, PhD1,2, Yukihiko Ohyda, MD, PhD2, Hirohisa Saito, MD, PhD1 and Kenji Matsumoto, MD, PhD1. 1National Research Institute for Child Health and Development, 2National Center for Child Health and Development, 3Gunma Children’s Medical Center, Shibukawa, Gunma, Japan, 4Waseda Institute for Advanced Study, Waseda University, Tokyo, Japan

Loss of SPINK7 in Esophageal Epithelial Cells Unleashes a Pro-Inflammatory Response Characterized By Excessive Cytokine Production and Loss of Barrier Function
Nurit Perez-Azour1, Demetria Michael2, Laetitia Furio3,4, Alain Hovnanian5,6 and Marc E. Rothenberg, MD, PhD, FAAAAAI. Division of Allergy and Immunology, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, University of Cincinnati, Cincinnati, Ohio, 2Cincinnati Children’s Hospital Medical Center, 3University Paris Descartes, 4INSERM UMR 1163, 5Division of Allergy and Immunology, Department of Pediatrics, Cincinnati Children’s Hospital Medical Center, University of Cincinnati, Cincinnati, Ohio, USA

Eosinophilic Esophagitis: Pathophysiology and Genetic Susceptibility
FADDA
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Outcomes for Umbilical Cord Blood Transplantation in Severe Combined Immunodeficiency Disorders: Ten-Year Experience
Carrie N. Caruthers, MD, Jonathan M. Rodrigues, MD, Alireza Shams, MD, Deepika Bhatla, MD and Alan P Knutsen, MD, FAAAAAI, Saint Louis University School of Medicine, St. Louis, MO

Newborn Screening for Severe Combined Immune Deficiency with T Cell Receptor Excision Circle Assay in Mississippi 2012 – 2014
Anne B. Yates, MD, FAAAAAI, University of Mississippi Medical Center, Jackson, MS and Jessica B Perkins, MD, University of MS Medical Center, Jackson, MS
916 Eosinophilic Esophagitis Is a Trait of Netherton Syndrome
Nathalia Bellon, MD,1 Colombe Palsuel-Marmont, MD,2 Lactitia De Peufeilhoux, MD,1 Patrick Barbet, PhD,1 Christine Bodemer, MD, PhD1 and Christophe Dupont, MD, PhD2, 1Department of Dermatology and Referral Center for Genodermatoses and Rare Skin Diseases (MAGEC), Université Paris Descartes, Sorbonne Paris Cité, Hôpital Universitaire Necker-Enfants Malades, Paris, France, 2Department of Digestive Functional Explorations and Food Allergy, Université Paris Descartes, Sorbonne Paris Cité, Hôpital Universitaire Necker-Enfants Malades, Paris, France, 3Department of Pathology, Université Paris Descartes, Sorbonne Paris Cité, Hôpital Universitaire Necker-Enfants Malades, Paris, France

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917 D-Dimer Levels May Identify Chronic Urticaria Patients Who Would More Likely Fail H2 Blockers or Omalizumab
Tho Q. Truong, MD, National Jewish Health, Denver, CO

918 Sonographic Assessment of Optimal Needle Length for Epi- nephrine Autoinjectors in Infants and Toddlers
Harold L. Kim, MD,1-2, Chitra Dirakar, MD, FAAP,1-4, Paul McNamis, BEng,1, Dan Rudin, MD,2, William Daley, MD, MPH5 and Elke Plattz, MD, MS6,1, 1Western University, London, ON, Canada, 2McMaster University, 3Children’s Mercy Hospital, 4University of Missouri-Kansas City, 5University of Waterloo, 6Sanofi US, 7Brigham and Women’s Hospital, 8Harvard Medical School

919 Constitutive KIT Activity and IL-6 Production in Mast Cells Alters Levels of Reactive Oxygen Species (ROS) and the Scavenger Protein DJ-1 in Mastocytosis
Dokyun Kim, PhD1, Michael A Beaven, PhD2, Joseph Kuliniski, PhD3, Avanti Desai, MS4, Glenn Cruse, PhD5, Calman Prussin, MD,1, Hirsh D. Komarov, MD,1 Melody C. Carter, MD,1 Dean D. Metcalfe, MD6 and Ana Oliviera, PhD7, 1Laboratory of Allergic Diseases, NIAID, NIH, Bethesda, MD, 2Laboratory of Molecular Immunology, NHLBI, NIH, Bethesda, MD

920 IgE-Mediated Atopic Dermatitis-like Skin Inflammation Is Downregulated By the Application of Allergen-Specific Monoclonal Antibody IgG1 Fab Fragments to the Skin
Shin Yoshino, Nobuki Mizutani and Chutha Sae-Wong, Kobe Pharmaceutical University, Kobe, Japan

921 Ibuprofen and Other Arylpipionic Acid Derivatives Can Be Responsible for Immediate Selective Responses to NSAIDS
Diana Perez-Alzate, MD1, Natalia Blanco-Lopez, MD, PhD2, Inmaculada Dona, MD, PhD3, Maria Luisa Somoza, MD4, Maria J Torres, MD, PhD5, Gador Bogas, MD6, Jose A Cornejo-Garcia, PhD2, Gabriel Canto, MD, PhD1 and Miguel Blanca, MD, PhD1, 1Allergy Service, University Hospital Infanta Leonor, Madrid, Madrid, Spain, 2Allergy Service, Infanta Leonor Hospital, Madrid, Spain, 3Allergy Service, IBIMA-Regional University Hospital of Malaga-UMA, Malaga, Spain, 4Allergy Unit, Infanta Leonor University Hospital, Madrid, Spain, 5Allergy Unit, Regional University Hospital of Malaga-IBIMA, UMA, Malaga, Spain, 6Research Laboratory, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain, 7Allergy Unit, IBIMA, Regional University Hospital of Malaga, UMA, Malaga, Spain

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922 Anaphylaxis Preparedness Initiative for Allergen Immunotherapy – Implementation of a Policy for Carrying Autoinjectable Epinephrine
Ahiha Subramanian, MD, MPH1, Lisanne P. Newton, MD1, David M. Lang, MD, FAAAAI1, Tanya Gobel, RN1, Kathleen M. Caruso, RN, BSN1, Katrina Zell1 and Xiaofeng F Wang, PhD2, 1Cleveland Clinic, Cleveland, OH, 2Quantitative Health Sciences, Cleveland Clinic, Cleveland, OH

923 Underutilization of Penicillin Skin Testing: A Call for Verifying Penicillin Allergy and Antibiotic Stewardship
Roxanne C. Oriol, MD1, Vincent R. Bonagura, MD, FAAAAI1 and Olga Belostotsky, MD, PhD1, 1Division of Allergy and Immunology at North Shore Long Island Jewish Health System, Great Neck, NY, 2Department of Allergy and Immunology at North Shore Long Island Jewish Health System-Lenox Hill Hospital, New York, NY

924 Health-Related Quality of Life Is Impaired in Families with Wheat Allergy Vs. Grass Allergy
Nora Borres, MD, Cand.1, Nora Nilsson2, Isabel Drake, PhD3, Sigrid Sjolander, Caroline Nilsson, MD, PhD4, Bjorn Nordlund, PhD5 and Gunilla Hedlin, MD, PhD4, 1Land University, 2Astrid Lindgrens Childrens Hospital, Stockholm, Sweden, 3Immunodiagnostic, Thermo Fisher Scientific, Uppsala, Sweden, 4Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet and Sachs’ Children’s Hospital, Södersjukhuset, Stockholm, Sweden, 5Karolinska Institutet, Bromma, Sweden, 6Karolinska Institutet, Stockholm, Sweden

925 Socioeconomic Disparities in the Economic Impact of Childhood Food Allergy
Lucy A. Bilaver, PhD1,2, Kristen Kesser, MD, MPH1, Bridget Smith, PhD3 and Ruchi Gupta, MD, MPH4, 1Northern Illinois University, DeKalb, IL, 2Chapin Hall at the University of Chicago, Chicago, IL, 3New York-Presbyterian Hospital - Columbia University Medical Center, New York, NY, 4Edward J. Hines Jr. VA Hospital, Chicago, IL, 5Northwestern University Feinberg School of Medicine, Chicago, IL, 6Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, IL

926 Allergy Misconceptions Among Attending Physicians, Resident Physicians and Mid-Level Providers
Kaitlyn M. Jackson1,2, Desta Jordan, MD1,2, Amy Perkins, MS1,2 and Kelly M. Maples, MD1,2, 1Eastern Virginia Medical School, Norfolk, VA, 2Children’s Hospital of The King’s Daughters, Norfolk, VA, 3Pediatrics, Eastern Virginia Medical School, Norfolk, VA

Rhinosinusitis, Local IgE

IRSO

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927 Unified Airway Theory: Association of Bronchiectasis and Chronic Rhinosinusitis
Sumit Bose, MD1, Whitney W. Stevens, MD, PhD2, Newton Li, MD3, Mariel G Rosati, MD2, Leslie C. Grammer, MD1, Kathryn E. Hulse, PhD1, Assadih Kato, PhD3, Robert C. Kern, MD4, Bruce
K. Tan, MD3, Stephanie S. Smith, MD4, Kevin C. Welch, MD4, David B. Conley, MD3, Pedro C. Avila, MD1, Robert P. Schleimer, PhD3 and Anjo T. Peters, MD1, 1Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, 2Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, 3Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, 4Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL.

928 A Novel Method of Measuring Nasal Specific IgE in Systemic and Local Allergic Rhinitis Patients

Paloma Campo, MD, PhD4, Carmen Rondon, MD, PhD4, Ana Prieto del Prado, MD3, Maria Salas, MD, PhD3, Luisa Galindo, RN3, Ana Aranda, PhD3, Cristina Gallego-Mayorga, PhD3, Arrieta Ruiz, MD3, Gador Bogas, MD3, Leticia Herrero, MD3, Maria D Cañamero1 and Miguel Blanco, MD, PhD1, 1Allergy Unit, Regional University Hospital of Málaga-IBIMA,UMA, 2Research Laboratory, IBIMA-University Hospital of Málaga, Málaga, Spain, 3Research Laboratory, Regional University Hospital of Málaga-IBIMA,UMA, 4Allergy Unit, IBIMA-University Hospital of Málaga, Málaga, Spain.

929 Chronic Rhinosinusitis Patients with Gastroesophageal Reflux Disease Have Significantly Higher Prevalence of Atopic Conditions

Erica L. Palmisano, MD1, Mohamed Benhammudi2, Arpita Mehta2, Mary C. Tobin, MD2, Christopher D. Codispoti, MD, PhD2, Sindhura Bandi, MD2, Pete Batra, MD2, Phillip LoSavio, MD2, Robert P. Schleimer, PhD2 and Mahboobeh Madhavini, MD, PhD2, 1Allergy/Immunology section, Department of Immunology and Microbiology, Rush University Medical Center, Chicago, IL, 2Department of Immunology and Microbiology, Allergy/Immunology Section, Rush University Medical Center, Chicago, IL, 3Department of Otorhinolaryngology-Head and Neck Surgery, Rush University Medical Center, Chicago, IL, 4Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL.

930 Proton Pump Inhibitors (PPIs) May Modulate More Than Just Reflux in Chronic Rhinosinusitis with Nasal Polyps

Jin Young Min, MD, PhD1, Robert C. Kern, MD1, Christopher J. Ocampo, MD, PhD3, Whitney W. Stevens, MD, PhD3, Caroline P.E. Price1, Christopher F. Thompson, MD1, Tetsuya Homma, MD, PhD2, David B. Conley, MD3, Stephanie Shintani-Smith, MD3, Julia H. Huang1, Lydia Soh, BSc2, James E. Norton, MS2, Kathryn E. Hulse, PhD2, Atsushi Kato, PhD2, Robert P. Schleimer, PhD2 and Bruce K. Tan, MD3, 1Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL, 2Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, 3Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL.

931 Heterogenous Inflammation in Chronic Rhinosinusitis without Nasal Polyps

Atsushi Kato, PhD1,2, Aiko I Klingler, PhD3, Whitney W. Stevens, MD, PhD1, Anju T. Peters, MD3, Julie A Poposki, MS3, Lydia Suh, BSc1, James E. Norton, MS2, Roderick G. Carter, BSc3, Kathryn E. Hulse, PhD2, Leslie C. Grammer, MD1, Robert P. Schleimer, PhD1,2, Stephanie S. Smith, MD3, David B. Conley, MD2, Robert C. Kern, MD2 and Bruce K. Tan, MD3, 1Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, 2Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL, 3Division of Allergy-Immunology, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL, 4Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL.
LATE-BREAKING ABSTRACTS PRESENTED AT SCIENTIFIC SESSIONS
AAAAI ANNUAL MEETING
MARCH 4-7, 2016

The following abstracts were accepted for presentation after the deadline for the abstract supplement

L1 Potential Role of Gut Microbial Metabolites in Allergy Prevention in Children
Dr Caroline Rodahl1, Dr Remo Frei2, Dr Ruth Fersl2, Susanne Loeliger1, Prof. Charlotte Braun-Fahrländer3, Prof. Erika Von Mutius, MD, MSc4, Prof. Juha Pekkanen, MD5, Prof. Jean-Charles Dalphin6, Prof. Josef Riedler2, Prof. Roger Lauener, MD7, Dr Liam O’Mahony, PhD8, 1University children’s hospital Zurich, Switzerland, 2Swiss Institute of Allergy and Asthma Research, Davos, Switzerland, 3Swiss Tropical and Public Health Institute and University of Basel, Basel, Switzerland, 4University Children’s Hospital, Munich, Germany, 5National Public Health Institute, Kuopio, Finland, 6University Hospital of Besançon, France, 7Children’s Hospital Schwarzach, Austria, 8Children Hospital of Eastern Switzerland, St Gallen, Switzerland.

RATIONALE: Short-chain fatty acids (SCFAs) are metabolites produced by microbes in fermented foods or by microbes in the gut following fermentation of fibers. SCFAs have been shown to have anti-inflammatory properties in animal models. Our objective was to investigate the potential role of SCFAs in the prevention of allergic diseases among children and allergic airway-inflammation in mice.

METHODS: Measurement of SCFAs in fecal water were performed among a subset of 1 year old children (n=301) from a European birth cohort. Data on environmental factors and allergy were collected by questionnaires. We used ovabumin (OVA) or house dust mite (HDM) sensitised mice to model allergic airway-inflammation.

RESULTS: In the birth cohort study, we observed a positive association between yogurt consumption in the first year of life and the fecal levels of butyrate. The children with the highest fecal butyrate levels had a significantly reduced risk of becoming sensitized to inhalant allergens, with a similar directional trend for asthma, atopic dermatitis and sensitization to food allergens. Oral administration of SCFAs to mice significantly reduced the severity of allergic airway-inflammation, both in the OVA and HDM models. All SCFAs tested reduced the total number of cells and eosinophils in bronchoalveolar lavages as well as reduced airway hyperresponsiveness. The single most effective SCFA was butyrate and oral administration of butyrate further reduced levels of Th2 cytokines in lung cells.

CONCLUSIONS: SCFAs, especially butyrate, protect against allergic airway inflammation and strategies designed to increase SCFA levels in children should be considered, both as a preventive and a therapeutic option.

L2 Associations of Early Life Exposures and Environmental Factors with Asthma Among Children in Rural and Urban Areas of Guangdong, China
Dr Jing Li, MD, MSc1, Dr Zhao Wei Yang, PhD2, Mr. Mulin Feng2, Dr Marjut Roponen2, Dr Bianca Schaub3, Prof. Gary Wing-kin Wong, MD, FRCP(C)4, 1The First Affiliated Hospital of Guangzhou Medical College, State Key Laboratory of Respiratory Disease, Guangzhou Institute of Respiratory Disease, Guangzhou, China, 2Department of Allergy and Clinical Immunology, State Key Laboratory of Respiratory Disease, The First Affiliated Hospital, Guangzhou Medical University, Guangzhou, China, 3Department of Environmental Science, University of Eastern Finland, Kuopio, Finland, 4University Children’s Hospital Munich, Department of Pulmonary and Allergy, LMU Munich, Munich, Germany and Member of the German Center for Lung Research (DZL), 5Department of Paediatrics, The Chinese University of Hong Kong, Hong Kong.

RATIONALE: Environmental factors may play important roles in asthma, but findings were inconsistent. The study was to determine the associations between early life exposures, environmental factors and asthma in urban and rural children in southeast China.

METHODS: A screening questionnaire survey was performed in 7164 children from urban Guangzhou and 6087 from rural Conghua. In the second stage, subsamples of 854 children (419 from Guangzhou, 435 from Conghua) were recruited for a case-control study including detailed questionnaire enquiring family history, early life environmental exposures, dietary habits, and tests including histamine airway provocation, skin prick test, and serum antibody analysis. House dust samples from 76 Guangzhou and 80 Conghua families were obtained to analyze levels of endotoxin, house dust mite and cockroach allergens.

RESULTS: The prevalence of doctor-diagnosed-asthma was lower in children from Conghua (3.4%) than Guangzhou (6.9%, p<0.001) in the screening survey. A lower percentage of asthma was found in rural compared to urban subjects (2.8% vs 29.4%, p<0.001) in case-control study. Atopy (odds ratio 1.91, 95% confidence interval 1.55-2.39), parental allergic diseases (2.49, 1.55-4.01), hospitalization before age 3 (2.54, 1.37-4.70), high milk product consumption (1.68, 1.03-2.73) and dust Dermatophagoides farinae level (1.71, 1.34-2.19) were positively, while crop farming before age 1 (0.15, 0.08-0.32) and dust endotoxin level (0.69, 0.50-0.95) were negatively associated with asthma.

CONCLUSIONS: A variety of environmental factors were found to be associated with asthma. Parental allergic diseases, atopy, diet and early life exposures might explain the lower prevalence of asthma in the rural environment in southeast China.

L3 Austri, a Large Randomized Study in Adolescents and Adults with Asthma, Assessing the Safety and Efficacy of Salmeterol in Combination with Fluticasone Propionate Compared to Fluticasone Propionate Alone
Dr David A. Stempel, MD FAAAAI1, Dr Ibrahim Raphiou, PhD2, Kenneth Kral1, Dr Anne Yeuxy3, Kathy Bouron3, Amanda Emmett3, Dr Charlene M. Frazma, PhD2, Dr Steve Pascoe, MD3, 1GlaxoSmithKline, Research Triangle Park, NC, 2TTR International, Research Triangle Park, NC.

