New food allergy model for fenugreek developed

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A mouse model to investigate allergy to fenugreek has been developed by Norwegian researchers. The model can also be used to study cross-reactivity to peanut, soy and lupin, major food allergens with public health relevance.

Fenugreek is a member of the legume family and is used as an ingredient in curries, chutneys and teas. Allergic reactions to fenugreek may be severe yet its presence is rarely declared in ingredient listings. There is also great concern about potential cross-reactivity with other legumes such as peanut, soy and lupin.

"Allergens that are hidden in generic terms like spices, pose a special problem for food-allergic people. Fenugreek is a well-known food ingredient in Asian dishes, and as dietary patterns are changing, we will be more exposed to fenugreek also in Norway. Mouse models are important research tools that give valuable information in the understanding of food allergies, and may contribute to develop specific therapies for these food allergies" says Nina Eriksen Vinje, researcher at the Division of Environmental Medicine at the Norwegian Institute of Public Health and first author of the paper published in the *Scandinavian Journal of Immunology*.

Cross-reactivity between peanut and fenugreek first came to attention in 2006. The Norwegian Food Allergy Register received reports about allergic reactions to food containing curry powder, and cross-reactivity between peanut and fenugreek was confirmed in two peanut-allergic

patients. It has since been discovered that fenugreek gives a stronger cross-reaction to peanut than other legumes such as soy and green peas.

Mouse models

New foods need to be tested on specific food-allergy models for each potential allergen. Mice are used as they have a well-characterised immune system that resembles the human immune system, allowing researchers to study complex immune reactions. The food-allergy model for fenugreek developed by the Norwegian Institute of Public Health can also be used to understand suspected cross-reactivity to peanuts and other legumes.

More information: Vinje NE, Namork E, Løvik M (2011) Anaphylactic Reactions in Mice with Fenugreek Allergy. *Scandinavian Journal of Immunology* Volume 74: Issue 4 pages 342-353

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