

NIH Expands Food Allergy Program

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Denver, CO — The National Institutes of Health announced that the Consortium of Food Allergy Research (CoFAR), established in 2005, will be funded for five more years. CoFAR will continue to foster new approaches to prevent and treat food allergies and also expand in scope to include research on the genetic causes underlying food allergy and studies of food allergy-associated eosinophilic gastrointestinal diseases (EGIDs). National Jewish Health is one of the five institutions that make up CoFAR.

Funding for CoFAR is provided by the National Institute of Allergy and Infectious Diseases (NIAID) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), components of NIH.

"Food allergies are difficult to manage because even when one strictly avoids allergenic foods, people with food allergies are still at risk of potentially life-threatening accidental exposures," says NIAID Director Anthony S. Fauci. "We need to find better ways to treat and prevent food allergy and improve the quality of life of those with the disease."

Food allergy occurs in an estimated 5 percent of children and 4 percent of adults in the United States. The hallmark of this disorder is production of immunoglobulin E (IgE) antibodies in response to a specific food. Once IgE antibody is made, further exposure to the food triggers an allergic response. Symptoms of food allergy can range from hives or stomach cramps to swelling of the larynx, fainting from low blood pressure or anaphylaxis, a life-threatening allergic response to food.

EGIDs are a group of recently recognized allergic diseases that also are associated with production of IgE antibodies as well as other immune responses to food. The most common EGID is eosinophilic esophagitis (EoE), which is characterized by inflammation and accumulation of eosinophils, a subset of immune cells, in the esophagus. The primary symptoms of EoE in children include nausea, vomiting and abdominal pain after eating, while in adults, the primary symptom is difficulty swallowing.

The causes of food allergy and EGIDs are unknown. Although these diseases seem to have a genetic component, the genes responsible have yet to be identified. Additionally, some people outgrow their childhood allergies, whereas others develop new ones.

When NIAID established CoFAR in 2005 with five clinical sites, the goal was to help improve understanding of why food allergy develops and how can it be treated or prevented.

During this first phase, CoFAR investigators initiated three clinical trials. One clinical trial is testing if drops containing gradually increasing amounts of peanut protein, given under the tongue, can effectively treat people with peanut allergy. The second trial is evaluating gradually increasing doses of a modified peanut protein, given in a suppository, to treat peanut allergy. In the third clinical trial, volunteers receive egg protein by mouth in gradually increasing doses to treat egg allergy.

CoFAR investigators also initiated an observational study to determine what factors correlate with their allergy continuing or resolving. The study also aims to determine what factors correlate with developing or not developing a new allergy to peanuts. The study has enrolled more than 500 infants, ages 3 to 15 months, with known egg or milk allergy.

All of these studies will continue under the new initiative. In addition, CoFAR will add a new clinical trial to treat peanut allergy, using peanut protein that will be applied on the skin. As part of the program expansion, there will be two new research sites looking for genes associated with food allergy and three consulting sites conducting studies to understand EoE.

The five original CoFAR clinical sites-located at National Jewish Health, Denver; Mount Sinai Medical Center, Duke

University Medical Center, Durham, N.C.; Johns Hopkins University, Baltimore; and University of Arkansas for Medical Sciences, Little Rock-will be led by Dr. Sampson and continue to receive support under the new grant. Joining this group will be the investigators conducting the EGID studies at Cincinnati Children's Medical Center Hospital, University of Colorado Denver and Children's Hospital of Philadelphia.

For more information about food allergy, visit the NIAID Food Allergy Web portal at <http://www.niaid.nih.gov/topics/foodallergy/>.

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