RATIONALE: Previous studies have shown an excess of serious asthma-related outcomes, including death, in subjects taking Long Acting Beta Agonists (LABAs). This study was designed to examine the risks and/or benefits of LABA therapy when added to an ICS in a combination inhaler in patients with asthma.

METHODS: A global, randomized, double-blind, parallel group study of asthmatic subjects ≥12 years; treated with salmeterol (SAL) and fluticasone propionate (FP) in combination (FSC) or FP alone for 26 weeks. The primary endpoint was time to first serious asthma-related event, the composite of death, intubation or hospitalization. To declare non-inferiority the hazard ratio of subjects with a serious asthma-related event with FSC compared to FP was <2.0 based on the upper bound of the 95% confidence interval (CI) on the estimate of the hazard ratio. The secondary endpoint was time to first asthma exacerbation requiring OCS.

RESULTS: Of 11,751 subjects randomized, 67 subjects experienced 74 serious asthma-related events with 34 and 33 subjects treated with FSC and FP, respectively. The FSC/FP hazard ratio was 1.029 (0.638-1.662) for time to first serious asthma-related event. Non-inferiority was achieved. There were no asthma-related deaths and 2 asthma-related intubations (both on FP). The FSC/FP hazard ratio for time to first asthma exacerbation was 0.787 (0.698-0.888).

CONCLUSIONS: There was no evidence of an increased risk of serious asthma-related events when SAL was used in a combination product with FP compared to FP. There was a significant reduction in risk of asthma exacerbations for FSC compared to FP alone.
L4 The Diagnostic Testing Accuracy of Urinary Leukotriene E4 in Determining Aspirin Intolerance in Asthma: A Systematic Review and Meta-Analysis

John B. Hagan, MD, FAAAAI1, Tanya M. Laidlaw, MD2, Robih D. Divecak, MBBS, PhD3, Erin O’Brien, MD4, Hirohiti Kita, MD1, Gerald W. Volcheck, MD, FAAAAI5, Christina R. Hagan2, Devyani Lal, MD3, Harry G. Teaford, MD2, Patricia J. Erwin5, Matthew A. Rank, MD, FAAAAI3, Mayo Clinic, Rochester, MN; Brigham and Women’s Hospital, Boston, MA; Mayo Clinic, Rochester, MN; Baylor University, Waco, TX; Mayo Clinic, Phoenix, AZ; Mayo Clinic Arizona, Scottsdale, AZ; Mayo Clinic, Rochester, MN; Mayo Clinic, Scottsdale, AZ.

RATIONALE: Urinary leukotriene E4 (LTE4) may be a biomarker that distinguishes aspirin-intolerant asthma from other asthma subtypes. Specific Aim: to estimate the diagnostic testing accuracy of LTE4 as a marker of aspirin intolerance in patients with asthma using previously published studies.

METHODS: We identified relevant clinical studies from a systematic review of English and non-English articles using MEDLINE, EMBASE, and CENTRAL. Articles were screened at the abstract and full text level by two independent reviewers. We included previously published studies which analyzed LTE4 in human subjects with asthma who had been characterized as having or not having aspirin intolerance on the basis of a specified definition. Receiver operator characteristic (ROC) curves were constructed and area under curve (AUC) calculated for each method used to measure LTE4 by comparing against the gold standard of a positive aspirin challenge.

RESULTS: The search strategy identified 867 potential articles, of which 86 were reviewed at the full text level and 10 met criteria for inclusion. The sensitivity, specificity, positive predictive value and negative predictive values of LTE4 to determine aspirin intolerance in asthmatic subjects were 0.55, 0.83, 0.77, 0.65 (Amersham-EIA); 0.76, 0.79, 0.73, 0.82 (Cayman-EIA); 0.73, 0.81, 0.76, 0.79 (mass spectrometry) and 0.81, 0.80, 0.65, 0.90 (radioimmunoassay) at optimal threshold of 192, 510, 165 and 69 pg/ml Cr respectively. The diagnostic odds ratio for each methodology was 6.11; 12.27; 11.70; and 17.33 respectively.

CONCLUSIONS: This study defines the diagnostic testing accuracy of LTE4 in determining aspirin intolerance in asthma.

L5 Factors Affecting Control and Adherence to One Year Treatment in Elderly Asthmatics in Turkey

Prof. Bilun Gemicioglu, MD, PhD1, Prof. Hasan Bayram, MD, PhD2, Prof. Arif Cömmez, MD3, Prof. Ozunur Abadoglu, MD4, Prof. Aydur Cilli, MD5, Prof. Esra Uzlasan, MD6, Prof. Hakim Gun, MD7, Dr Levent Akcaydiz, MD8, Prof. Mecit Suerdem, MD9, Prof. Tefik Ozlu, MB10, Prof. Zeynep Mısır, MD11, Istanbul Univ. Cerrahpasa Faculty of Medicine, Istanbul, Turkey; University of Gaziantep, Gaziantep, Turkey; Dokuz Eylül University Faculty of Medicine, Izmir, Turkey; Cukurova University Faculty of Medicine, Sivas, Turkey; Akdeniz University Faculty of Medicine, Antalya, Turkey; Uludag University Faculty of Medicine, Bursa, Turkey; Verniyapsa Pulmonary Diseases Hospital and Research Center, Istanbul, Turkey; Mardin Medical Park Hospital, Mardin, Turkey; Sıla University Faculty of Medicine, Konya, Turkey; Karadeniz Teknik University Faculty of Medicine, Trabzon, Turkey; Ankara University Faculty of Medicine, Ankara, Turkey.

RATIONALE: The objective of this study was to investigate the factors that affected the control and the adherence to one year treatment of newly diagnosed elderly asthmatics (EA) living in different areas of Turkey, and to compare these with young asthmatics (YA) regarding different parameters.

METHODS: A total of 1116 newly diagnosed adult asthmatic patients from 122 secondary or tertiary centers of different geographic locations took part in the study, and a standard web-based questionnaire was applied from July-2012 to March-2014. Patients were divided into two groups as YA (age: 18-59) and EA (age≥60). The differences in biometric parameters, pulmonary functions, allergic status, comorbidities, first given therapies, one year control, and adherence to treatment were analyzed.

RESULTS: The age of 12.2% of the new-onset asthma patients was ≥60 years. Body mass index was found as 27.8 kg/m² for YA and 29.8 kg/m² for EA (p<0.001). The presence of any comorbidity was 66.2% and 52.2% in EA and YA, respectively (p=0.003). Combined inhaled steroid plus long acting beta2 agonists were the most frequently administered treatment (83.0% vs. 93.4% in YA and EA, p=0.002).

The asthma control during one year was not significant between groups. But the number of wishes were elevated in EA than YA (1.60 vs 1.22, p=0.01). The adherence to therapy was not significant between groups. The adherence to therapy in EA was significantly correlated with the presence of hypertension (p=0.025).

CONCLUSIONS: Our findings demonstrated that EA presented more comorbidities and the presence of hypertension increased adherence to asthma treatment in elderly asthmatics.

L6 Comparison of Omalizumab Therapy Effectiveness in Patients with Heterogeneity to Non-Steroidal Anti-Inflammatory Drugs (NSAID) and Patients Who Tolerate NSAID (non-NSAID) – Polish Real Life Experience

Dr Izabela R. Kuprys-Lipinska, MD, PhD, Dr Pawel Majak, MD, PhD, Ms. Joanna Molinska, M. Sc., Mr. Mateusz Jonakowski Student, Prof. Piotr Kunis, MD, PhD; Department of Internal Medicine, Asthma and Allergy, Barlicki University Hospital of Medical University of Lodz, Lodz, Poland.

RATIONALE: Heterogeneity to non-steroidal anti-inflammatory drugs (NSAID) is a distinct phenomenon of severe asthma, but may coexist with allergy. The aim of the analysis was to compare the effectiveness of omalizumab (OMA) in the treatment of severe allergic asthma in patients with heterogeneity NSAID to patients who tolerate NSAID (non-NSAID).

METHODS: 38 patients started OMA therapy in the Polish program for the treatment of severe allergic asthma in Barlicki Hospital between 2013 and 2015 year. We prospectively evaluated OMA effectiveness recording changes in oral corticosteroids daily dose (OCS), annual numbers of asthma exacerbations, the Asthma Control Questionnaire (ACQ) score, and the Asthma Quality of Life Questionnaire (AQLQ) score in 16th week and 52nd week of therapy. At the baseline the positive history of hypersensitivity to NSAID was reported by 14 patients, 24 patients tolerated NSAID.

RESULTS: The baseline characteristic of study groups in respect of demographic data, anthropologic data and severity of asthma did not significantly differed between NSAID and non-NSAID (P>0.05). 4 patients (2/2 from NSAID/non-NSAID) stopped themselves the therapy due to subjective lack of benefit. In both groups we observed significant improvement in ACQ, AQLQ scale as well the reduction of exacerbations and the OCS dose in 16th and 52nd week (P<0.05). The improvement in asthma control parameters between study groups did not differed in 16th and 52nd week (P>0.05).

CONCLUSIONS: The OMA seems to be equally effective in patients suffering from severe allergic asthma independently of NSAID hypersensitivity status but the population study is required to confirm this observation.
L7 Role of Home Environmental Staphylococcus Aureus Bacterial Allergens in Childhood Asthma

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RATIONALE: Staphylococcus aureus (SA) may induce allergic (Th2-biased) inflammatory responses through secreted staphylococcal enterotoxin (SE) A-D superantigens. SA is known to exacerbate eczema and increasingly is implicated in asthma exacerbations. We quantified putative staphylococcal allergens in home dust using a bacterial genetic method, then we associated SA/SE exposures with respiratory symptoms among children with asthma.

METHODS: We measured SA (femB) and SEA-SEA genes in home dust extracts from the randomization visit (before treatment) in the completed Asthma Control Evaluation cohort (NCT00114413) using real-time PCR. We tested cross-sectional associations between dust exposures and self-reported respiratory symptoms in 245 inner-city children with asthma (~50% of the cohort) using linear and binomial regression modeling.

RESULTS: We identified SA genes in 189 (77%) of 245 homes, with prevalence of any SE gene detection as follows: SEA (60%); SEB (52%); SEC (51%); SED (63%). Among children with asthma, mean ACT score was 20.7 and mean days of symptoms in the prior two weeks were: wheeze/ cough: 22; interference with activities: 1.2; sleep disruption: 0.6. Strong dust SE detection, i.e., threshold cycle (Ct)≤35, was associated with worse ACT score [β=-1.46, p=0.01] and increased odds of having a symptom day for each of the two-week outcomes, e.g., [wheeze/cough OR 1.55, p<0.001]. SA and SED/SED were variably associated or were not associated with respiratory symptom outcomes.

CONCLUSIONS: Home staphylococcal dust exposures (SA/SE) were common among inner-city children with asthma. Dust SE detection consistently was associated with increased respiratory symptoms in this cohort. Longitudinal studies are needed to confirm and explicate this novel finding.

L8 Environmentally-Induced Epigenetic Changes Correlate with Race and Childhood Asthma Severity

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RATIONALE: Socioeconomic status, genetic predisposition and environmental factors contribute to asthma incidence and severity. Children with asthma who are economically disadvantaged likely live in substandard housing with potential indoor environmental exposures that may manifest through epigenetic mechanisms. We examined the association of global DNA methylation with socioeconomic status, asthma severity and race/ethnicity.

METHODS: Global DNA methylation was measured in peripheral blood of children with asthma between the ages of 2 and 17 yrs enrolled in the Kansas City Safe and Healthy Homes Program. Inclusion criteria included residing in the same home for a minimum of 4 days per week and total family income of less than 80% of the Kansas City median family income (MFI). A three-way mixed factorial ANOVA was used to analyze global DNA methylation. When appropriate, follow-up analyses were performed using independent-samples tests and ANOVA models with Bonferroni corrections.

RESULTS: Our results indicate that overall, African American children with asthma had significantly higher levels of global DNA methylation than children with asthma of other races/ethnicities (p = 0.029). This difference was more pronounced when socioeconomic status and asthma severity were considered (p = 0.042). In children with persistent asthma from the lowest income families (<50% Kansas City MFI), significantly higher levels of global DNA methylation were observed in African American children compared to children of other races/ethnicities (p = 0.05).

CONCLUSION: Our study demonstrates a significant interaction effect among global DNA methylation levels with asthma severity, race/ethnicity, and socioeconomic status.

L9 Withdrawn
L10 Megolizumab in COPD with Eosinophilic Bronchitis: A Randomized Clinical Trial

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Rationale: Chronic obstructive pulmonary disease (COPD) is associated with eosinophilic bronchitis in 10–20% of patients. Megolizumab, an anti-interleukin-5 antibody, depletes blood eosinophils, sputum eosinophils and reduces exacerbations. We investigated if it had similar effects in COPD with airway eosinophilia.

Methods: This was a double-blind, placebo-controlled, randomized single-centre study. Patients (40–80 years) with current moderate-to-severe COPD (post-bronchodilator FEV1/FVC <70%; post-bronchodilator FEV1 <60% predicted) and current/ex-smokers (>10 pack-years) with sputum eosinophilia (2% or more) received monthly IV injections of megolizumab 750 mg or placebo for 6 months.

Results: A total of 18 patients were recruited (8 in active-arm; 10 in placebo).1 patient in the placebo group withdrew after randomization. Megolizumab reduced sputum eosinophils (baseline 11% to 3.3% at 6 months in active arm vs 9.4% to 1.7% in placebo arm, p<0.05) and blood eosinophils (0.69 at baseline to 0.02 at 6 months in active-arm vs 0.36 to 0.28 in placebo-arm, p<0.05). There were no significant changes in the secondary outcome measures: lung function (FEV1, FVC, SVEF, FEV1/FVC, FEV1/SVC, FEV1/FVC, TLC, RV, RV/TLC and DLCO), exacerbation rates and Quality of life scores; no significant treatment effects on airway-wall area %, lumen area, parametric response maps or relative areas of the CT density-histogram. However, the CRQ mean dyspnea domain score change was clinically meaningful (≥0.5 units).

Conclusions: Megolizumab does not improve lung function and exacerbation rates in COPD with eosinophilia. This suggests that although eosinophils are a predictor of response to treatment with corticosteroids, unlike in asthma, they may not directly contribute to luminal obstruction in COPD.

L11 Role of R213G Polymorphism in Airways HYPERSENSITIVITY

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Rationale: The R213G polymorphism (rs1799895) in EC-SOD (Extracellular superoxide dismutase) protects smokers from developing COPD by reducing the EC-SOD from extracellular matrix into extracellular fluids such as plasma and epithelial lining fluid (ELF). The high levels of EC-SOD in ELF suggest a potential role for mitigating oxidative stress and airway hyperresponsiveness.

Methods: C57BL/6 R213G knock-in mice were sensitized and challenged with ovalbumin (OVA) or saline. Airway hyperresponsiveness (AHR) was measured with flexiVent. Bronchoalveolar lavage fluid (BALF) was used for cell counts. Cytokines in supernatant from BALF were assayed using a V-plex assay from MSD.

Results: Airway resistance (R) was significantly increased in wild-type (WT) OVA mice (N=6) compared to the saline group (N=9, p<0.0001), but not in R213G heterozygotes (HETs) OVA mice (N=7). However, homozygotes (HMs) OVA mice (N=4) showed higher R at 25 (p<0.05) and 50ng/ml (p<0.001) methacholine than the saline mice. Total number of BALF cells increased in WT OVA compared to the saline group (p=0.0017). IL-4, IL-5, IL-6, TNF-α, and IFN-γ were increased in WT OVA (p<0.01) but not in HETs or HMs compared to the saline group. However, IL-1β and KC/GRO were higher in HMs and WT OVA compared to the saline group (p<0.05).

Conclusions: The R213G polymorphism appears to be protective in AHR and both Th1 and Th2 cytokines were suppressed. Maximal protection was observed in the heterozygotes, suggesting that both high ELF and tissue antioxidant activity may be important in the AHR.

L12 Prostaglandin E2 Injection Suppressed Chronic Asthma Challenge in Patients with and without Aspirin Hypersensitivity

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Rationale: Induced sputum (IS) supernatant allows to measure lipid mediators of asthmatic inflammation in bronchial secretions. The specific role of endogenous bioactive prostaglandin E2 (PGE2) in aspirin-induced asthma (AIA) is not well understood.

Methods: To investigate the influence of aspirin on sputum supernatant concentration of PGE2 during aspirin challenge, using chromatography-mass spectrometry measurements in subjects with AIA (n=26) and aspirin-tolerant asthma (AIA, n=17), and healthy controls (HC, n=21). IS was collected before and following oral aspirin challenge. Sputum differential cell count and sputum supernatant concentrations of PGE2 were assessed.

Results: Aspirin precipitated bronchoconstriction in all AIA subjects, but in none of the AIA and HC. Phenotypes of asthma based on the sputum cytology differed between the groups. The IS specimens were mainly eosinophilic in AIA and paucigranulocytic in HC. In AIA group non phenotype based on the sputum cytology was dominant. At baseline, mean sputum supernatant concentrations of PGE2 were higher in asthma patients independent of aspirin hypersensitivity as compared to HC. Following the challenge, PGE2 decreased in all study groups (ANOVA, p<0.001). However, this decrease was statistically significant only in AIA patients (p<0.01) and HC. A cumulative dose of aspirin had no effect on the magnitude of the PGE2 alterations.

