



## **EMBARGOED UNTIL**

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### **Note to media: See abstract 504**

#### **Could Differences in Lung Defects Be Linked to Gender?**

SAN FRANCISCO – Researchers from the University of Wisconsin have raised questions about whether differences in lung defects could be linked to gender in a study presented at the 2011 Annual Meeting of the American Academy of Allergy, Asthma & Immunology (AAAAI).

Elizabeth L. Anderson, BSN, MA, and colleagues set out to identify changes in the makeup of the lungs that occur during their development and how these changes relate to both gender and asthma.

“While one of the challenges of studying causes of childhood asthma is that the lungs are pretty inaccessible, new tools have been developed to be able to assess airflow through different parts of the lung,” said James E. Gern, MD, FAAAAI, who was involved in the study.

One such tool that was used by the researchers is hyperpolarized helium, a harmless gas that lights up with MRI scanners. Forty-three children between the ages of 9 and 11 were recruited from participants in the Childhood Origins of ASThma (COAST) project, an observation study of a high-risk birth cohort. Of the 43 children, 17 had current asthma.

MRIs were taken of each child, using the hyperpolarized helium to define the location and size of areas of the lung with no airflow. Defect scores were determined by an individual blinded to the participants’ asthma phenotypes.

When comparing the children with current asthma versus those without, the researchers found an increased number of areas of the lung with no airflow in the children with asthma. However, these lung defects were significantly more present in girls than boys, regardless of whether they had asthma.

“These findings indicate that prior to puberty airflow to the lungs in girls is not as evenly distributed as it is in boys, even in children without asthma. In children with asthma, these abnormalities in airflow distribution are even more pronounced,” explained Robert F. Lemanske, Jr., MD, FAAAAI, another study author. “We plan to repeat these studies once the children have

reached puberty to determine whether or not these same relationships exist with the increase in lung size that occurs during adolescence.”

The AAAAI represents allergists, asthma specialists, clinical immunologists, allied health professionals and others with a special interest in the research and treatment of allergic disease. Established in 1943, the AAAAI has more than 6,500 members in the United States, Canada and 60 other countries. Visit [www.aaaai.org](http://www.aaaai.org) for more resources and expert advice from allergists.

*Editor's notes:*

- *This study was presented during the 2011 Annual Meeting of the American Academy of Allergy, Asthma & Immunology (AAAAI) on March 18-22 in San Francisco. However, it does not necessarily reflect the policies or the opinions of the AAAAI.*
- *A link to all abstracts presented at the Annual Meeting is available at [www.annualmeeting.aaaai.org](http://www.annualmeeting.aaaai.org)*