

Safe food for allergic consumers



Allergenicity assessment of new or modified food proteins

New or modified proteins will play a key role in innovation of food products and in improving the sustainability of our food supply chain. New or modified protein-containing food products and ingredients may however lead to novel allergen risks. At TNO, we support you in the assessment of such risks based on our long-standing expertise and scientific network.

We address:

- The risk of cross-reactivity; is there a risk that individuals who are already allergic to related proteins experience an allergic reaction when they consume the novel or modified protein-containing food product (cross reactivity, IgE binding)?
- The risk of *de novo* sensitisation; is there a risk that individuals become allergic when they consume the novel or modified protein-containing food product (sensitization, IgE production)?

Our Food Allergy team is happy to discuss how we can support you to address specific needs tailored to your product development pipeline.

Contact

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For background information:

- Verhoeckx K, Broekman H, Knulst A, Houben G. Allergenicity assessment strategy for novel food proteins and protein sources, *Regulatory Toxicology and Pharmacology* 2016; 79, 118-124. <https://doi.org/10.1016/j.yrtph.2016.03.016>
- Westerhout J, Krone T, Snippe A, Babé L, McClain S, Ladics GS, Houben GF, Verhoeckx KCM. Allergenicity prediction of novel and modified proteins: Not a mission impossible! Development of a Random Forest allergenicity prediction model. *Regulatory Toxicology and Pharmacology* 2019;107; 104422. <https://doi.org/10.1016/j.yrtph.2019.104422>