Conclusions: PGE2 decreases significantly in AIA during the oral challenge. The results support theory on the inhibition of PGE2 biosynthesis as a trigger for bronchoconstriction mediated by cysteinyl leukotrienes in AIA.
L13 A New Pharmacological Approach for Asthma through Tissue-Specific Modulation of the GABA(A) Receptor
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RATIONAL: This study addresses the unmet need for an oral, safe, non-steroideal asthma treatment by targeting GABA_A receptors (GABA_ARs) in lung tissues. The hypothesis is that GABA_ARs in inflammatory and airway smooth muscle (ASM) cell can be targeted by subtype-selective GABA_A agonists to tissue-selectively induce immunosuppression and ASM relaxation.
METHODS: A drug discovery approach identified GABA_AR targets in lung cells by immunodetection, subtype selectivity by electrophysiology, preclinical characterization of active ligands using microsomes, S9, and blood plasma stability assays. Pharmacokinetic studies in mice are applied to identify in vitro stability and distribution. Murine pharmacodynamic models are used to quantify sensorimotor effects (rotated), disease specific airway hyperresponsiveness, airway mucus production, and airway eosinophilia. Subtype-selective GABA_AR ligands were evaluated for immune modulation using in vitro T-cell assays and ASM muscle relaxation with isolated ASM.
RESULTS: The α4 subtype-selective GABA_AR ligand XHE-III-74EE showed high stability in vitro but a limited half-life in vivo due to rapid metabolism and clearance. Chronic administration of 20 mg/kg XHE-III-74EE successfully reduced airway hyperresponsiveness without inducing adverse CNS effects. Mucus hypersecretion was reduced for chronic and acute treatment. Similar results were observed for metabolite XHE-III-74A that exhibits α4 GABA_AR subtype selectivity. XHE-III-74A significantly reduced eosinophilia, which is consistent with antiinflammatory suppressive effects in activated T-cells as measured by intracellular calcium release and IL-2 production. Both compounds were able to induce ASM muscle relaxation.
CONCLUSIONS: α4-Selective GABA_A agonists have a great potential as novel drug candidates for asthma to alleviate symptoms of airway hyperresponsiveness mediated by ASM constriction, hypereosinophilia, inflammation, and mucus overproduction.

L15 Case Report of a Previously Unreported Type of DOCK8 Deficiency
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RATIONAL: Dedicator of cytokines 8 (DOCK8) deficiency is an autosomal recessive hyper-IgE syndrome characterized by recurrent bacterial, viral and/or fungal infections, atopic dermatitis and food allergies. Previous reports demonstrate either autosomal recessive or compound heterozygosity defects within the DOCK8 gene.
METHODS: Genetic sequencing evaluation of DOCK8, SPINK5, STAT3, and TYK2 were performed by GeneDx.
RESULTS: The patient presented with severe atopic dermatitis, eczema herpeticum, and severe food allergies. Immune evaluation showed decreased NK cell function, absent CD45+ total lymphocyte and CD3+ T cell responses to Tetanus toxoid and a serum IgE of 15,828 kU/L. Targeted comparative genomic hybridization revealed a heterozygous defect, c.624-12 T>A, a variant of unknown significance in the DOCK8 gene.
CONCLUSIONS: c.624012 T>A variant is a previously unreported mutation that is likely responsible for the findings in this patient. This is the first reported case of this heterozygous mutation and may be clinically useful in the diagnosis and treatment of severe atopic dermatitis that does not fit the established criteria for previously reported hyper-IgE syndromes.

L14 Role of Circulating ICOS+ Follicular Helper T Cells in the Pathogenesis of Birch Pollen Allergy
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RATIONAL: Production of antigen-specific immunoglobulins in tissues is controlled by follicular helper T (Tfh) cells, which are recognized as memory Tfh cells in peripheral blood. Recent studies have revealed that inducible T-cell co-stimulator (ICOS) and programmed death 1 (PD-1) are activation molecules in blood Tfh cells. However, the role of blood Tfh cells expressing such molecules in the pathogenesis of birch pollen allergy remains unknown.
METHODS: Patients with birch pollen allergy (n = 34) and healthy controls (n = 21) were recruited in this study. Expression of ICOS and PD-1 in blood Tfh cells from subjects in pollen and pollen-free seasons (i.e. before and after the periods with pollens) was examined by flow cytometry. Correlations between results of flow cytometry and clinical parameters were also analyzed.
RESULTS: Levels of ICOS and/or PD-1 expression in clinical patients were similar to those in the controls throughout the pollen-free seasons, whereas the percentages of ICOS expression in blood Tfh cells during the pollen season were temporally increased in the patients compared to those in the controls. We also found that total symptom scores were significantly correlated with percentage of ICOS+ blood Tfh cells. Moreover, differential levels of ICOS expression in pollen- and pollen-free seasons were significantly correlated with those of birch pollen-specific IgE.
CONCLUSIONS: Our findings suggest that increase in ICOS expression in pollen- and pollen-free seasons was significantly correlated with those of birch pollen-specific IgE.
L16 Immune Phenotype in Children with Mitochondrial Disease
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RATIONAL: Mitochondria contribute to metabolic processes important for cellular growth and function. Defects in mitochondrial function might negatively impact immune development and responses. Interestingly, there have only been a few publications reporting on increased rate of infections in certain patients with mitochondrial disease. In this clinical retrospective study, we performed immune analysis on 70 pediatric patients diagnosed with mitochondrial disease defined by definitive Walker criteria. The majority of patients lack a history of life-threatening infections.

METHODS: From our mitochondria cohort, we selected all patients diagnosed as definitive based on the Walker criteria. Seventy patients were identified, 16 with Leigh, 6 with depletion, 2 with SANDO, 1 with NARP, 1 with MELAS and the rest with unknown syndrome. We performed a laboratory retrospective review, documenting all commercial immune results.

RESULTS: Immunoglobulin and IgG subclass levels were within normal range for >90% of patients. Lymphocyte subset data was present for 44 patients. Although the CD45RA absolute count was within the age-specific normal range, the vast majority (65/71, 92%) of the values were in the lower third of the normal range. However, the %CD45RA was below the lower threshold for normal values (n=60, 85%). Conversely, the CD45RA values were on the upper threshold of normal. Most patients have protective titters to tetanus, diphtheria and pneumococcus.

CONCLUSIONS: Most patients with mitochondrial disease do not have perturbed immune development except for reduced CD45RA memory lymphocytes. The clinical significance of this result is unclear, but it suggests that mitochondrial function might be necessary for optimal immune memory development.

L17 Evaluation of Serum Levels of Osteopontin and IgG Anti- Osteopontin Autoantibodies As Potential Biomarkers of Immune Activation in Patients with Allergic Diseases
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RATIONAL: Osteopontin (OPN) is a pleomorphic cytokine known to influence a wide range of immune cells; high OPN and IgG anti-OPN autoantibodies (AutoAbs) levels are associated with an increased risk of autoimmune lymphoproliferative syndrome, multiple sclerosis and systemic lupus erythematosus. We aimed to verify if serum levels of OPN and IgG anti-OPN AutoAbs may qualify as biomarkers of an activated immune response also in allergic patients.

METHODS: Serum OPN levels were measured by ELISA test (Human Osteopontin DuoSet, R&D Systems, for OPN detection; “in-house” kit for anti-OPN AutoAbs). A series of 121 adult patients affected by asthma, allergic rhinitis (AR), Hymenoptera venom allergy (HVA), food allergy (FA), allergic contact dermatitis (ACD) and IgE-mediated hypersensitivity to beta-lactams (IEHB) was studied. 116 healthy subjects served as controls.

RESULTS: OPN serum levels were significantly higher in cases in comparison to controls (p=0.0010 by the Mann-Whitney test). Statistically higher levels were found in asthma (p=0.0269) and FA (p=0.0346) groups in comparison to controls. Prevalence and titters of serum IgG anti-OPN AutoAbs were significantly lower in cases with respect to controls (p<0.0001). Lower levels of AutoAbs versus controls were found in patients with HVA (p=0.0011), AR (p=0.0059), ACD (p=0.0011) and asthma (p=0.0013), but not in FA group (p=0.0575). Patients with IEHB presented heterogeneous results for OPN and anti-OPN AutoAbs.

CONCLUSIONS: Serum OPN levels may represent a novel, potentially useful biomarker for allergic asthma and, interestingly, for food allergy.

L18 Patient-Reported Outcomes (PROs) in Patients Receiving Omalizumab (OM): A Systematic Literature Review
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RATIONAL: To summarize clinical trial and real-world evidence describing the magnitude and duration of impact of OMB as add-on therapy on PROs in patients with moderate to severe allergic asthma.

METHODS: Systematic literature review (MEDLINE/EMBASE) was conducted to identify studies of OMB in pediatric/adolescent/adult patients with moderate to severe allergic asthma. Outcomes of interest included measures of self-reported asthma control, asthma-specific and general quality of life assessments/questionnaires, and patient symptom reports.

RESULTS: 25 randomized controlled trials (RCTs) and 34 non-randomized studies (NRs) were included. Among 8 RCTS reporting the Asthma Quality of Life Questionnaire (AQLQ) overall score, statistically significant improvements favoring OMB versus placebo/control, were documented in 5 studies; at 52 weeks, mean/median changes from baseline in domain and overall scores ranged from 1.01-1.33 for OMB and from 0.8-0.98 for placebo (p<0.01). At 20-52 weeks, proportions of patients with a minimally important difference (MID) in AQLQ improvement (≥0.5 points from baseline) ranged from 57.5%-78.8% with OMB and from 22.2%-69.8% with placebo/control. Statistically significant improvements in mean Asthma Control Test (ACT) scores from baseline to post study were found in 12 of 22 NRs; ranging from 9.4-17.28 at baseline to 17.4-22.5 at 8 months to 6 years. Seventeen of 22 NRs reported achievement of a MID in ACT (≥3 points from baseline) for patients treated with OMB.

CONCLUSIONS: Results from this systematic literature review confirm that OMB-treated patients with moderate to severe asthma achieve clinically meaningful improvements in PROs, which are observed across both RCTs and observational studies.
L19 Epicutaneous Allergen Exposure Dose Determines Manifestation of Allergic Airway Disease in Mice
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Rationale: As cat allergies are associated with severe asthma in children, we sought to determine whether the application of cat dander to barrier-disrupted skin could play a role in the development of allergic asthma.

Methods: In 4-6 week old female mice (BALB/c, C57Bl/6 and mice transgenic for the human HLA DRB1*0401), cat dander extract (CDE) was applied (1.5, 15 or 150 μg) to a shaved area on their back for 10 days after tape stripping. Mice were then administered intranasal challenges to CDE to localize the response to the lungs. Eosinophilia was determined by Wright-Giemsa staining of the bronchoalveolar lavage fluid (BALF) and hematoxylin and eosin staining of lung sections. Airway resistance was measured through a nebulized methacholine challenge.

Results: Mice exposed to 15 μg CDE on the skin showed increased eosinophil numbers in the BALF and peribronchial tissue (BALB/c: 2.3 ± 1.8 x 10⁶ eosinophils and 0.262 ± 0.257 eosinophils/mm² respectively) compared to naïve mice (BALB/c: 0.02 ± 0.04 x 10⁶ eosinophils in BALF and 0 eosinophils/mm² in the peribronchial tissue; p <0.05). Airway resistance was also increased. Intriguingly, eosinophilia and airway resistance were markedly reduced in mice that received 150 μg CDE on the skin (BALB/c: 0.5 ± 0.4 x 10⁶ eosinophils in BALF and 0.07 ± 0.05 eosinophils/mm² in the peribronchial tissue).

These trends were observed in all three strains.

Conclusions: Although epicutaneous exposure to cat dander on barrier-disrupted skin can lead to allergic airway disease, at a high dose of cat dander on the skin these features of disease are attenuated.

L20 Analysis of Home Dust for Allergens Related to Staphylococcus Aureus
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Rationale: The bacterium Staphylococcus aureus (SA) is known to induce allergic inflammatory responses, including through secreted staphylococcal enterotoxin (SE) A-D superantigens. SA is known to exacerbate eczema; a growing body of evidence suggests SA exposure may exacerbate a related disease, atopic asthma. While methods are established to quantify home environmental allergen exposure, corresponding methods for SA/SE assessment have not yet been validated. We adapted a method for home dust SA/SE detection and applied it in INHALE study homes of inner-city adults with asthma.

Methods: We conducted laboratory experiments to optimize sample processing and real-time PCR methods for genetic assessment of SA (femB) and SEA-D, based on published primers. We applied this method to dust and dust extract from 21 homes. We compared results from bacterial gene assessment to culture-based results from the same homes.

Results: The Biostic® Bacteremia DNA Isolation Kit (MoBio Laboratories) with 50mg raw dust and using 9μl isolated DNA for qPCR assessment performed equally or better than alternative methods. Application to INHALE homes demonstrated that while 10 (48%) of 21 homes were culture-positive for SA, all had detectable SA genes. Prevalence of SE detection in cultured SA isolates was 0% but in raw dust was: SEA 33%, SEB 76%, SEC 62%, SED 24%. Dust extract and raw dust demonstrated strong SA gene correlation (femB, Pearson’s coefficient 0.80), but weaker correlations for SE genes.

Conclusions: Compared to culture-based assessment, bacterial gene-based testing of home dust was more sensitive for staphylococcal (SA/SE) exposures. Staphylococcal exposures may be common among inner-city adults with asthma.

L21 Risk Factors for Childhood Peanut Allergy in a Large Birth Cohort Study: Growing up in New Zealand
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Rationale: The prevalence of IgE-mediated food allergy is increasing worldwide. However the prevalence of childhood food allergy and early life determinants remain unclear. We determined the prevalence of peanut allergy at age 2 years and both perinatal and postnatal factors associated with the risk of peanut allergy, within a contemporary New Zealand (NZ) birth cohort study.

Methods: Growing Up in New Zealand is an ethnically and socio-economically diverse cohort made up of 6853 births from 2009-2010 (11% of all births in NZ over this period). Between late pregnancy and when the children were 2 years old information was collected on child characteristics and their environments. Prevalence of peanut allergy was determined by parental report of doctor diagnosis. Multivariable logistic regression was used to describe the early life factors associated with the presence of peanut allergy.

Results: By age 2 years, 162 (2.6%, 95% CI 2.2-3.0%) cohort children were identified as peanut allergic. The odds of having peanut allergy were increased for boys (OR=1.59, 95% CI 1.13-2.26), children diagnosed with eczema since 9 months (OR=10.72, 95% CI 7.26-16.31), children whose mother had a history of atopic disease (OR=1.40, 95% CI 1.00-1.97), or whose mothers identified as being of Asian ethnicity (OR=2.27, 95% CI 1.48, 3.43).

Conclusions: This is the first study to determine prevalence in a diverse NZ cohort and identify key early determinants. In particular the increased likelihood of a peanut allergy in children born to mothers who identified as Asian may be related to discrete biological and environmental factors, further investigation is needed.
**L22** Increased Cis-to-Trans Urocanic Acid Ratio in the Skin of Chronic Urticaria Leads to the Enhancement of Mast Cell Degranulation

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**RATIONALE:** Increased filaggrin expression was positively correlated with urticaria severity in our previous study. However, the role of filaggrin breakdown products (FBP) in the pathogenesis of CU has not been studied.

**METHODS:** FBP, including pyrroldione carboxylic acid (PCA) and urocanic acid (UCA) were quantitated in stratum corneum (SC) samples collected from volar forearm regions (6 consecutive tapes) employing UPLC/MS/MS from 10 CU. 10 atopic dermatitis (AD) and 10 normal subjects. *In vitro* effects of *cis*- and *trans*-UCA on human mast cell degranulation were assessed by beta-hexosaminidase release assay using LAD2 cells.

**RESULTS:** With normalization by protein content, total amount of FBP and PCA content was significantly decreased in lesional (21.56 ± 20.2 and 16.70 ± 15.4 ng/mg protein, respectively, P < 0.01) AD skins as compared to NC (63.86 ± 21.9 and 49.14 ± 16.3). However, those were not significantly different in SCU lesions (44.54 ± 31.2 and 34.48 ± 23.6) compared with NC. *Trans*-UCA, the primary isomer of the UCA in NC, was significantly decreased in SCU and AD. The proportion of *cis*-UCA was significantly higher in SCU skin (0.44 ± 0.24, P < 0.01) compared with AD (0.14 ± 0.20) and NC (0.10 ± 0.12). Both TEWL and pH were significantly increased in AD lesions compared with SCU lesions. *cis*-UCA dose-dependently enhanced the IgE- and calcium-mediated degranulation of LAD2 cells (P < 0.001), which was not observed with *trans*-UCA.

**CONCLUSIONS:** FBP deficiency in AD was confirmed in the association with a significant increase in TEWL and pH in AD. Increased ratio of *cis*-to-*trans*-UCA, and decreased epidermal pH in SCU can be associated with UC pathogenesis. *cis*-UCA could contribute to the pathogenesis of CU by enhancing mast cell degranulation.

**L23** Multicenter Study of Food Induced Anaphylaxis in Korean Infants

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**RATIONALE:** Food induced anaphylaxis in young age group is increasing. We aimed to analyze clinical characteristics of anaphylaxis in Korean infants.

**METHODS:** A retrospective medical record review was performed on infants (0–2 years old) diagnosed with anaphylaxis between 2009 and 2013 in 23 tertiary hospitals in South Korea.

**RESULTS:** 363 anaphylaxis cases (66.9% male) were identified. Cutaneous symptoms (98.6%) were the most common symptoms followed by respiratory (83.2%), gastrointestinal (29.8%), and neurologic (11.6%). Cardiovascular symptoms were rare (7.7%), 338 cases (93.1%) of anaphylaxis was induced by foods. 185 cases (51.0%) of anaphylaxis occurred within 30 minutes after offending food exposure. The most common trigger food was milk (44.3%) followed by egg (22.0%), wheat (7.7%), peanut (4.8%), other nuts (3.0%), and fish (2.1%). The median value of specific IgE (sIgE) by immunoCAP to milk was 6.80 (range 0.37 ~ 427.00) kU/L, 51.7% of infants under 12 months of age and 55.9% of infants aged 12 months and over had their symptoms even under the levels of milk-sIgE diagnostic decision points. The median value of egg-sIgE was 10.40 (range 1.03 ~ 100.00) kU/L, 93.2% of egg-induced anaphylaxis cases had egg-sIgE levels above diagnostic decision points.

**CONCLUSIONS:** Milk was the most common trigger food of anaphylaxis in Korean infants. Half of the cases of anaphylaxis occurred within 30 minutes after exposure. Even in very low level (0.37 kU/L) of milk-sIgE, anaphylaxis could occur and more than half of the infants with milk anaphylaxis showed milk-sIgE levels under the diagnostic decision point.

