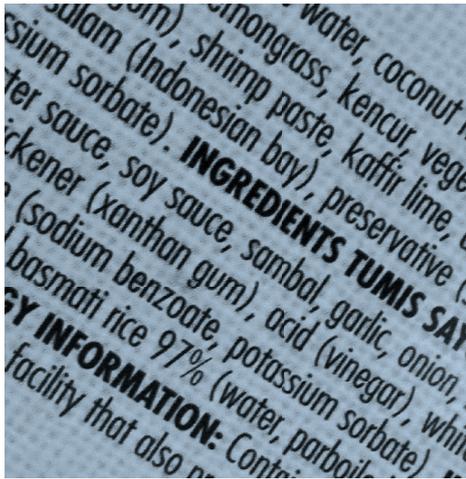


TOWARDS A FOOD ALLERGY FREE WORLD



TNO innovation
for life

TNO is establishing the start of a Shared Research Program (SRP) on food allergy, together with partners from various knowledge institutes and private participants from industry. The program will be supported by TNO knowledge investment funds from Dutch government to enable strategic and applied research with industrial partners. The research program will be based on the principles of open innovation, jointly owned by the participants and orchestrated by TNO.

Food allergy is an important cause of distress for industry, governments and the society as a whole. Food allergy has a prevalence of 2 to 4 % and is among the most prevalent disorders in the Western world. It impacts not only the allergic individuals but also people surrounding the allergic individual (e.g. family, friends, colleagues). The economic impact of food allergy for the food sector and society is substantial involving both direct (medical care, diet etc.) and indirect (illness, time spent for shopping etc.) costs. Moreover, the food industry regularly faces the financial consequences of food incidents and recalls due to unintentional contamination of their products with food allergens.

With the urgent need for the development and introduction of new, alternative and sustainable proteins sources for human

food consumption, the risk of development of new food allergies and new cross reactivity's is evident. Fundamental science and technology has now reached a stage at which we have sufficient starting points to start working on a Food Allergy Free World.

SHARED RESEARCH PROGRAM (SRP)

An SRP is a program, based on the 'open innovation model' with the aim to build up knowledge and technology in the research area and achieve a broad application of this knowledge and technology by its partners from the international industry and universities, university medical centers and research institutes. TNO is the orchestrator of the program and will enable new partners to enter any time, under agreed conditions. An SRP is divided in several program lines, each focusing on a specific theme.



The participation is per program line, but participation in more than one program line is possible. All participants are able to jointly influence the content of the program, that will be adjusted on a yearly basis. The program has a long term view and strategy and therefore requires a commitment from their partners over an extended period of time.

Partners will pay a yearly participation fee to TNO. The participation fees are leveraged by TNO's knowledge investment budgets and therefore at the same time guarantee long term commitment from the Dutch ministries. (Further details are available upon request.)

AIM OF THE SRP

The aim of the SRP is to develop a food allergy free world within 15 to 20 years.

PROGRAM LINES

The SRP food allergy is divided into three different program lines:

Protect the existing food allergic consumer

In this program line the scientific questions related to the development and implementation of quantitative guidances for ingredient and precautionary labelling by food companies will be addressed. This will improve:

- allergen management regarding cross contamination
- precautionary labelling
- evidence based allergen and allergy management and
- consumers trust in labelled and non-labelled food products.

Prevent the introduction of strong allergenic foods

The main goal of this program line is to develop a validated, predictive and accepted allergy risk assessment strategy for new protein sources and new or modified protein (containing) products. This will be accomplished by elucidating the correlations:

- between food matrix
- protein structure
- food processing
- digestion
- absorption/uptake and distribution, and
- interactions with the immune system.

Cure food allergic consumers and prevent the development of new food allergies

This program line will facilitate the development of safe and effective products and strategies for prophylactic and/or therapeutic interventions to prevent or cure food allergy. This will be achieved by developing:

- models to study treatment strategies and perform risk-benefit assessments,
- elucidation of immunological mechanisms involving food allergy and tolerance, and
- identifying diagnostic and prognostic biomarkers for food allergy and monitoring safety.

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TNO HEALTHY LIVING

TNO initiates technological and societal innovation for healthy living and dynamic society.

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