Fighting Food Allergies Through A Korean-Australian Collaboration

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AsianScientist (May 18, 2012) - Food scientists in Australia and South Korea are minimizing the adverse health effects of allergens in milk and other food products by developing innovative processing techniques that alter the properties of allergenic proteins.

A new memorandum of understanding signed today between the University of New South Wales (UNSW) School of Chemical Engineering and Korea's National Institute of Animal Science (NIAS) will explore the potential benefits of this and other innovative food safety technologies.

The food allergy research group at UNSW, led by Dr. Alice Lee, aims to develop nano-sensors that can better detect allergens such as those found in animal milk, which can cross a spectrum and in severe cases can result in potentially life threatening anaphylaxis.

They are also working to understand how these allergens change after harvest and during food processing, and how this affects the resulting human reaction.

> "Food allergy has been an emerging food safety concern especially in developed countries," said Lee. "The current collaborative research project we have with the National Institute of Animal Science is focused on reducing the health risks of milk allergens by a means of high pressure processing."

Under the new agreement, a researcher from the NIAS has been seconded to UNSW to work in the Food Science and Technology group, which is also looking at microbiological risks such as *E. coli* and salmonella, and chemical risks posed by traces of antibiotics, hormones, and pesticides.

Antibiotics are often administered to livestock in very low doses to fend off bacteria growth, but leftover residues can sometimes be present in meat, says Lee, resulting in negative health impacts when humans are exposed.

Korea's Rural Development Administration Department is comparable to Australia's Department of Agriculture, Fisheries and Forestry, says Lee, so it has a broad research focus, with a range of possibilities for future research collaborations in the areas of food safety.

> "Korea and Australia share a common interest in food security, global food availability, and food safety - especially around livestock hygiene," said Professor Rob Burford, head of the School of Chemical Engineering. "This is an exciting partnership for UNSW."

Source: UNSW.
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