**L24** Proteomic Profiling of Atopic Dermatitis, Psoriasis, and Contact Dermatitis Patients

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**RATIONALE:** Atopic dermatitis (AD), psoriasis (PS), and contact dermatitis (CD) are common inflammatory skin diseases characterized by significant barrier disruption and systemic inflammation. Transcriptomic profiling has identified unique epidermal signatures as well as common inflammatory pathways. Given the systemic nature of the diseases, this study profiled the proteomic signatures in serum from subjects with AD, PS, and CD compared to healthy donor controls.

**METHODS:** Serum was collected from 20 subjects with moderate-to-severe AD, 20 subjects with CD, 12 subjects with moderate-to-severe PS, and 10 healthy controls with no history of skin disease. Protein expression was evaluated by SOMAscan®, Singleplex®, and multiplex technology. Expression in AD, CD, and PS serum was compared to healthy controls for statistical significance (fold change > 1.5 and false discovery rate < 0.05) and lists compared between diseases to identify unique proteomic signatures.

**RESULTS:** This study identified 7 proteins (Up Regulated: C5a, PARC, LBP, CRP, ILT-4; Down Regulated: CAMK2B, Carbonic anhydrase 6) that were similarly modulated in all inflammatory skin diseases compared to healthy controls. Additional comparisons with serum from healthy controls revealed significant modulations in a total of 25, 5, and 64 proteins in subjects with AD, PS, and CD, respectively. Protein signatures were further refined by comparing between inflammatory skin diseases. This resulted in a unique signature of increased IgE, CCL17/TARC, and CCL22/MDC in AD; which significantly correlated (p<0.05) with disease severity.

**CONCLUSIONS:** This study suggests unique proteomic signatures in the sera may potentially distinguish between inflammatory skin diseases despite similar epithelial barrier disruption and epithelial inflammation.
L25  Efficacy and Safety of Crisaborole Topical Ointment, 2%, a Novel, Nonsteroidal, Topical, Anti-Inflammatory, Phosphodiesterase Inhibitor in 2 Phase 3 Studies in Children and Adults with Mild-to-Moderate Atopic Dermatitis

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RATIONALE: Phosphodiesterase 4 (PDE4) enzyme is overexpressed in inflammatory cells of patients with atopic dermatitis (AD); this leads to disease exacerbation. Here, we present safety and efficacy from 2 multicenter, double-blind, vehicle-controlled phase 3 studies of identical design in patients with mild-to-moderate AD (NCT02118766 and NCT02118792) treated with the novel, nonsteroidal, topical, anti-inflammatory investigational PDE4 inhibitor Crisaborole Topical Ointment, 2%.

METHODS: Patients ≥2 years old with mild-to-moderate AD were randomized 2:1 to receive crisaborole or vehicle twice daily with evaluation on Days 8, 15, 22, and 29. Primary and secondary efficacy endpoints analyzed AD disease severity with the Investigator’s Static Global Assessment (ISGA). Supportive efficacy endpoints examined time to improvement in pruritus, severity of pruritus, and signs of AD.

RESULTS: Studies 1 and 2 enrolled 503:256 and 513:250 crisaborole/vehicle patients, respectively. At Day 29, more crisaborole-treated patients achieved ISGA success than those treated with vehicle (study 1: 32.8% vs 25.4%, P=0.038; study 2: 31.4% vs 18.0%, P<0.001) with a greater percentage of “almost clear” or “clear” ISGA scores (study 1: 51.7% vs 40.6%, P=0.005; study 2: 48.5% vs 29.7%, P<0.001). Success in ISGA and improvement in pruritus were achieved earlier with crisaborole than vehicle (P<0.001 vs vehicle). A greater proportion of crisaborole-treated patients achieved success for all clinical signs of AD by Day 29. Treatment-related adverse events were infrequent, transient, and mild/moderate in severity.

CONCLUSIONS: Two Phase 3 studies demonstrate that Crisaborole Topical Ointment, 2%, represents a novel, safe, and efficacious treatment for children and adults with mild-to-moderate AD.

L26  The Negative Impact of Persistent Penicillin Allergy Labeling

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RATIONALE: Although 8-20% of patients have penicillin allergy labels (PAL), less than 1% of the population are truly allergic. The extent to which a PAL persists in the EMR despite documented penicillin tolerance is currently unknown.

METHODS: The synthetic derivative (de-identified version) of the electronic medical record (EMR) was mined for patients >18 years or older with >3 visits linked to Vanderbilt ambulatory care from January 2000 to August 2014. Key outcomes including antibiotic utilization and presence of C. difficile infection were compared between cases with (n=1,104) and controls (n=31,084) without PAL. Cases were examined for the persistence of the PAL despite documented tolerance. Categorical variables were analyzed by Pearson Chi-squared test and continuous data by Wilcoxon signed rank test.

RESULTS: Most PAL (67%) were already labeled upon entry into the EMR, and 96% remained persistently labeled. Cases were more likely to develop C. difficile infection (1.2% vs 0.9%, p<0.001). The proportion of prescription encounters for levofloxacin (15% vs 12%), vancomycin (5% vs 4%), clindamycin (8% vs 4%), and aztreonam (1% vs <0.1%) were overrepresented in PAL cases versus unlabeled controls (all p<0.001). Of 11216 PAL, 4321 (39%) had EMR documentation of having received and tolerated a penicillin, however despite this 4045/4321 (94%) retained the PAL.

CONCLUSIONS: In this largely ambulatory population, PALs persist within the EMR despite proven tolerance and are associated with higher risk antibiotic treatments and C. difficile infection. Major reform of the EMR to utilize systematic approaches of documenting, reconciling, and removing the PAL is urgently needed.

L27  Skin Testing for the Diagnosis of Severe Perioperative Anaphylaxis to Clindamycin

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RATIONALE: Clindamycin hypersensitivity reactions (HSRs) are rare with an incidence of 0.4%. Mild cutaneous type I HSRs are most common, and severe HSRs are extremely rare with only three prior case reports of anaphylaxis. Clindamycin skin testing has low sensitivity in mild to moderate HSRs but has not been evaluated in severe HSRs.

METHODS: Skin prick and intradermal tests were performed with clindamycin, propofol, midazolam, ondansetron, and clindamycin.

RESULTS: A 60-year-old woman with leakage of bilateral breast implants presented for capsulectomy with removal and replacement of implants. Anesthesia was induced with midazolam, fentanyl, propofol, and rocuronium. She had an unknown childhood penicillin allergy and was given clindamycin in the operating room prior to induction and ondansetron at the time of induction for nausea. Immediately after induction, she became difficult to ventilate with no response to sevoflurane or albuterol nebulizer. Upon intubation, she was persistently hypoxemic and bradycardic. She developed linear urticaria on her bilateral extremities and went into PEA arrest. ACLS was administered for 8 minutes prior to ROSC. After resuscitation, serum tryptase and histamine were obtained and were 106 ng/mL and >9.99 ng/mL, respectively. She recovered and was evaluated in the Allergy Clinic two months later. Repeat serum tryptase was 3.5 ng/mL, and latex IgE was <0.35 kU/L. Skin testing was negative to rocuronium, propofol, midazolam, and ondansetron. Skin prick test was positive to clindamycin with a 10 mm wheal and 35 mm flare.

CONCLUSIONS: Clindamycin hypersensitivity can cause life-threatening anaphylaxis. Skin testing is useful for diagnosis in severe type I HSRs.
L28 Antibiotic Allergy De-Labeling: Teaching an Old Dog New Tricks
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RATIONALE: Antibiotic allergy labels (AAL) significantly impact antibiotic prescribing and may lead to the inappropriate use of broad spectrum antibiotics which creates a public health concern. Infectious disease (ID) physicians from the Emerging Infections Network (EIN) of the Infectious Diseases Society of America (IDSA) were surveyed to determine their views, access and use of antibiotic allergy testing (AAT).

METHODS: A 10-item online survey was distributed by the EIN in September 2015 to 1172 members practicing adult ID, 323 pediatric and 24 both. Two reminders were sent to non-respondents.

RESULTS: Of 736/1,545 (48%), only 43% had skin prick/intradermal testing (SPT) available and 30% were either unaware of options or had none available. Although 78% overall suggested that a negative test would lead to AAL removal, those with > 15 years experience were significantly less likely to remove AAL (P < 0.001). Most felt AAL removal would aid antibiotic selection (95%), appropriateness (92%), safety (74%) and antimicrobial stewardship (AMS) (82%). Although 68% overall advocated incorporation of AAT into AMS, those with < 15 years experience were significantly more likely to support this (P = 0.006). In the context of a remote reaction history, point-of-care testing (40%) was preferred to antibiotic desensitization (7%).

CONCLUSIONS: ID physicians perceive inadequate access to AAT services. Less experienced physicians were both more likely to view AAT as a means to remove AAL and advocate its incorporation into AMS. A generational shift appears to be occurring that should support AAT as a tool to improve antibiotic appropriateness.

L29 The Use of Drug Desensitization Protocols at a Pediatric Institution
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RATIONALE: Protocols for adults to achieve immunologic IgE and non-IgE induction of temporary drug tolerance (drug desensitization) have been well described. Use of these protocols is recommended only when administration of the drug is essential and requires close collaboration between Allergists, nursing and pharmacy staff. Application of these protocols to pediatric patients is further challenging due to variations in patient weights, target doses and minimum volumes required to infuse drugs. We have established pediatric protocols based on adult guidelines at our pediatric tertiary care center to perform antibiotic desensitizations via a 12 step, 4 syringe method. We describe these protocols and their success.

METHODS: We conducted a retrospective chart review of all patients who had drug desensitization performed between 1/1/2013 and 7/15/2015 under the supervision of a Pediatric Allergist using standardized desensitization protocols and reviewed their outcomes.

RESULTS: In the given period, 5 patients underwent desensitization using the protocol involving 5 different antibiotics (ceftiraxone, ceftriaxone, linezolid, eritapenem, oxacillin). Three of the 5 subjects were female and the mean age was 12 years (range of 3 - 19 years). All 5 patients tolerated the desensitization procedure and subsequent dosing of the drug to complete the full therapeutic course.

CONCLUSIONS: Dose calculation for the various steps of drug desensitization is challenging in a pediatric population where there is a need for customized dosing. This procedure is cumbersome and prone to human error. The pediatric protocols established at our institution have been utilized with success and can potentially be applied to use for other agents.

L30 Early Introduction of Dietary Egg Reduces Egg Sensitization at 12 Months of Age in Infants at Risk of Allergic Disease
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RATIONALE: Epidemiological evidence suggests delayed introduction of dietary egg may promote rather than protect from egg allergy in infants at risk of allergic disease, as has been recently shown for peanut. We examined whether introduction of dietary egg between 4-6 months of age would reduce sensitisation to egg, in infants at risk of allergy.

METHODS: We conducted a randomised controlled trial in infants with at least one first degree relative with allergic disease. Infants were randomised at 4 months of age and included where egg-white (EW) skin prick test (SPT) was <2mm. Infants were randomised to receive pasteurised raw whole-egg powder or rice powder from introduction of solids until 8 months of age, with all other egg excluded. Diets were liberalised at 8 months. Primary outcome was EW-SPT ≥3mm at 12 months of age and analysed using Chi-square test. IgG4/IgE were analysed by non-parametric tests.

RESULTS: 319 infants were randomised to egg (n=165) and rice (n=154). 14 infants reacted to egg within one-week of introduction despite egg-SPT <2mm at randomization. 254 infants were assessed at 12 months of age. Loss to follow up was similar between groups. Sensitisation to EW at 12 months was 20% and 11% in infants randomised to rice and egg powder, respectively. (OR=0.46, 95% CI 0.22 – 0.95, p=0.03). IgG4-EW, ovalbumin and ovomucoid and IgG3/IgE ratios were higher in patients randomised to egg (p<0.0001 for each) at 12 months.

CONCLUSIONS: Early introduction of whole-egg into the diet of high risk infants reduced sensitisation to EW at 12-months of age.
**L31** Correlation of Negative Tree Nut Skin-Prick Tests and Successful Tree Nut Food Challenges Among Peanut-Allergic Children

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**RATIONALE:** Children with peanut allergy are regularly instructed to avoid all tree nuts. However, children with peanut allergy are likely not allergic to all tree nuts. In our cohort of peanut anaphylaxis patients undergoing oral immunotherapy (OIT), we sought to determine the correlation of tree nut skin prick testing (SPT) results and likelihood of successfully passing a tree nut challenge.

**METHODS:** Skin-prick testing was performed to peanut and tree nuts (macadamia, pine nut, coconut, hazelnut, brazil nut, cashew, pecan, walnut, pistachio, almond) in 27 patients with known peanut allergy. The probability of negative SPT (wheat <3mm) for each nut was determined.

**RESULTS:** All patients demonstrated positive peanut allergy diagnostics in skin test, component testing or food challenge. Only 15.4% of patients were SPT positive to peanut alone. Macadamia, pine nut, and coconut SPT had a probability of negative SPT of 0.97, 0.97, and 0.91 respectively. The odds ratio for this group having a negative SPT (compared to a negative SPT) was 46.22. For hazelnut, brazil nut, and cashew the probability of a negative SPT was 0.81, 0.77, and 0.73, respectively. Pecan, walnut and pistachio had odds ratios of 0.68, 0.68, and 0.64, respectively. All patients with macadamia, pine nut and coconut negative SPT subsequently passed 9 gram food challenges without OIT.

**CONCLUSIONS:** Despite current recommendations to avoid all tree nuts for peanut allergic patients, the majority of patients with peanut allergy will have negative skin tests and food challenges to certain tree nuts, especially macadamia, pine nut, and coconut. This pattern was seen despite most patients having multiple nut sensitizations.

**L32** Withdrawn

**L33** Cor a 14 Specific Ig E Best Distinguishes Between Hazelnut Allergic and Tolerant Patients

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**RATIONALE:** Several hazelnut (HZNT) allergens have been identified to date including Cor a 8 (LTP), Cor a 9 (11S globulin) and Cor a 14 (2S albumin). The aim of the study was to determine the importance of these allergens in component resolved diagnosis in HZNT allergic patients.

**METHODS:** Forty-four children suspected to have fruit, nut and/or legume allergy were selected. Patients were classified as allergic if they had presented at least 2 reactions unequivocally related to HZNT ingestion in the last 2 years. Patients were defined as tolerant if they consumed HZNT on a regular basis. Clinical questionnaire, skin prick test (SPT), serum total and specific IgE and MIA-ISAC IgE (Thermo Fisher Scientific, Uppsala, Sweden) were performed.

**RESULTS:** Sixteen patients (11 males) were defined as allergic and 28 (15 males) tolerant. HZNT-SPT wheat scale (mm) (median 7.75: IQR:4.12 vs. 2.5: IQR:0.9-5.9, p=0.000) and HZNT-sIgE (kU/L) (median 14.45; IQR: 1.98-370 vs. 0.82: IQR:0.02-14.3, p=0.000) were significantly greater in allergic than in tolerant children. Both positive Cor a 9-sIgE and Cor a 14-sIgE were significantly more frequent in allergic patients (75.00% vs. 14.28%; p=0.000 and 75.00% vs. 10.71%; p=0.000, respectively). Cor a 9-sIgE values were significantly higher in allergic children whether by means of ImmunoCAP (median 4.38 kU/L; IQR:0.26-16 vs. 0.02 kU/L; IQR:0.0-0.21, p=0.000) or MIA-ISAC (median 0.14 IU; IQR:0.2-2 vs. 0.0 IU; IQR:0.0, p=0.000), as were Cor a 14-sIgE values (median 4.97 kU/L; IQR:0.39-20.4 vs. 0.02 kU/L; IQR:0.01-0.09, p=0.000). This was not found for Cor a 8. ROC curves were constructed for the three allergens showing Cor a 14 the best diagnostic performance (AUC:0.925, 95% CI:0.847-1, p=0.000).

**CONCLUSIONS:** Cor a 14 is the best discriminating allergen in the diagnosis of HZNT allergic patients.
L34 Resolution of Severe Near Fatal Food Allergy Following Hematopoietic Stem Cell Transplantation
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L35 Population-Based Study Suggests Strong Genetic Association Between Eosinophilic Esophagitis and Asthma
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L37 A Trial of an Oral CRTH2 Antagonist in Antihistamine-Refractory Chronic Spontaneous Urticaria
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Rationale: Chronic spontaneous urticaria (CSU) skin lesions show degranulated mast cells and infiltration by CRTH2-bearing leukocytes. Our prior work demonstrated altered blood basophil and eosinophil surface CRTH2 expression in CSU. We sought to evaluate the safety and efficacy of the oral CRTH2 antagonist AZD1981 in CSU.
Methods: Antihistamine-refractory adult CSU subjects were recruited for a Phase II study involving 4 weeks of double-blind, placebo-controlled treatment with AZD1981. Subjects completed daily hive and itch scoring and disease activity surveys. We examined PGD2-induced eosinophil shape change, blood total leukocyte histamine content, CBC differentials, and CRTH2 expression on blood basophils, eosinophils, and ILC2s at baseline and after treatment.
Results: Thirty-six subjects were screened and 22 subjects completed the study. Weekly itch scores were significantly lower 1 week following active treatment with AZD1981 (9.5 to 7.2, n=12, p=0.0264). PGD2-induced eosinophil shape change (10-7 M PGD2) was significantly reduced at the end of treatment (26.9 to 3.1 (net MFI, n=12, p=0.0005) but was similar in the placebo group (10.4 to 7.81 MFI, n=8, p=0.8438). CBC eosinophil percent significantly increased with active therapy (3.17% to 4.43%, n=12, p=0.0396). No SAEs were reported.
Conclusions: This is the first study of an oral CRTH2 antagonist patients with antihistamine-refractory CSU. AZD1981 treatment led to reductions in patient reported itch, reduced PGD2-induced eosinophil shape change, increased basophil CRTH2 expression, and increased blood eosinophils in CSU subjects. These results provide evidence supporting the role for this pathway in CSU.

