Presentation to the USDA Food Allergy Meeting

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National Institutes of Health
April 27, 2006
2003 Expert Panel on Food Allergy Research Recommendations

- Molecular characterization of food allergens
- Pathophysiology of food allergy and food-induced anaphylaxis, including animal models
- Long-term follow up of food-allergic children to identify immune mechanisms underlying
  - Emergence of oral tolerance
  - Development of new food allergies
- Immune intervention strategies to prevent and treat food allergy
NIAID Food Allergy Research Following the 2003 Expert Panel

- Clinical Trials in the Immune Tolerance Network (Ongoing)
- Consortium of Food Allergy Research (2005)
- Conferences on Definition and Management of Anaphylaxis (NIAID/FAAN) (2004 and 2005)
NIAID Allergy and Asthma Funding

Dollars in Millions

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NIAID Food Allergy Research Funded Grants (FY 2005)

- Consortium of Food Allergy Research
- Immunological Response to Cow’s Milk Proteins
- Immunotherapy for Peanut Allergy
- Redefining the Major Peanut Allergens
- Immunological Basis of Egg Allergy
- Regulation of Gastrointestinal Eosinophils
- Developmental Immunotherapeutics for Allergy
- Unconventional T Cell Activities in Animals
NIAID Food Allergy Research Consortium of Food Allergy Research

- Hugh Sampson, MD, Mount Sinai School of Medicine
- $16 million over five years – CoFAR
- $5 million over five years – SAC (EMMES)

- Interventional Project
  - Clinical trial of a new food allergy immunotherapy

- Observational Project
  - Natural history study correlating new food allergy and tolerance to food with immunologic events

- Basic Immunology Project
  - Mouse model of mechanisms of potential immune-based peanut allergy intervention
NIAID Food Allergy Research Consortium of Food Allergy Research

- Mount Sinai School of Medicine
- Duke University School of Medicine
- Johns Hopkins University School of Medicine
- National Jewish Medical and Research Center
- University of Arkansas Children’s Hospital Research Institute
- Yale University School of Medicine
Non-NIAID, NIH Food Allergy Research for FY 2005 Number of Awards

- National Institute of Diabetes and Digestive and Kidney Diseases 3
- National Center for Complementary and Alternative Medicine 2
- National Center for Research Resources 1
Non-NIAID, NIH Food Allergy Funded Grants (FY 2005)

- Mechanisms of Eosinophilic Esophagitis
- Food Proteins and Enteric Infections
- Gut Dendritic Cells and Sensitization
- Chinese Herbal Medicine - Food Allergy
- Sublingual Immunotherapy for Peanut Allergy
Prevention of Allergy/Asthma by Oral Mucosal Immunoprophylaxis (OMIP)

- Patrick Holt, P.I.

- 200 high risk children age 18-30 months (FH of atopy, personal history of food allergy or atopic dermatitis)

- Children not sensitized to allergens in mix receive daily, for 1 year, OMIP with high dose house dust mite, cat and timothy grass; or placebo.

- Expected outcomes after 3 years
  - Decreased sensitization to allergen(s) in mix
  - Decreased incidence of asthma
  - Decreased sensitization to bystander allergens
Tolerance to Peanut in High-Risk Children

Gideon Lack, P.I.

>400 children age 4-10 months at high risk for peanut allergy (egg allergy and/or atopic dermatitis)

Children with negative SPT to peanut randomized to either 6 grams/week peanut snack (bamba) or peanut avoidance, until age 5.

Expected outcomes:
- Lesser incidence of peanut allergy at age 5
- Decreased sensitization to ingested and inhaled allergens
- Decreased incidence of rhinitis and asthma