

Researchers developing less allergenic peanut ⁴⁻⁰⁸

Peanuts are the most allergenic food known, capable of triggering severe adverse reactions in sensitized individuals.

Around 1.5 million people are allergic to peanuts, and peanut allergies cause as many as 100 deaths each year in the U.S.

The number of children having an allergic reaction to peanuts has increased dramatically in the last decade in the U.S.

Human allergic reactions have been linked to several different proteins within the peanut. Most of the peanut allergens are seed storage proteins.

Some 20 peanut allergens have been reported.

Currently the only effective way to prevent allergic

reactions from occurring is the avoidance of the food containing the peanut allergen. It is highly impractical and difficult to totally avoid food with peanuts because they are widely used as a protein source and are in a variety of processed foods.

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AG SENSE



By Naveen Puppala

Research at New Mexico State University, in collaboration with the Human Stress Signal Research Center, National Institute of Advanced Industrial Science and Technology, in Tsukuba, Japan, and the USDA-ARS Cropping System Research Lab and Texas A&M Research Center, both at Lubbock, are collaborating on a project to identify differential levels of allergen protein in mature seeds of four peanut cultivars: New Mexico Valencia C, Tamspan 90, Georgia Green, and NC-7.

Allergen Arah3/Arah4 was absent in New Mexico Valencia C and Georgia Green cultivars, while the Tamspan 90 cultivar had the highest levels of the

allergen protein. Allergen Arah3/Arah4 appears to cause fewer allergic reactions.

In this proposed study, the Tamspan 90 cultivar, along with other genotypes from the Valencia mini core, will be investigated for the presence of various allergen proteins including Arah3/Arah4. Researchers will look for genotypes with abundant Arah3/Arah4 and low levels of major peanut allergens (Arah1, Arah2 and Arah3) to develop hypo-allergenic peanuts.

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