L38 BCX7353, a Potent Inhibitor of Plasma Kallikrein, Shows Sustained Maximal Enzyme Inhibition When Dosed Orally Once Daily: Results from a Phase I Trial in Healthy Subjects
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Rationale: Plasma kallikrein is a proven target in the treatment of hereditary angioedema (HAE). A first-in-human study evaluated the pharmacokinetics, pharmacodynamics and safety of plasma kallikrein inhibitor BCX7353.
Methods: Healthy subjects (n=94 enrolled, n=92 completed) received single (10, 30, 100, 250, 500 or 1000mg) or multiple (125, 250, 500mg x7 days or 350mg x14 days), once-daily (QD) oral doses of BCX7353 or placebo. Drug levels were measured in serial post-dose samples and plasma kallikrein enzyme activity was measured in a specific bioassay. Safety was evaluated by clinical and laboratory monitoring.
Results: BCX7353 exposure increased slightly greater than proportionally with increasing dose. The half-life of BCX7353 was 50-60 hours, and accumulation in AUClast was approximately 4-fold relative to dosing at Day 7 or 14. Kallikrein inhibition was highly correlated to plasma concentrations, r=0.916. On Day 7, at doses 2250mg QD, plasma concentrations were within or above the target therapeutic range and inhibition of plasma kallikrein was maximal and sustained throughout the dosing interval. Two subjects discontinued the study for gastrointestinal adverse events (AEs). One subject had a diffuse maculopapular rash that resolved with oral steroids. There were no serious AEs, and the maximum tolerated dose was not reached.
Conclusions: Once daily BCX7353 has a generally well tolerated safety profile and provides sustained potent and maximal plasma kallikrein inhibition. Plasma concentrations met or exceeded the predicted therapeutic range over a 24 hour dosing interval. Clinical studies with HAE patients are planned to assess the efficacy of BCX7353 in reducing the occurrence of attacks.

L39 House Dust Mite Major Allergens Contributes Significantly to Specific IgE Response during Allergen Immunotherapy
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Rationale: Allergen-specific IgG4 increases during allergen specific immunotherapy (AIT). In this study, specific IgG4 against the individual major allergens of dust mites during AIT was investigated.
Methods: Patients of allergic rhinitis (n=52) sensitized to dust mite were treated with subcutaneous immunotherapy using standardized D. pteronyssinus (Dp) extract. Patients with allergic rhinitis (n=14) sensitized to dust mites who received medications alone were controls. Specific IgE and IgG4 against Dp, D. farinae(Df) and corresponding major allergens of group 1 (Dp1 and Df1) and group 2 (Dp2 and Df2) were measured before AIT, 6 months and 12 months later.
Results: Combined symptom and medication scores significantly decreased in immunotherapy group. Specific IgG4 against Dp1, Df1 and Df2 allergens increased significantly during AIT (Dp: 0.3, 0.99, 2.72; Df1: 0.16, 0.67, 2.04; Dp2: 0.10, 0.49, 1.49; Df: 0.38, 1.04, 2.62; Df1: 0.12, 0.37, 1.01; Df2: 0.1, 0.44, 1.27, before AIT, 6 months and 12 months later respectively, mag/L). Of the correlations between dust mite extract IgG4 and the individual subgroup allergen IgG4, it was shown that there were strong correlations in terms of both concentrations (after 12 months: Dp-Dp1: r=0.99, Dp-Dp2: r=0.93, Df-Df1: r=0.93, Df-Df2: r=0.95) and levels of increase (after 12 months: Dp-Dp1: r=0.69, Dp-Dp2: r=0.59, Df-Df1: r=0.56, Df-Df2: r=0.77) (P<0.0001 for all). With the same testing instrument (UniCAP system), Df1 and Df2 IgG4 contributed 87% to Df specific IgG4 response, whereas Dp1 and Dp2 contributed 130% to Dp IgG4 response at the 12 months of AIT.
Conclusions: Our findings underscores the importance of major allergens in AIT standardization and design.
L40 Altered TGF-β Signalling in Inflammatory Nasal Polyps Drive Remodelling in CRSwNP

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RATIONALE: Dysregulation of TGF-β and activin signalling play fundamental roles in lower airways remodelling. This study focuses on characterising remodelling changes seen in CRSwNP and accompanying alteration in TGF-β signalling.

METHODS: Immunohistochemical staining was performed on inferior turbinate and nasal polyp biopsy specimens measuring TGF-beta,-activin A and its receptor ALK-4, and phosphorylated SMAD3 in subjects with CRSwNP (n=10) and healthy controls (n=19). Staining for D2-40 and CD34 were used to define lymphatic and vascular remodelling; smooth muscle actin and HSP-47 to study collagen synthesis and myofibroblast transformation. Matrix metalloprotease79 with their inhibitor TIMP-1 were enumerated. Basement membrane thickness was defined using Siris red stain.

RESULTS: Basement membrane zone was markedly thinned in both polyp and turbinates of CRSwNP (p<0.01 versus controls). Turbinates show increased lymphatic and vascular remodelling with polyps nearly devoid of glands and possessing very little blood vessels as demonstrated by differences in total CD31/D2-40 cell counts (p<0.01, p=0.01), blood vessels (p<0.01, p=0.02), vessel size (p=0.01, p=0.04), or vascularity (p=0.02, p=0.25). HSP-47 expression is elevated in polyps (p=0.09) whilst SMA is increased in turbinates (p<0.03). MMP79 with TIMP-1 ratios are elevated in turbinates. TGF-β expression is increased in polyps (p<0.01) with ALK-4 elevated in polyps and turbinates (p=0.02 and p=0.03). Activin levels tend to be higher in polyps CRSwNP (p=0.08).

CONCLUSIONS: This data demonstrates remodelling alterations in both polyps and turbinates of CRSwNP. It is possible that dysregulated TGF-β signalling in inflammatory polyps drives chronic changes in turbinate architecture thereby resulting in characteristic remodelling in this nasal disease.

L41 Real-Life Study on the Effect of Micronized Cellulose Powder As Add-on to Intra-nasal As-Needed Treatment of Subjects with Pollen Allergic Rhinitis

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RATIONALE: The use of symptom relievers on demand is the most common approach in real life for treating exacerbations of allergic rhinitis. We have demonstrated previously that commercially available micronized hydroxyethyl-propyl-methyl-cellulose powder (HPMC) applied after local decongestant significantly enhances its action in subjects with persistent allergic rhinitis. This study investigated whether this beneficial effect of HPMC translates into clinical benefits in a real life setting.

METHODS: Thirty-six symptomatic seasonal allergic rhinitis patients (25 male, median age 31 years) were instructed to treat their bothersome symptoms locally with intra-nasal xylometazoline and/or azelastine and/or mometasone, or, if symptoms persevered, with oral bilastine or prednison. Patients were randomized to “seal” the effect of each local application with one puff of either HPMC or placebo (lactose powder). They completed diaries with symptom scores (0-3), and medications (1 score for any drug application). Objective measurements of Peak Nasal Inspiratory Flow (PNIF), measure of the level of nasal congestion, and Exhaled Breath Temperature (EBT), surrogate marker of airway inflammation, were made before and after treatment.

RESULTS: Combined Symptom and Medication Scores (CSMS) were significantly (P<0.05) lower in the HPMC group, 90±9 vs. 122±12, (mean ± SEM). Following treatment PNIF increased in the HPMC arm by 60% vs. 31% in the placebo one. The before vs. after treatment differences were in favor of the HPMC for both PNIF (P=0.01) and EBT (P=0.007).

CONCLUSIONS: In real life intra-nasal HPMC applied following local rescue medications decreased symptoms and reduced nasal congestion/inflammation in subjects with symptomatic allergic rhinitis.

L42 Distinct and Common Gene Expression Profiles of Nasal Poly Tissues in Eosinophilic and Non-Eosinophilic Chronic Rhinosinusitis

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RATIONALE: Chronic rhinosinusitis (CRS) can be classified into two groups: CRS with (CRSwNP) and without (CRSsNP) nasal polyps. CRSwNP is reportedly characterized by massive eosinophil infiltration and type 2 inflammation. However, some CRSwNP patients, especially Asians, show much less eosinophil infiltration. To clarify the molecular characteristics of these nasal polyps, we investigated the comprehensive gene expression profiles of CRSwNP in Japanese patients.

METHODS: Nasal polyp tissues from adult patients with CRS with eosinophilic polyps (ECRS; n=13, tissue eosinophil count >70 HPF) and CRS with non-eosinophilic polyps (NECRS; n=10, tissue eosinophil count <70 HPF) were diagnosed on the basis of the JESREC Study (Allergy, 2015 Aug; 70(8):595-1003). Those and nasal mucosa biopsy specimens from age-matched control subjects (n=7) were analyzed by a microarray system to determine their comprehensive gene expression profiles.

RESULTS: Expression of type 2- and eosinophil-related genes (IL13, IL5, IL1RL1, CCL26 and CCL23) was increased in ECRS compared with the controls, and the results were comparable to those for CRSwNP in Western countries. In contrast, expression of type 1- and neutrophil-related genes (CSF3, CXCL10, IL8, IFNG and IL1B) was increased in NECRS. A primary component analysis revealed three distinct clusters, reflecting ECRS, NECRS and controls. However, expression of monocytic/macrophage- and lymphocyte-related genes (CCL18, MARCO, F13A1, CD209 and IL2RA) was increased in both ECRS and NECRS.

CONCLUSIONS: The characteristic gene expression profiles indicated the existence of at least two separate CRSwNP endotypes in Japanese patients. Their shared gene expression profiles may help understand the pathogenesis of nasal polyps.
L43 IgG4 Drives M2 Macrophages to Cortisol, Lcn-2 and IL-10 Release: Implications in Maintenance of Tolerance and Allergen Immunotherapy

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RATIONALE: M2 macrophages play a role in resolving inflammatory responses: macrophages are a prominent source of i) cortisol, and ii) of human lipocalin-2 (LCN-2) having a glucocorticoid-responsive element in its promoter. We addressed whether macrophages are a source of IL-10 and whether IgG antibodies have an impact in regulating them, for understanding allergen immunotherapy (AIT).

METHODS: Primary macrophages from healthy PBMCs or monocytic cell line THP-1 were differentiated into M2 macrophages by M-CSF and LPS, and for further sub-differentiation with IL-4/IL-13 (M2a), or with IgG immunoglobulins (M2b). The supernatants were analyzed in radiomunoassay for cortisol, or by ELISA for LCN-2 and IL-10. Alternatively, Bos d 5 was co-incubated with these supernatants, either loaded or emplaced from its ligand by dialysis against deferoxamine, as controlled by Prussian Blue staining.

RESULTS: Prussian Blue staining detected iron in M2b and M2a, but not in M2c macrophages. Only IgG4, but not IgG1 immune complexes rendered M2b macrophages capable of secreting significant levels of cortisol, LCN-2 and IL-10. When ligand-emptied Bos d 5 was incubated with the M2b supernatants, it decreased the free levels of cortisol and LCN2.

CONCLUSIONS: Activated macrophages are differentially regulated by IgG classes: Only IgG4 is leading to cortisol, LCN-2 and IL-10 secretion. Moreover, exogenous unloaded lipocalin allergens may lower the levels of bioavailable cortisol, and LCN-2 and IL-10 release. Our data unravel a novel mechanism of how IgG4, being a hallmark in AIT, is able to regulate M2 macrophages towards a tolerogenic phenotype.

L44 Facilitated Allergen Binding (FAB) Is a Meaningful Immunological Biomarker for Monitoring Immediate Clinical Efficacy in Short-Term Peptide Allergen Immunotherapy

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RATIONALE: Short-term peptide-allergen-immunotherapy is a novel approach for treating allergic rhinoconjunctivitis. We investigated whether changes in mucosal reactivity to allergen exposure after this short-term therapy are detectable in the immunological parameters of sIgG4 and the functional blocking antibody response measured by facilitated allergen binding (FAB).

METHODS: Data was collected from a DBPC dose-finding study in 198 patients who received placebo or a peptide-dihydrolase of grass-pollen peptides at 5 visits over 4 weeks at cumulative doses of up to 370µg (EudraCT-No:2013-005445-37). Conjunctival allergen challenge was used as a surrogate marker of efficacy before and after immunotherapy. We have shown that this parameter has a predictive value for patients’ symptoms and medication needs during the pollen season. Serum samples were taken to determine sIgG4 and FAB.

RESULTS: Patients exhibiting diminished reactivity and tolerating an at least 10-fold higher concentration of the conjunctival challenge solution showed a significantly greater increase in FAB (20.01% ± 16.706) than patients who did not improve (p = 0.01); The immediate change in sIgG4 observed in the improved patients was not significant (p = 0.233). Also, patients showing no reaction to the highest conjunctival allergen concentration had significantly higher FAB values (p = 0.034) than patients who still reacted to one of the allergen challenge dilutions; the immediate induction of sIgG4 found in the non-reacting patients was not significant (p = 0.797).

CONCLUSIONS: After 4 weeks of peptide allergen immunotherapy, the immediate appearance of FAB can be correlated with a meaningful clinical parameter of therapeutic efficacy.

L45 Safety of STG320 Sublingual Tablets of House Dust Mite Allergen Extracts in Subjects with HDM-Associated Allergic Rhinitis: Results of a Pooled Analysis

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RATIONALE: Safety of house dust mite (HDM) sublingual tablets (STG320) for the treatment of HDM-associated allergic rhinitis (AR) with or without intermittent asthma has been assessed in seven DBPC clinical trials. The pooled safety data are presented here.

METHODS: Subjects (5-64 years) with medically confirmed HDM-associated AR were randomized to receive placebo or STG320 at doses from 100IR to 1,500IR. Adverse events were monitored and analyzed descriptively.

RESULTS: 2,407 subjects (1,718 adults, 443 adolescents, 246 children) comprised the Safety Set including 627 (26%) with intermittent asthma at enrollment. 1,571 participants received at least one dose of active treatment and 836 received placebo, 64% of actively-treated subjects and 20% of placebo-recipients reported treatment-emergent adverse events (TEAEs) suspected to be drug-related. These were mostly consistent with mild or moderate application-site reactions [e.g., throat irritation (23%), oral pruritus (17%), mouth edema (14%), ear pruritus (12%)] and mainly reported over the initial 4 weeks. Percentages of subjects with drug-related TEAEs were similar in those with and without asthma in active (59% and 66%) and placebo (19% and 20%) groups. Four subjects reported serious drug-related TEAEs (3 active: eczema, pharyngeal edema and dyspnea, and one placebo: urticaria). 123 (8%) and 24 (3%) subjects in active and placebo groups, respectively, discontinued mainly as a result of application-site reactions (e.g., mouth or lip edema). There were no reports of anaphylaxis and no epinephrine use.

CONCLUSIONS: Pooled safety data from the rhinitis program demonstrate the favorable safety profile of HDM sublingual tablets in subjects receiving any dose of active treatment.
L46 Immunological Effects of Treatment with STG320 Sublingual Tablets of House Dust Mite Allergen Extracts in Subjects with HDM-Associated Allergic Asthma

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RATIONALE: A clinical development program investigating the efficacy and safety of house dust mite (HDM) sublingual tablets (STG320) in adults with HDM-associated allergic asthma is ongoing. Here we present immunological data from a phase II study evaluating the effect of three doses of STG320 compared to placebo.

METHODS: This DBPC, dose-ranging study enrolled subjects (18-50 years) whose asthma was partly controlled [Asthma Control Test (ACT) 16-19] while receiving asthma therapies consistent with GINA treatment Steps 2 to 4. Eligible subjects were to have a positive skin prick test to HDM and HDM-specific serum IgE ≥ 0.7 kU/L. Participants were randomized to receive 100IR, 500IR or 1000IR of STG320 or placebo, daily for about 13 months. The primary endpoint was the ACT score after the treatment period. HDM-specific IgE and IgG were measured before and after treatment and fold-changes were analyzed descriptively in each group. Safety data were analyzed descriptively.

RESULTS: Of 386 randomized subjects, 344 were included in the analysis (100IR: 88, 500IR: 87, 1000IR: 81, placebo: 88). The primary endpoint was not met. At baseline, HDM-specific IgE and IgG were similar in the four treatment groups. After treatment, HDM-specific IgE increased by 1.5- to 2-fold in the active groups, and was unchanged in the placebo group. Changes in IgG were increased with the dose, from 3-fold (100IR) to 6-fold (1000IR), and were unchanged for placebo. No unexpected adverse events were observed.

CONCLUSIONS: In this study, the HDM sublingual tablet showed a dose-dependent effect based on its immunological activity.

L47 Clinical Development Strategy for Unmet Need in Grass Subcutaneous Immunotherapy

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RATIONALE: Grass MATA MPL is an immunotherapy treatment currently in late stage development that addresses the unmet need in the USA of a standardised immunotherapy for seasonal grass allergic rhinitis. This immunotherapy is a modified extract of sweet grasses Adsorbed to a depot adjuvant complex containing MCT (micro crystalline tyrosine) and MPL (Monophosphoryl lipid A®) that requires fewer injections than traditional SCIT. To address the challenges in optimal dose evaluation with attention to safety and efficacy, a clinical development model is presented.

METHODS: A complimentary battery of phase I to III studies has been conducted to evaluate the relationship of allergen, MCT and MPL combinations in field and EEC (Environmental Exposure Chamber) studies. The effectiveness of the allergen immunotherapy is thought to correlate to cumulative dose and the benefit of MCT + MPL has been previously demonstrated with the latter improving efficacy by ~25%. Optimal allergen dose finding was assessed in a combination of field and EEC studies.

RESULTS: A comparative assessment of up dosing of grass MATA MPL in different clinical arms has been completed. The relationship of cumulative dose is presented with consideration of monotonous and non-monotonic dose response including the relevance of dose response plateau and translation to TSS reduction. Ultra-short course treatment (4-6 injections) is compared with prolonged treatment therapy showing increased patient adherence with shorter courses.

CONCLUSIONS: The product and clinical development strategy for Grass MATA MPL is presented describing a process to address many of the variables contributing to optimal product efficacy for treatment of grass allergic US patients.

L48 Essai Survey: European Multicentre Prospective Study to Collect Systemic Adverse Reactions Due to Allergen Immunotherapy: Pediatric Population Results

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RATIONALE: Systemic adverse reactions (SAR) due to Allergen Immunotherapy (AIT) still represent one of its major drawbacks preventing a more extensive use of this etiologic treatment. The objective of this EAACI-supported survey was to collect SAR due to aerosol AIT in real life practice.

