Patterns of Allergen Cross-Reactivity

**Allergen Cross-Reactivity**

Allergen groups (species within the genus) listed below show strong cross-reactivity within the associated group. Using one member of the group for the allergy immunotherapy extract may be adequate to protect the patient against the entire group.

### Weeds:

- **Ambrosia**
  - Short ragweed
  - Giant ragweed
  - False ragweed
  - Western ragweed

- **Artemisia**
  - Sages
  - Wormwood
  - Mugworts

**Chenopod and Amaranth families**

- **Salsola**
  - Russian thistle

- **Chenopodium**
  - Lambs quarter

- **Kochia**
  - Burning bush

- **Amaranthus**
  - Pigweed
  - Red root pigweed
  - Amaranth

- **Atriplex**
  - Saltbush
  - Wingscale

**Dust Mites:**

- *D. pteronyssinus*
- *D. farinae*

*D. pteronyssinus* and *D. farinae* have allergens with extensive interspecific cross-reacting epitopes as well as unique allergens. Generally, considered individually, dosage modifications may be made if used in combination to account for this cross-reactivity.

### Grasses:

**Subfamily Festucoideae,**

- Meadow fescue
- Timothy
- Rye
- Kentucky blue
- Orchard
- Red top

**Betulaceae**

- Birch
- Alder
- Hazel
- Hornbeam
- Hop hornbeam

**Fagaceae**

- Beech
- Oak
- Chestnut

**Oleaceae**

- Ash
- European olive
- Privet

**Populus**

- Cottonwood
- Poplar
- Aspen

**Cockroach:**

- German cockroach
- American cockroach

Although, German cockroaches are most likely to occur in American homes, an equal mixture of German and American cockroach is appropriate.

**Trees:**

- **Cupressaceae**
  - Juniper
  - Cedar
  - Cypress

**Betulaceae and Fagales**

- Cupressaceae family: strong evidence for cross-reactivity between members of this family. One member of this family should be adequate.

- Betulaceae and Fagales families have extensive cross-reactivity. The use of one of the locally prevalent members should be adequate.

- Oleaceae family: Strong cross-reactivity between the *Fraxinus* (ash) and *Olea* (olive) species.