

## Hybrid products from animal and plant sources (MeatHybrid)

(CORNET)

<b>Coordination:</b>	Forschungskreis der Ernährungsindustrie e. V. (FEI), Bonn (Research Association of the German Food Industry)
<b>National Agencies:</b>	<ul style="list-style-type: none"> <li>• AiF - German Federation of Industrial Research Associations, Germany</li> <li>• VLAIO Flanders Innovation &amp; Entrepreneurship, Agentschap Innoveren &amp; Ondernemen, Brussels/Belgium</li> </ul>
<b>Research Association:</b>	<ul style="list-style-type: none"> <li>• Flanders' Food, Brussels/Belgium</li> </ul>
<b>Research Institutes:</b>	<ul style="list-style-type: none"> <li>• DIL - German Institute of Food Technologies, Quakenbrueck</li> <li>• University of Hohenheim, Institute of Food Science and Biotechnology, Department of Food Physics and Meat Science</li> <li>• Institute for Agricultural and Fisheries Research (ILVO) Unit Technology and Food Science, Melle, Flanders/ Belgium</li> </ul>
<b>Industrial Branch:</b>	<ul style="list-style-type: none"> <li>• Meat Processing Industry</li> </ul>
<b>Duration:</b>	2017 - 2019
<b>Volume:</b>	€ 772.149,-- (total)

### Aim of the project:

Since 1988, the use of plant proteins in meat products has been permitted through an EU-guideline. To this day, however, only few products are available on the market. Small and medium scale enterprises are reluctant to invest in research and development since it is not clear how consumers will react to hybrid meat product offerings. There is insufficient information on potential acceptance rates and product preferences. Producers lack knowledge about the ideal concentration of plant proteins in the formulation of hybrid products, the correct procedure of adding plant proteins to form "hybrid batters", and methods to convert them to sliceable or spreadable products. However, so far, attempts of adding plant proteins to meat products have largely failed. This is because (a) incompatible proteins have been used, (b) proteins have been added "unstructured", i.e. as powders to minced meat and (c) products have had unacceptable sensory performances.

The overall objective of the project is to develop knowledge that enables the production of hybrid products that will be successful in the market and meet consumers' needs and wants with respect to sustainability, taste and health. The central hypothesis of this research project is that there are formulation and process conditions under which hybrid products can be developed that meet consumer expectations and deliver high value in terms of sustainability, health and organoleptic properties.

### Economic impact:

In 2015, food producing companies (310.000) in Europe employed 4.8 million people, 14 % of the total manufacturing sector, making the food industry the second largest industrial sector with a turnover of 917 billion €. Most producers are SMEs and only a few are able to compete on the global market. The turnover in Germany is 175.2 billion € (of these, 53.6 billion € account for exports) which makes the food industry the fourth largest industry in Germany. The meat industry represents the

largest sector within the food industry in Germany, with a percent revenue share of 23.2 % and a turnover of 41 billion €. The food industry in Germany employs more than 550.000 people of which about 110.000 work in the meat industry. The results of this interdisciplinary project give SMEs the chance to produce new hybrid products for the national and international markets.

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This CORNET project ("Collective Research Network") is a transnational collaborative research project with two participating countries under the coordination of the FEI. The idea of CORNET is to bring together national funding and research institutions in a transnational project and to create synergies across national borders. The German part of the CORNET project is funded under the program to promote Industrial Collective Research (IGF) from the Federal Ministry for Economic Affairs and Energy (via AiF) through the Research Association of the German Food Industry (FEI).

### ... a Project of the *Industrial Collective Research (IGF)*

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