METHODS: Data was centrally collected with an online database, and gathered through three different questionnaires: DQ: doctor questionnaire (filled in only once by each participating doctor); PQ: patient questionnaire (one per patient-treatment) and RQ: reaction questionnaire (one per reaction). Harmonized MedDRA terminology for SAR due to AIT was used.

RESULTS: Three countries (France, Germany and Spain), 95 doctors and 1578 pediatric patient-treatment were recruited, mean age 11.7 years (± SD 3.9), 59.1% (932) males. Allergic asthma and rhinitis/ rhinoconjunctivitis was the AIT indication in 56.1% (880) patients, allergic rhinitis/rhinoconjunctivitis without asthma in 38.3% (604), asthma alone in 5.2% (82) and conjunctivitis alone in 0.4% (6) patients. Monoallergen AIT composition was 49% mites, 25.8% grass, 8.7% tree, 4.6% Alternaria, 0.8% epithelia, 0.6% weeds and 10.5% were mixtures. Subcutaneous AIT (SCIT) was used in 71.4% (n = 1127). A total estimation of 19.669 and 131.550 doses of SCIT and sublingual AIT (SLIT) were given, and 29 SAR (79.3% SCIT) were recorded in 24 patient-treatments, 3 were anaphylaxis and only 1 was severe. SAR were more frequent in up-dosing (79.3%) but milder (82.6% mild) than in maintenance (33.3% mild) (p = 0.023). The use of natural extracts compared to allergoids was associated with higher risk of suffering SAR (OR = 8.4, 95%CI: 1.9-36.5).

CONCLUSIONS: AIT showed to be a safe treatment with a low rate of SAR and even lower ratio of severe SAR.
Molecular Fingerprinting of Complex Allergoids
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RATIONALE: Targeted reduction in IgE reactivity of native allergen extracts to produce allergoids via covalent cross-linking is beneficial in producing safe and efficacious immunotherapies. We present techniques to demonstrate the presence of the relevant allergens in allergoid preparations by tandem mass spectrometry and the molecular fingerprint of those allergoids by high performance-size exclusion chromatography (HPLC-SEC).

METHODS: The polymerization profile of sweet grass allergoids was determined by HPLC-SEC, from which separate size fractions of allergoids were collected. Proteomic analysis of each corresponding fraction was performed, subject to tryptic digest and analysed via tandem mass spectrometry. Once the peptide had been identified, it was compared to protein databases, such as NCBI or SwissProt, from which the sequence identity was assessed.

RESULTS: HPLC-SEC highlighted the spread of allergens/allergoids pre- and post-modification. The HPLC profiles of the allergoids showed a decrease in retention time (increase in molecular weight) after modification (i.e. polymerization). A greater number of allergens are identified from tandem mass spectrometry (proteomic) analysis as the predicted molecular weight range of each fraction decreases.

CONCLUSIONS: Native and modified extracts are not two discrete preparations but are instead a formula of native and modified allergens, within which IgE reactive epitopes are present. Proteomic analysis confirmed the presence of allergens from multiple grass species. This work demonstrates that IgE epitopes remain in an allergoid formulation while IgE epitopes are attenuated, allowing safe administration of a higher strength product in fewer doses.

Patterns of Interferon Regulatory Factor 1 (IRF1) Expression By Respiratory Epithelial Cells Reveal Non-Redundancy of Type I Versus Type III Interferons
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RATIONALE: Types I and III interferon (IFN) are co-expressed by respiratory epithelial cells (REC) in response to viral infection, and stimulate neighboring REC to express a set of interferon stimulated genes (ISG) through shared signaling pathways. Whether types I and III IFN have non-redundant functions in anti-viral defense is unknown. Because transcription factors dictate cellular phenotype and function, we hypothesized that IFN that are transcription factors (TF-ISG) mediate non-redundant functions of types I or III IFN.

METHODS: We treated BEAS-2B human REC with increasing doses of IFN-beta or IFN-lambda alone or together, and measured expression of TF-ISG and a set of “canonical” ISG by qRT-PCR and western blot.

RESULTS: Alone, IFN-beta and IFN-lambda each induced expression of the canonical ISG and a subset of TF-ISG. By contrast, while IFN-beta alone induced IRF1 expression, it was poorly induced by IFN-lambda alone. Saturating doses of the two IFNs together did not enhance peak ISG transcript expression greater than either alone. Western blots revealed that while IFN-beta alone induced early and transient IRF1 expression, it was lower but sustained (through 24h) after IFN-lambda alone. In contrast to transcripts, saturating doses of the two IFNs together enhanced expression of IRF1 protein at 2h, 4h, and 24h greater than either of them alone.

CONCLUSIONS: In REC, IRF1 is expressed early and relatively selectively in response to IFN-beta alone, and protein expression was enhanced after treatment with both IFNs together. IRF1 may mediate non-redundant qualitative functional responses of REC to types I and III IFN.

IgE Cross-Linking Directly Modulates Degranulation and Tslpr Induction upon Food Allergen Challenge
Mrs. Michelle T. Graham, PhD; Stanford University.

RATIONALE: Recent data reveals that IgE-cross-linking upregulates thymic stromal lymphopoietin receptor (TSLPR) expression on isolated basophils in a small cohort of allergic asthma patients. Both IgE and non-IgE signaling pathways facilitate basophil activation, yet it is unclear whether food allergens leads to basophil activation and TSLPR expression solely through IgE/FcεRI signaling complexes. We hypothesize IgE-mediated signal transduction pathways are necessary for degranulation, type 2 cytokine IL-4 secretion, and TSLPR induction.

METHODS: Heparin-treated whole blood from 12 double-blind placebo-controlled food challenged (DBPCFC) confirmed food allergic patients were treated with IgE-stripping design ankyrin-repeat protein (DARP)n molecules, E2.79 (monovalent) and b53.79 (bivalent), and assessed for basophils activation by degranulation markers CD63 and CD203c upon allergen challenge. The basophils were further assessed for TSLPR induction upon nut allergen challenge.

RESULTS: Treatment with DARPin molecules perturbs IgE binding to high affinity FceRI on primary basophils with minimal disruption of FceRI expression on the plasma membrane. Treatment with DARPins significantly reduced CD63 percentages by >70% and CD203c levels by 58% after IgE cross-linking and food allergen challenge. Furthermore, DARPins abrogate TSLPR induction in primary basophils.

CONCLUSIONS: We demonstrated that IgE cross-linking upon food allergen challenge is essential for degranulation as determined by CD63+ and CD203c kinetics. DARPin treatment further impairs TSLPR induction upon IgE cross-linking and allergen challenge. Our data delineates IgE-mediated functions in basophils and a novel pathway for TSLPR induction upon food allergen challenge.
L52 Novel Noninvasive Biomarker for Eosinophilic Esophagitis (EoE)
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RATIONALE: The field of EoE research has expanded greatly in the understanding of disease pathogenesis including eosinophil fibrosis; however, there has been a significant delay in identifying reliable predictive EoE specific non-invasive biomarkers. Herein, we propose a panel of noninvasive biomarkers for disease progression and diagnosis.
METHODS: A flowcytometry analysis to detect CD2242 and CD274 eosinophil subsets and qPCR analysis to detect mRNA levels of IL-18Rα, CD274 (PD1L), VIP, CD101 in normal and EoE patients blood and biopsies.
RESULTS: We recently discovered two eosinophil subtypes in the blood of normal and EoE patients that will be identified by CD2242 and CD274. The CD2242 eosinophil increases in EoE patients as disease progresses and most eosinophil accumulated in esophageal biopsies of EoE patients are CD2742. In addition, we found that mRNA levels of IL-18Rα, CD274 (PD1L), VIP (eosinophil chemoattractant), CD101 (T regulatory cells suppressor) significantly increases in blood and esophageal biopsies of EoE patients compared to normal and GERD patients. Additionally, the mRNA levels of IL-18Rα, CD274, VIP, CD101 correlates well with blood eosinophils that significantly reduces in improved EoE patients.
CONCLUSIONS: We first time show eosinophil two subset and only CD2242 eosinophil increases in the blood of EoE patients. Furthermore, blood and tissue mRNA levels of IL-18Rα, CD274, VIP, CD101 increases and correlates with the eosinophils of blood and biopsies, respectively. Taken together, induced CD2242 eosinophils and induced panel of molecules will be the novel noninvasive biomarkers for EoE, which even differentiate EoE from GERD.

L53 IL-33 Induces Eosinocid Formation in Mast Cells By a Novel COX-1-Dependent Mechanism
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RATIONALE: Mast cells (MCs) are involved in allergic and inflammatory reactions; they release potent mediators such as prostaglandin (PGD2), thromboxane (TXB2) and cysteinyl leukotrienes (cysLTs) after activation. Interleukin (IL)-33 is an effector molecule of the Th2 responses, and an agonist for mast cell activation, though the roles of mast cells and their eicosanoids in IL-33-dependent immune responses are not known.
METHODS: Murine Bone Marrow-derived MCs (BMMCs) were stimulated with IL-33 and analyzed for eicosanoid production and level of cyclooxygenase (COX)1 and COX2 transcription over time. Wild type (Wt) mice were challenged intranasally with 4 doses of IL-33 (1 μg/day) and assessed for total (TCC) / differential cell count and lipid content in the bronchoalveolar lavage (BALs).
RESULTS: In BMMCs, IL-33 induces a robust release of PGD2, TXB2, and cysLTs. The response peaks within 3h of stimulation and is accompanied by ERK phosphorylation and a sustained upregulation of COX2 transcript. Interestingly, both COX2 upregulation and eicosanoid production are completely suppressed by the selective COX1 inhibitor SC560. Intranasal IL-33 induces robust generation of PGD2 and TXB2, along with increases in eicosanophils.
CONCLUSIONS: IL-33-dependent BMIC activation requires both COX1 and COX2. In this system, COX1 acts upstream of COX2 to mediate COX2 transcription, eicosanoids production and MAP Kinase activation. IL-33 is a robust inducer of mast cell-associated eicosanoids in vivo, which may participate in the recruitment of eicosanophils.

L54 Development of a Germ-Free Murine Model for Prediction of Food Allergy Potency: Preliminary Studies Using Peanut Ara h1 and Ara h2 As Model Food Allergens
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RATIONALE: Novel food or protein sources are becoming increasingly common in our diets but have potential to sensitize consumers. A germ-free C3H/HeN mouse model for food allergy has shown promise for differentiating sensitization and elicitation profiles of known allergenic food proteins. The aim of this study was to determine if this mouse model can predict the potential potency of allergenic food proteins. Known peanut allergens, Ara h1 and h2, were used as model allergenic proteins with varying potency as reported by in vitro sera or basophil analysis from peanut-allergic individuals.
METHODS: Germ-free C3H/HeN mice were sensitized with 60μg Ara h1 (n=20) or h2 (n=18) by three weekly intraperitoneal injections (IP) with alum adjuvant, followed by IP challenge of 500μg of indicated protein. Thirty minutes post-challenge clinical scores were graded (0=no symptoms to 5=death) and body temperatures recorded. ELISA was used to measure presence of protein-specific IgE and mast cell protease in sera.
RESULTS: Germ-free mice sensitized with Ara h1 exhibited significantly less-severe clinical scores (mean=2) compared to mice sensitized with Ara h2 (mean=4) (p<0.05). Hypothermic response post-challenge (average temperature-2.5±1.6) and -8.8±0.9°C, respectively (p<0.05) correlated well with clinical scores.
CONCLUSIONS: Preliminary results based on clinical scores and hypothermia confirm that the germ-free C3H/HeN mouse model can differentiate between the potency of Ara h1 and h2 as reported in previous in vitro and in vivo analyses of human subjects. While further analysis of additional known allergens is needed, this model shows promise as a risk assessment tool for prediction of allergenicity of novel food proteins.

L55 Development of Multiple Features of Antigen-Induced Asthma Pathology in a New Strain of Mast Cell Deficient BALB/c-KIWI81818 Mice
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RATIONALE: Genetically mast cell (MC)-deficient mice are used to identify and quantify the contributions of MCs to various biological responses in vivo, such as defense against venom, parasite immunity and allergic inflammation. However, despite the fact that scores of genes have been identified as modifiers of allergic inflammation, most MC-deficient models have been available only on a single genetic background.
METHODS: We transferred the KIWI818 allele onto the BALB/c background to generate BALB/c MC-deficient mice (BALB/c-KIWI8188). We examined in BALB/c-KIWI8188 mice models of allergic inflammation to which MCs substantially contribute in C57BL/6-KIWI8188 mice. Results: BALB/c-KIWI8188 mice have dramatically reduced numbers of MCs (0-2% of wild type) in all tissues examined. In addition, BALB/c-KIWI8188 mice exhibited subtle hematologic differences compared to wild type mice, including splenomegaly with evidence of increased splenic hematopoiesis. In a model of acute allergic inflammation, IgE-dependent passive cutaneous anaphylaxis, both ear swelling and leukocyte infiltration were largely or entirely MC-dependent in BALB/c-KIWI8188 mice. In contrast, in two different models of chronic allergic airway inflammation to ovalbumin or house dust mite, airway hyperresponsiveness, lung inflammation, and airway remodeling developed robustly in MC-deficient BALB/c-KIWI8188 mice.
CONCLUSIONS: These results support the conclusion that the importance of MC contributions in various models of allergic inflammation may be at least partially determined by genetic background.
L56  
**In Vitro Induction of Peanut-Specific T Cells**  
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**RATIONALE:** IL-10 producing type 1 regulatory T cells (Tr1) express the surface markers CDAG and CD49b, and can be induced *in vitro* and used as cell therapy to control undesired immune responses. Peanut allergy is a life-threatening condition with no curative treatment. Our aim is to induce peanut-specific Tr1s *in vitro*.

**METHODS:** Healthy controls (HC) and allergic patients undergoing peanut oral immunotherapy were included in this study. Maturic (mDC) or tolerogenic (DC10) dendritic cells were differentiated as previously described (Pacciani et al., 2010). In the presence of the main peanut allergens Arah1 and Arah2. Autologous CD4+ T cells were co-cultured for 14 days with DC10 (*)T10* or with mDC (*)TM*) in the presence of absence of IL-10, respectively. We assessed by flow cytometry the expression of the Tr1 markers CDAG and CD49b, of the gut-homing receptor GRP15, and the anergy of the T10 compared to the Tm upon restimulation with Arah1/2.

**RESULTS:** The percentages of LAG3*CD49b* Tr1 cells were comparable in T10 cultures from patients (10.5%) and HC (9.4%). In both T10 cultures, the percentage of Tr1 was higher than in the control Tm culture. The GRP15* cells were enriched in the CD45RA LAG3*CD49b* population compared to the CD45RA* population (19.3 vs 9.2%, p=0.03). T10 from HC were anergic compared to Tm.

**CONCLUSIONS:** We successfully induced antigen specific LAG3*CD49b* Tr1 cells from peanut-allergic patients and HC; those from HC were anergic. GRP15* cells were enriched in this population, suggesting their gut-homing capacity. Further studies are ongoing to assess the functional properties of Tr1 cells established from peanut allergic patients.

L57  
**Binding of the Active Vitamin A Metabolite Retinoic Acid to the Major Cows Milk Allergen Bos d 5 Down-Regulates T-Cell Responses**  
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**RATIONALE:** Recent research of our group has shown that the major cows milk allergen Bos d 5, a member of the lipocalin family, acts immunomodulatory depending on its load with siderophore-iron complexes. The aim of this study was to investigate whether Bos d 5 could influence Th1/Th2 immune responses when complexed with the active Vitamin A metabolite retinoic acid (RA).

**METHODS:** Binding of RA to Bos d 5 was determined by autofluorescence quenching and ANS displacement assay. Activated PBMCs from 12 healthy donors were incubated with the milk allergen being "emptied" (apo-Bos d 5) or being loaded with RA (holo-Bos d 5). T-cell subsets (CD3+, CD4+, CD8+) were analyzed by FACS, cytokines (IFN-γ, IL-10, IL-13) measured by ELISA.

**RESULTS:** We calculated a dissociation constant of 1.7 μM and in vitro RA was able to dose-dependently displace ANS from Bos d 5. Incubation of PBMCs with apo-Bos d 5 for 48 hours significantly induced high IFN-γ, IL-13 and IL-10 levels whereas T-cell subsets remained unaltered. In contrast, stimulations with holo-Bos d 5 led to a significant decrease in CD4+ positive cells and to a pronounced decrease in all three cytokines. This phenomenon was dependent on the allergen-RA complex, as treatment with RA alone did not influence T-cell subsets or cytokine levels.

**CONCLUSIONS:** Our data suggest that holo-Bos d 5, with RA in its molecular pocket, has a pronounced immunosuppressive effect. We thus propose that proper loading of this major cows milk allergen may prevent subsequent allergic immune responses to it.
L59 Enhanced Efficacy and Confirmed Safety of a Two-Year Epicutaneous Immunotherapy (EPIT) Treatment of Peanut Allergy with Viaskin® Peanut: The Continuation of the Vipes Phase IIb Randomized Controlled Trial (RCT)

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RATIONALE: The 12-month Vipes RCT of EPIT using Viaskin® Peanut (VP) was continued as an open-label trial for an additional 24 months. We report results of the 12-month interim analysis.

METHODS: From 207 subjects completing the Vipes RCT (6–55 years), 171 (82.6%) entered the open-label extension. For this second year, 64.9% subjects initially treated with 50 μg, 100 μg, 250 μg peanut protein (pp) i.e. VP50, VP100, VP250, or placebo were treated for 12 months with VP250. The remainder received VP50 or VP100 for 6 months before switching to VP250. Endpoint response was based on the proportion of successes, i.e. eliciting dose ≥10-fold above baseline or ≥1,000 μg pp at the 24-month DBPCFC.

RESULTS: The response rates after 24 months EPIT with VP250 were 69.7% (23/33) overall and 80.0% (16/20) in children 6-11 years, compared to 50% overall and 53.6% in children after 12 months VP250 EPIT. Adolescents/ adults remained stable. In children, the peanut cumulative reactive dose after 24 months increased significantly compared to Vipes entry (mean±SD): +1817.0±1183.9 mg pp; +983.3±1279.9 mg pp after 12 months. Children's median peanut IgE decrease from baseline was 9% and -38% after 18 and 24 months; median peanut-IgG4 increase was 793.5% at 24 months. Mean±SD compliance was 94.8±11.6%; there were no serious AEs related to VP. Interestingly, the 12-month VP250 treatment of the ex-placebo group exactly reproduced the significant response rate in Vipes study with 50.0% (23/46) overall, 53.6% (15/28) in children.

CONCLUSIONS: The 24-month EPIT with VP250 is well accepted, safe and clearly enhances the 12-month therapeutic benefit overall and in children.

L60 The Efficacy of AR101, a Peanut-Derived Pharmaceutical for Oral Immunotherapy (OIT), Is Maintained and Tolerable Is Increased with Low-Dose Maintenance Therapy

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RATIONALE: AR101, a pharmaceutical for OIT, demonstrated robust efficacy in ARCO1, a Phase 2, double-blind, placebo-controlled trial in 4–21 year olds. We now report results from the open-label continuation trial, ARCO2.

METHODS: In ARCO2, former ARCO1 placebo subjects up-dosed to 300 mg of peanut protein as AR101, then underwent double-blind placebo-controlled food challenge (DBPCFC) after 2 more weeks of therapy. Those passing DBPCFC at 443 mg cumulative of peanut protein, were eligible to continue maintenance therapy for 12 additional weeks. Former AR101 subjects who up-dosed successfully in ARCO1 entered ARCO2’s 12-week maintenance period directly. As all former ARCO1 subjects underwent 12 weeks of open-label maintenance therapy with 300 mg of AR101 in ARCO2, the post-maintenance DBPCFC results from both groups were pooled.

RESULTS: A 26 ARCO1 placebo subjects entered ARCO2 and up-dosed over an average of approximately 22 weeks. Of these, 21 reached 300 mg/d AR101 (4 discontinuing from gastrointestinal AEs; 1 for scheduling issues, and 20 passed DBPCFC at 443 mg. Of 26 ARCO1 subjects treated with AR101, 21 completed the study and 21 entered ARCO2. Of the 40 subjects undergoing post-maintenance DBPCFC, 100%, 90%, and 60% tolerated a cumulative 443, 1043, 2043 mg of peanut protein, respectively. Only 2 subjects required single doses of epinephrine during the DBPCFC. AR101 showed improved tolerability during maintenance versus up-dosing, with reduced AE rates and no treatment-related discontinuations.

CONCLUSIONS: In ARCO2, twelve weeks of AR101 maintenance at 300 mg/d resulted in 90% desensitization to ≥1043 mg of peanut protein, equivalent to ±4 peanuts, with improved tolerability.
L61 Efficacy and Safety of the SQ-House Dust Mite Sublingual Immunotherapy Tablet in North American Children and Adults: Findings from a Large Randomized, Placebo-Controlled Clinical Trial

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RATIONALE: SQ®-house dust mite (HDM) sublingual immunotherapy tablet (SLIT-tablet) (MK-8237; MerckALK) has been demonstrated to have beneficial effects on allergic rhinitis and asthma outcomes, but previous trials were conducted in European subjects. This is the largest trial to assess the efficacy/safety of HDM SLIT-tablets in North American subjects with HDM allergic rhinitis with/without conjunctivitis (ARC).

METHODS: In this double-blinded, multicenter trial (NCT010700192), 1,482 subjects (aged ≥12 years) with HDM ARC with or without asthma were randomized to daily 12 SQ-HDM SLIT-tablet or placebo for up to 52 weeks. Subjects had a rhinitis daily-symptom score (DSS, 4 nasal symptoms, maximum = 12) of ≥20, or ≥25 with 1 severe symptom, on 5 of 7 consecutive days before randomization. The primary endpoint was average total combined rhinitis score (TCRS), defined as rhinitis DSS plus rhinitis daily-medication score (DMS), during the last 8 weeks of treatment.

RESULTS: Treatment with 12 SQ-HDM SLIT-tablet improved TCRS 17% vs placebo (95% CI: −25%, −10%). Improvements vs placebo in the secondary endpoints average rhinitis DSS, rhinitis DMS, total combined rhinconjunctivitis score, and ARC symptoms assessed by visual analogue scale were 16%, 18%, 17%, and 16%, respectively. All nominal P-values were <0.001 vs placebo except rhinitis DMS. No treatment-related AEs meeting the ICH definition of serious were reported; 1 treatment-related systemic allergic reaction occurred (assessed as moderate) at first administration under medical supervision and was treated with epinephrine.

CONCLUSIONS: 12 SQ-HDM SLIT-tablet was well-tolerated and improved HDM ARC symptoms in adults and children. This was the first successful North American trial of a HDM SLIT-tablet.

L62 Pathogenic Autoantibodies in Patients with Severe Asthma and Sputum Eosinophils

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RATIONALE: An asthmatic airway with frequent degranulation accumulates immunogenic entities like peroxidases and autologous cellular materials, which can lead to breach of immune tolerance and generation of autoantibodies.

METHODS: Immunoprecipitated sputum immunoglobulins (IP-Igs) from moderate and severe asthmatics with eosinophilic, neutrophilic, and pleiotropic bronchitis were analyzed for antibodies against eosinophil peroxidase (EPX) and anti-nuclear antibodies (ANAs). Eosinophils were labeled with IP-Igs and monoclonal anti-EPX antibodies, and examined by confocal and deconvolution microscopy. IP-Igs were assessed for inducing degranulation ex vivo. IL-5 was examined. 2 mice of IL-5 transgenic and wild type mice (n=3) were analyzed for markers of eosinophil degranulation and autoantibodies.

RESULTS: Severe asthmatics with eosinophilic (n=20) and pleiotropic bronchitis (n=18) had detectable anti-EPX IgGs and ANAs in sputum samples, compared to neutrophilic (n=13), moderate-eosinophilic asthmatics (n=13) and healthy volunteers (n=15) (p<0.001). Significant binding of sputum IgGs to fixed and permeabilized eosinophils, along with co-localization with EPX immunostaining, confirmed the occurrence of autoantibodies to autologous eosinophilic cellular components. IP-Igs pooled from severe asthmatics (n=5) compared to healthy volunteers (n=5) induced eosinophil degranulation ex vivo (measured by lactate dehydrogenase and EPX release). Both anti-EPX IgGs and ANAs shared significant correlations with daily prednisone dose, free eosinophil granules and EPX content (r=0.3, p<0.01). Finally, IL-5 transgenic (1.92±0.08) and wild-type (0.53±0.09) mice.

CONCLUSIONS: We hereby report a sub-set of severe asthmatics with increased airway eosinophil 'activity' presenting with pathogenic autoantibodies against autologous eosinophilic cellular components.

L63 The Leukotriene E4 Receptor, GPR99 Mediates Mast Cell-Dependent Musosal Responses to the Mold Allergen, Alternaria alternata

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RATIONALE: The mold aeroserollen Alternaria alternata triggers mast cell (MC) degranulation and the generation of cysteinyl leukotrienes (cysLTs). CysLTs act at three receptors, CysLT1R, CysLT2R and GPR99, the recently identified receptor for the stable cysLT metabolite, LTA4. GPR99 distribution and function in the respiratory mucosa is unknown.

METHODS: Wild-type (WT), MC-deficient (Mctp5/DTA), FeRy-chain-deficient (Fcer1y), LTC4-synthase-deficient (Lc4s−/−), CysLT1−/−, CysLT2−/− and Gpr99−/− mice received a single intranasal (i.n.) dose of 0 or 30 µg G. alternata, and nasal goblet cell (GC) mucin content was assessed by Periodic acid-Schiff (PAS) staining after 1 hour. GPR99 expression in the nasal mucosa was assessed by RT-PCR in WT mice and by X-gal staining of tissue sections in Gpr99−/− mice.

RESULTS: A. alternata elicited GC mucin release in WT mice, as detected by a reduction in PAS+ GCs. There was no detectable mucin release in A. alternata-treated Mctp5/DTA, Lc4s−/−, Gpr99−/− mice and a reduction in CysLT1−/− mice. By contrast, mucin release was intact in FeRy−/− and CysLT2−/− mice. GPR99 transcript was detected in the nasal mucosa of WT mice and transcript for E.coli β-galactosidase, inserted in the targeted deletion of Gpr99, was detected in Gpr99−/− mice. X-gal staining confirmed GPR99 expression in nasal epithelial cells. Finally, i.n. LTE4 elicited GC mucin release in WT mice that was absent in Gpr99−/− mice.

CONCLUSIONS: These results demonstrate that GPR99 is expressed on murine respiratory epithelial cells and controls their secretory function. Moreover our results suggest that the innate immune response of respiratory epithelial cells to A. alternata is controlled, in part, through a MC-cysLT-GPR99 axis.
L64 Human Airway Epithelial Cells Express Functional IL-5 Receptors
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RATIONAL: Interleukin-5 (IL-5) is linked to asthma pathogenesis and exacerbations, presumably by promoting eosinophil production and function. We detected by microarray the IL-5 receptor alpha subunit (IL5RA) mRNA in differentiated airway epithelial cells and hypothesized that this receptor is functional in these cells.

METHODS: Airway epithelial cells obtained from 4 donor lungs were differentiated at air-liquid interface (ALI) and then incubated with recombinant IL-5 for 15 minutes, 1 hour, 6 hours, and 24 hours. Expression of the IL-5R α- and β-subunits was tested using qPCR and Western blot. Following incubation with IL-5 (10 ng/mL), cell lysates were analyzed for phosphorylation of downstream signaling molecules by Western blot.

RESULTS: Expression of the α-subunit of IL-5R was increased 18-fold in differentiated airway epithelial cells compared to undifferentiated monolayers. mRNA expression of the β-subunit was low in unstimulated ALI cells, but increased following incubation for 6 hours with IL-5. Protein expression of the α-subunit was confirmed in both treated and untreated differentiated airway epithelial cells. β-subunit protein expression was low but rapidly inducible by IL-5, suggesting re-localization within the cells. IL-5 stimulation (15-60 min) of ALI cells significantly increased phospho-ERK (mean fold increase = 2.7, p = 0.003, n = 4) and phospho-AKT (mean fold increase = 5.2, p = 0.029, n = 4), but not phospho-STAT5.

CONCLUSIONS: Differentiated human airway epithelial cells express functional IL-5 receptors. The signaling molecules affected suggest that IL-5 may promote epithelial cell growth and proliferation. Collectively, these findings suggest that IL-5 affects airway physiology in asthma in part through effects on airway epithelial cells.

L65 Impairment of Autophagy in Pulmonary CD11c+ Cells Induces Corticosteroid-Insensitive Airway Hypersensitivity
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RATIONAL: A significant proportion of asthmatic patients do not respond to steroid therapy and suffer from neutrophilic asthma with incompletely understood pathogenesis. Autophagy is an important intracellular organelle recycling pathway that has been implicated in asthma. We evaluated the role of autophagy in the pathogenesis of steroid-resistant neutrophilic asthma.

METHODS: We assessed the airway hyperreactivity (AHR) and inflammation, T cell response and DC profile in several autophagy impaired mouse models. We also generated a novel mouse model in which Atg5, a key gene in autophagy pathway, is specifically knocked out in CD11c+ cells.

RESULTS: Our results show that induction of severe asthma impairs autophagy pathway in lung CD11c+ cells. We found for the first time that house dust mite (HDM)-mediated induction of AHR and lung inflammation in Atg5−/− mice leads to neutrophilic steroid resistance asthma while in WT mice causes eosinophilic steroid-responsive asthma. Adaptive transfer of bone-marrow derived CD11c+ cells from Atg5−/− but not WT mice is sufficient to mediate Th17-dependent neutrophilic asthma in WT recipients. Most importantly, we found that CD11c-specific Atg5−/− mice develop spontaneous AHR and neutrophilic lung inflammation. Lack of autophagy in CD11c+ cells induces significantly higher level of key cytokines such as IL-1α, IL-1β and IL-23.

CONCLUSIONS: Our results provide novel insights into an important and previously unrecognized role of autophagy in asthma and suggest that inducing autophagy may affect pulmonary CD11c+ cells function and therefore, may be considered as an attractive clinical target for future strategies of treatment and prevention of asthma.

L66 Ara h 1 Peptide Immunotherapy Protects Against Peanut-Induced Anaphylaxis in a Dose-Dependent Manner
Elizabeth Simmons, MSc1, Ms. Jennifer Water2, Dr. Susan Waseem, MD FAAAAI1, Dr. Marla Jordan, MD, PhD2, Dr. Mark Larché, PhD1, 3McMaster University, Hamilton, ON, Canada, 2Firestone Institute for Respiratory Health, Hamilton, ON, Canada, 3Division of Clinical Immunology & Allergy, Department of Medicine, McMaster University, Hamilton, ON, Canada.

RATIONAL: Peptide immunotherapy, a disease-modifying treatment that uses short peptides representing major allergen T cell epitopes, has been shown to reduce symptoms of allergic rhinoconjunctivitis. This study evaluated the ability of peptide immunotherapy to protect against anaphylaxis in a murine model of peanut allergy.

METHODS: We identified a novel peptide from the major peanut allergen Ara h 1 that is recognized by C57Bl/6 mice. Mice were sensitized to peanut immunoadjuvants and treated 1 week later with 2 intraperitoneal injections of peptide, 1 week apart. We included 6 doses, ranging from 0.01 μg to 300 μg of peptide. Mice were subsequently challenged with peanut extract and evaluated for signs of anaphylaxis. They were monitored over a period of 40 minutes for clinical signs of allergic reaction, changes in rectal temperature, and vascular leakage.

RESULTS: Peptide immunotherapy provided significant protection against anaphylaxis in a dose-dependent manner. Mice that received 100 μg of Ara h 1 peptide exhibited the highest level of protection. Control mice treated with saline experienced a mean maximum temperature drop of 7.4°C, while mice receiving 100 μg of peptide experienced a drop of 2.0°C (p = 0.01 vs control). Maximum mean clinical score was 4.0 in control mice, and 1.8 in treated mice (p = 0.002). Mean hemocrit for control mice was 56.4%, and 48.9% for treated mice (p = 0.16).

CONCLUSIONS: One T cell epitope-containing peptide from a single major peanut allergen can protect against anaphylaxis elicited by whole peanut extract challenge. Studies of peptide immunotherapy in clinical peanut allergy are warranted.

L67 Identification of Trl Cells and Other CD4+ T Cell Subsets in Humans Using Mass Cytometry: A Tool for Understanding Asthma
Mary Prunicki, PhD, MD1, Xiaoying Zhou, PhD1, Mariangela de Planell Sagnier, PhD2, Rachel Miller, MD3, Kari C. Nadeau, MD, PhD, FAAAAI1, 2Stanford University, 3Columbia University, 4Division of Pulmonary, Allergy and Critical Care Medicine, Department of Medicine, Columbia University, New York, NY, 5Stanford University, Medicine, 6Division of Pulmonary and Critical Care, Stanford, CA, 7Sean N. Parker Center for Allergy Research at Stanford University, CA.

RATIONAL: T cell subsets contribute to immune function and are critical for controlling allergic disease. We studied asthmatic and non-asthmatic children to investigate the contributions of various T cell subsets.

METHODS: Peripheral blood mononuclear cells (PBMCs) from healthy (n = 10) and current asthmatic children (n = 10) were cultured with control medium for 10 days ex vivo. Plasma total IgE levels were measured. Flowcytometry of the FoxP3 gene at 10 different CPg sites was also performed.

RESULTS: T cell subsets (Th1, Treg, Th1, Th2, Th17, TCRδ) were differentiated using both Flow-Jo and 2 dimensional display using vSNE. Methylation at 4 CpG sites in the promoter region was negatively correlated with the percentage of Th1 cells (CpG <146, p<01; CpG <133, p<01; CpG <127, p<03; CpG <83, p<02). IgE level negatively correlated with percentage of Treg cells (p<05). In addition, there was a trend for asthmatics to have fewer Th1 cells than healthy controls (p<08).

CONCLUSIONS: This study is the first to our knowledge to identify all of these T cell subsets using mass cytometry. Analysis at a single-cell level may be superior to flow cytometry, and elucidate more subtle findings, as reported here even with a limited sample size. These preliminary data indicate that asthmatics may have reduced amount of Th1 cells in comparison to non-asthmatics. T1 cells also correlate with FoxP3 methylation levels in the promoter region. Finally, IgE levels are inversely related to the number of Treg cells.
To contribute to the development of our members as lifelong learners and to enhance the effectiveness of the CME activities it provides, the AAAAI uses the six competencies defined by the Accreditation Council for Graduate Medical Education (ACGME) to guide its educational programming decisions. The six competencies are:

- Patient Care
- Medical Knowledge
- Practice-Based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-Based Practice

All sessions at the Annual Meeting address the competencies of Patient Care and Medical Knowledge. Below is a list of sessions that address the other competencies:

### Interpersonal and Communication Skills

### Professionalism
1007, 1050, 1101, 1151, 1204, 1208, 1210, 1301, 1401, 1810, 2006, 2010, 2022, 2051, 2151, 2503, 2555, 2611, 2806, 2811, 2813, 3003, 3004, 3009, 3010, 3021, 3301, 3312, 3501, 3507, 3511, 3512, 3521, 3554, 3706, 4004, 4009, 4150, 4705, 4802, 4809, 4813

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- ATM

CONVENTION CENTER DRIVE
TRUCK DOCK
CONCESSIONS CAFE
BOND STREET PARKING LOT
SOUTH TRUCK RAMP
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TRAINING STATION

EXHIBIT HALL
POSTER HALL
GENERAL SESSION
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VENICE BOULEVARD PARKING STRUCTURE
FIGUEROA DRIVE
FIGUEROA STREET

2016 ANNUAL MEETING
LOS ANGELES CONVENTION CENTER
MARCH 4-7

Los Angeles Convention Center — Level One
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- Concourse Meeting Rooms
- South Hall Meeting Rooms
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As the first and only once-a-month subcutaneous immunoglobulin (IG) for the treatment of primary immunodeficiency in adults, HYQVIA (Immune Globulin Infusion 10% (Human) with Recombinant Human Hyaluronidase) offers added freedom with only3:

- Adjust the frequency and number of infusion sites taking into consideration volume, total infusion time, and tolerability1

**Indication and Usage**
HYQVIA is an immune globulin with a recombinant human hyaluronidase indicated for the treatment of Primary Immunodeficiency (PI) in adults. This includes, but is not limited to, common variable immunodeficiency (CVID), X-linked agammaglobulinemia, congenital agammaglobulinemia, Wiskott-Aldrich syndrome, and severe combined immunodeficiencies.

**Limitation of Use:**
Safety and efficacy of chronic use of recombinant human hyaluronidase in HYQVIA have not been established in conditions other than PI.

**Detailed Important Risk Information**

**BOXED WARNING: THROMBOSIS**
Thrombosis may occur with immune globulin products, including HYQVIA. Risk factors may include advanced age, prolonged immobilization, hypercoagulable conditions, history of venous or arterial thrombosis, use of estrogens, indwelling vascular catheters, hyperviscosity, and cardiovascular risk factors. Thrombosis may occur in the absence of known risk factors. For patients at risk of thrombosis, administer HYQVIA at the minimum dose and infusion rate practicable. Ensure adequate hydration in patients before administration. Monitor for signs and symptoms of thrombosis and assess blood viscosity in patients at risk of hyperviscosity.

**CONTRAINDICATIONS**
HYQVIA is contraindicated: in patients who have a history of anaphylactic or severe systemic hypersensitivity reactions to the administration of Human Immune Globulin (IgG); in IgA-deficient patients with antibodies to IgA and a history of hypersensitivity; and in patients with known systemic hypersensitivity to hyaluronidase or Recombinant Human Hyaluronidase of HYQVIA.

**WARNINGS and PRECAUTIONS**

**Hypersensitivity:** Severe hypersensitivity reactions may occur, even in patients who have tolerated previous treatment with IgG. IgA-deficient patients with antibodies to IgA are at greater risk of developing potentially severe hypersensitivity and anaphylactic reactions.

**Thrombosis:** Thrombosis may occur following treatment with immune globulin products, including HYQVIA. Risk factors may include advanced age, prolonged immobilization, hypercoagulable conditions, history of venous or arterial thrombosis, use of estrogens, indwelling central vascular catheters, hyperviscosity, and cardiovascular risk factors. Thrombosis may occur in the absence of known risk factors.

**Immunogenicity of Recombinant Human Hyaluronidase (PH20):**
Non-neutralizing antibodies to the recombinant human hyaluronidase component can develop. The potential exists for such antibodies to cross-react with endogenous PH20, which is known to be expressed in adult male testes, epididyms, and sperm. The clinical significance of these antibodies or whether they interfere with fertilization in humans is unknown.

**Aseptic Meningitis Syndrome (AMS):** AMS has been reported to occur with IgG treatment administered intravenously and subcutaneously. Discontinuation of IgG treatment has resulted in remission of AMS within several days without sequelae.

**Hemolysis:** Acute intravascular hemolysis has been reported following intravenously administered IgG products, including Immune Globulin Infusion 10% (Human) administered intravenously, and delayed hemolytic anemia can develop due to enhanced RBC sequestration. IgG products, including HYQVIA, contain blood group antibodies which may cause a positive direct antiglobulin reaction and hemolysis.

Please see additional Detailed Important Risk Information on facing page and Brief Summary of Prescribing Information, including Boxed Warning, on the following pages.
Find out more at Booth #1101

HyQvia
[Immune Globulin Infusion 10% (Human) with Recombinant Human Hyaluronidase]


Detailed Important Risk Information (cont’d)

Renal Dysfunction/ Failure: Acute renal dysfunction/failure, acute tubular necrosis, proximal tubular nephropathy, osmotic nephrosis, and death may occur upon use of IgG products administered intravenously, especially those containing sucrose. HYQVIA does not contain sucrose. Ensure that patients are not volume depleted prior to the initiation of infusion of HYQVIA. Monitor renal function and urine output and consider lower, more frequent dosing in patients who are at risk of developing renal dysfunction because of pre-existing renal insufficiency or predisposition to acute renal failure.

Spread of Localized Infection: Do not infuse HYQVIA into or around an infected or acutely inflamed area due to potential risk of spreading a localized infection.

Transfusion-Related Acute Lung Injury (TRALI): Non-cardiogenic pulmonary edema has been reported in patients following treatment with intravenously administered IgG products, including Immune Globulin Infusion 10% (Human). TRALI is characterized by severe respiratory distress, pulmonary edema, hypoxemia, normal left ventricular function, and fever.

Transmittable Infectious Agents: Because the Immune Globulin Infusion 10% (Human) of HYQVIA is made from human plasma, it may carry a risk of transmitting infectious agents, e.g., viruses and other pathogens, and theoretically, the Creutzfeldt-Jakob disease (CJD) agent. No cases of viral transmission or CJD have been associated with HYQVIA.

Interference with Laboratory Tests: False positive serological test results, with the potential for misleading interpretation, may result from the transitory rise of the various passively transferred antibodies in the patient’s blood after infusion of IgG. Passive transmission of antibodies to erythrocyte antigens (e.g., A, B, and D) may cause a positive direct or indirect antiglobulin (Coombs’) test.

ADVERSE REACTIONS
The most common adverse reactions observed in > 5% of patients in the clinical trials were: local adverse reactions (52%), headache (21%), antibody formation against recombinant human hyaluronidase (18%), fatigue (11%), nausea (7%), pyrexia (7%), and vomiting (7%). No serious adverse reactions occurred during the HYQVIA clinical trials.
HyQvia

[Immune Globulin Infusion 10% (Human) with Recombinant Human Hyaluronidase]

BRIEF SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS AND USAGE

HYQVIA is an immune globulin with a recombinant human hyaluronidase indicated for the treatment of Primary Immunodeficiency (PI) in adults. This includes, but is not limited to, common variable immunodeficiency (CVID), X-linked agammaglobulinemia, congenital agammaglobulinemia, Wiskott-Aldrich syndrome, and severe combined immunodeficiencies.

Limitation of Use:
Safety and efficacy of chronic use of recombinant human hyaluronidase in HYQVIA have not been established in conditions other than PI.

BOXED WARNING: THROMBOSIS

• Thrombosis may occur with immune globulin products, including HYQVIA. Risk factors may include advanced age, prolonged immobilization, hypercoagulable conditions, history of venous or arterial thrombosis, use of estrogens, indwelling vascular catheters, hyperviscosity and cardiovascular risk factors. Thrombosis may occur in the absence of known risk factors.
• For patients at risk of thrombosis, administer HYQVIA at the minimum dose and infusion rate practicable. Ensure adequate hydration in patients before administration.
• Monitor for signs and symptoms of thrombosis and assess blood viscosity in patients at risk of hyperviscosity.

CONTRAINDICATIONS

HYQVIA is contraindicated in:
• patients who have had a history of anaphylactic or severe systemic reactions to the administration of IgG.
• IgA-deficient patients with antibodies to IgA and a history of hypersensitivity.
• patients with known systemic hypersensitivity to hyaluronidase or Recombinant Human Hyaluronidase of HYQVIA.

WARNINGS AND PRECAUTIONS

Hypersensitivity—Severe hypersensitivity reactions may occur, even in patients who have tolerated previous treatment with IgG. In case of hypersensitivity, discontinue the HYQVIA infusion immediately and institute appropriate treatment. Immune Globulin Infusion 10% (Human) of HYQVIA contains trace amount of IgA (average concentration of 37μg/mL). Patients with antibodies to IgA potentially are at greater risk of developing potentially severe hypersensitivity and anaphylactic reactions.

Thrombosis—Thrombosis may occur following treatment with immune globulin products, including HYQVIA. Risk factors may include advanced age, prolonged immobilization, hypercoagulable conditions, history of venous or arterial thrombosis, use of estrogens, indwelling central vascular catheters, hyperviscosity, and cardiovascular risk factors. Thrombosis may occur in the absence of known risk factors.

Consider baseline assessment of blood viscosity in patients at risk for hyperviscosity, such as those with elevated cholesterol, fasting chylomicronemia, markedly high triglycerides (triglycerides), or monoclonal gammopathies. For patients at risk of thrombosis, administer HYQVIA at the minimum dose and infusion rate practicable. Ensure adequate hydration in patients before administration. Monitor for signs and symptoms of thrombosis and assess blood viscosity in patients at risk for hyperviscosity. [See Boxed Warning, Dosage and Administration (2), Patient Counseling Information (17) in full prescribing information].

Immunogenicity of Recombinant Human Hyaluronidase (PH20)—Eighteen percent (15 of 83) of subjects receiving HYQVIA in clinical studies developed antibodies to hyaluronidase or subcutaneously administered IgG. Discontinuation of IgG treatment has resulted in remission of AMS within several days without sequelae. The syndrome usually begins within several hours to two days following intravenously administered IgG, perhaps more frequently in association with high dose (2 g/kg) intravenously administered IgG.

Aseptic Meningitis Syndrome (AMS)—AMS has been reported to occur with IgG products, including Immune Globulin Infusion 10% (Human) administered intravenously and subcutaneously. Discontinuation of IgG treatment has resulted in remission of AMS within several days without sequelae. The syndrome usually begins within several hours to two days following intravenously administered IgG, perhaps more frequently in association with high dose (2 g/kg) intravenously administered IgG. AMS is characterized by the following signs and symptoms: severe headache, nuchal rigidity, drowsiness, fever, photophobia, painful eye movements, nausea and vomiting [see Patient Counseling Information (17) in full prescribing information]. Cerebrospinal fluid (CSF) studies frequently reveal pleocytosis up to several thousand cells per mm³, predominantly from the granulocytic series, and elevated protein levels up to several hundred mg/dL, but negative culture results. Conduct a thorough neurological examination on patients exhibiting such symptoms and signs, including CSF studies, to rule out other causes of meningitis.

Hemolysis—IgG products, including HYQVIA, contain blood group antibodies which may act as hemolysins and induce in vivo coating of red blood cells (RBC) with IgG. These antibodies may cause a positive direct antiglobulin reaction and hemolysis. Acute intravascular hemolysis has been reported following intravenously administered IgG, including Immune Globulin Infusion 10% (Human) administered intravenously, and delayed hemolytic anemia can develop due to enhanced RBC sequestration [see Adverse Reactions (6) in full prescribing information].

Monitor patients for clinical signs and symptoms of hemolysis. If signs and/or symptoms of hemolysis are present after HYQVIA infusion, perform appropriate confirmatory laboratory testing [see Patient Counseling Information (17) in full prescribing information].

Renal Dysfunction/Failure—Acute renal dysfunction/failure, acute tubular necrosis, proximal tubular nephropathy, osmotic nephrosis and death may occur upon use of IgG products administered intravenously, especially those containing sucrose. HYQVIA does not contain sucrose. Acute renal dysfunction/failure has been reported in association with Immune Globulin Infusion 10% (Human) administered intravenously. Ensure that patients are not volume depleted prior to the initiation of infusion of HYQVIA. In patients who are at risk of developing renal dysfunction because of pre-existing renal insufficiency or predisposition to acute renal failure (such as diabetes mellitus, age greater than 65, volume depletion, sepsis, paraproteinemia, or patients receiving certain nephrotoxic drugs), monitor renal function and consider lower, more frequent dosing.

Periodic monitoring of renal function and urine output is particularly important in patients judged to be at increased risk for developing acute renal failure. Assess renal function, including measurement of blood urea nitrogen (BUN) and serum creatinine, before the initial infusion of HYQVIA and again at appropriate intervals thereafter. If renal function deteriorates, consider discontinuation of HYQVIA.

Spread of Localized Infection—Infusion into or around an infected area can spread a localized infection. Do not infuse HYQVIA into these areas due to potential risk of spreading a localized infection.

Transfusion-Related Acute Lung Injury (TRALI)—Non-cardiogenic pulmonary edema (TRALI) may occur with intravenously administered IgG and has been reported to occur with Immune Globulin Infusion 10% (Human) administered intravenously. Ensure that patients are not volume depleted prior to the initiation of infusion of HYQVIA. If TRALI is suspected, conduct an evaluation, including appropriate tests for the presence of anti-neutrophil and anti-HLA antibodies in both the product and patient serum. TRALI may be managed using oxygen therapy with adequate ventilatory support.

Transmissible Infectious Agents—Because Immune Globulin Infusion 10% (Human) of HYQVIA is made from human plasma, it may carry a risk of transmitting infectious agents, e.g., viruses, the variant CJD (vCJD) agent, and theoretically, the classic Creutzfeldt-Jakob disease agent. This also applies to unknown or emerging viruses and other pathogens. No cases of transmission of viral diseases or vCJD have been associated with HYQVIA.

Report all infections thought to be possibly transmitted by HYQVIA to Baxalta US Inc., at 1-800-423-2090 (in the U.S.).

Interference with Laboratory Tests—After infusion of IgG, the transitory interference with laboratory tests may yield false positive serological testing results, with the potential for misleading interpretation. Passive transmission of antibodies to erythrocyte antigens (e.g., A, B, and D) may cause a positive direct or indirect antiglobulin (Coombs’) test.

ADVERSE REACTIONS

Common adverse reactions observed in clinical trials in >5% of subjects were:

Local reactions, headache, antibody formation against recombinant human hyaluronidase (rHuPH20), fatigue, nausea, pyrexia, and vomiting.

Clinical Trials Experience

Because clinical studies are conducted under widely varying conditions, adverse reaction rates observed in clinical studies of a product cannot be directly compared to rates in the clinical studies of another product and may not reflect the rates observed in clinical practice.

Immune Globulin Infusion 10% (Human) administered intravenously: Prior to initiation of treatment with HYQVIA, 87 patients received 365 infusions of Immune Globulin Infusion 10% (Human) encompassing 22.2 patient-years,
Among the 87 patients treated, 56 (64.4%) experienced 1 or more adverse reactions. Among the 365 intravenous infusions, 158 adverse reactions occurred for a rate per infusion of 0.43.

A total of 1359 infusions of HYQVIA were administered during the trial; 230 of these infusions occurred during the ramp-up period and the other 1129 occurred during the observation period. During the observation period, 81 patients received 1129 infusions of HYQVIA, of those, 67 (82.7%) experienced one or more adverse reactions. Among the 1129 HYQVIA infusions, 456 adverse reactions occurred for a rate per infusion of 0.40.

Seven of these adverse reactions were severe defined as marked impairment of function or can lead to temporary inability to resume normal life pattern; requires prolonged intervention or results in sequelae.

Adverse reactions occurring in greater than 5% of subjects associated with infusions of HYQVIA vs. Immune Globulin Infusion 10% (Human) given intravenously are shown in Table 1. The majority of these adverse reactions were mild to moderate in severity and did not necessitate discontinuing the infusions. Mild is defined as transient discomfort that resolves spontaneously or with minimal intervention; moderate is defined as limited impairment of function and resolves spontaneously or with minimal intervention; severe (infusion site pain, infusion site swelling and infusion site edema that caused discomfort). Among the 234 local adverse reactions, three were severe (infusion site pain, infusion site swelling and infusion site edema that extended from the abdominal infusion site to the genitalia); all were transient and resolved without sequelae. More than 98% of local reactions were either mild (70.5%) or moderate (28.2%) in severity.

Table 2
Most Frequent Local Adverse Reactions Reported in greater than 1% of Infusion During Treatment With HYQVIA

<table>
<thead>
<tr>
<th>Infusion Site Reaction</th>
<th>Number and Rate of Reactions per Infusion N = 1129</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discomfort/pain</td>
<td>122 (0.11)</td>
</tr>
<tr>
<td>Erythema</td>
<td>32 (0.03)</td>
</tr>
<tr>
<td>Swelling/Edema</td>
<td>35 (0.03)</td>
</tr>
<tr>
<td>Pruritus</td>
<td>22 (0.02)</td>
</tr>
</tbody>
</table>

Rate per infusion = total number of events divided by total number of infusions during the combined efficacy and extension trials encompassing more than 3 years, the local adverse reaction rate was 2.6 per patient-year. During the first 12 month period (months 1-12), the rate was 3.68 local adverse reactions per patient-year. During the subsequent 12 month period (months 13-24), the rate declined to 2.12 local adverse reactions per patient-year. Finally, during the third 12 month period (months 25-36), the rate further declined to 0.37 local adverse reactions per patient-year.

Sixty-six of the 68 subjects who completed the efficacy clinical trial enrolled in a prospective, open-label, multicenter extension trial to assess the long-term safety and tolerability of HYQVIA. Sixty-three of 66 subjects enrolled received HYQVIA and 3 received IGIV. Of the 63 subjects who received HYQVIA, 48 completed the extension trial. The cumulative exposure of HYQVIA across the two trials was 188 subject-years and 2959 infusions, and a maximum exposure of 188 weeks or up to approximately 3.5 years. There were no clinically observable changes in the skin or subcutaneous tissue in either the efficacy or extension clinical trials.

Postmarketing Experience

Because postmarketing reporting of adverse reactions is voluntary and from a population of uncertain size, it is not always possible to reliably estimate the frequency of these reactions or establish a causal relationship to product exposure.

Postmarketing Experience of Immune Globulin Products

The following adverse reactions have been identified and reported during the postmarketing use of Immune Globulin products administered intravenously:

- **Hematologic**
  - Leukopenia, Pancytopenia
- **Neurological**
  - Transient ischemic attack, Tremor, Burning sensation, Cerebral vascular accident, Coma, Seizures, Loss of consciousness
- **Cardiovascular**
  - Hypotension, Hypertension, Myocardial infarction, Chest pain, Cardiac arrest, Vascular collapse
- **Respiratory**
  - Pulmonary edema, Dyspnea, Oxygen saturation decreased, Cyanosis, Hypoxemia, Bronchospasm, Apnea, Acute Respiratory Distress Syndrome (ARDS)
- **Gastrointestinal**
  - Abdominal pain, Hepatic dysfunction
- **Integumentary**
  - Hyperhidrosis, Allergic dermatitis, Bullous dermatitis, Erythema multiforme, Stevens-Johnson Syndrome
- **Psychiatric**
  - Anxiety, Insomnia
- **Musculoskeletal**
  - Back Pain
- **General/Body as a Whole**
  - Edema, Rigors

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