

# The LikeMeat Project



The LikeMeat project consortium was made up of 14 research and industry partners - full details can be found on the project website

<http://www.likemeat.eu>

## High quality meat-like products - from niche markets to widely accepted meat alternatives

The 2 key aims of the project were: (i) to develop meat analogs with excellent texture, juiciness, appearance, and aroma and (ii) to enable small and medium sized European enterprises to participate in a rapidly expanding market sector.

## CyberColloids role in the project

CyberColloids participated in the project as the lead SME partner. From a technical perspective, we were responsible for the identification and sourcing of suitable hydrocolloid ingredients with textural functionality. During the project, we were able to improve our understanding of plant derived proteins and the development of meat-like products. As the lead SME we played a key role in IP management and in the development of the post-project IP exploitation plan.

## Key outcomes of the project

When the project was conceived, the number and range of meat-like products in the European market was relatively small, available technology for the production of such products was limited and many products were not of

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acceptable quality for a wide range of consumers. During and since the completion of the project, both consumer demand and the range of available meat-free products have grown substantially in Europe. CyberColloids are fortunate to have gained new experience from the LikeMeat project which has been of value in subsequent research projects.

Fibrous meat analogues were produced using a high moisture cooking extrusion process. During this development, various ingredients and process conditions were evaluated and optimised. A number of different analogues were formulated, including vegetarian analogues containing mixes of plant derived, milk and egg protein, and vegan analogues containing only plant derived ingredients. Plant proteins other than soy and wheat, as commonly found in meat-like products, were used.

Each formulation was optimised to give end products with the best meat-like qualities including texture, aroma and fibrous appearance. CyberColloids were able to help, by providing expertise on the choice and use of different hydrocolloids to improve important texture attributes and juiciness.

A key aspect of the research was to address issues concerning food safety and shelf life. Part of this work involved the identification of potential microbial risks during processing and in the final product.

A range of base analogue ingredients were produced and then used to develop different conceptual products for evaluation. These were chosen by the SME and industry partners and included coated products, delicatessen products and ready-to-eat meals (e.g. schnitzel and a Mexican style like-mince dish).

After further optimisation of both the analogues and recipes, five prototype products were selected and subsequently tested in extensive consumer studies. This task also involved scaled up production of the meat-like analogues in order to produce enough for the testing. The consumer target group identified as most likely to buy such products was flexitarians - *i.e.* consumers wanting the flexibility to choose meat or not but not being specifically vegan or vegetarian.



**Schnitzel - one of the prototype products**

Overall, the project was highly successful with the SME partners not only enabled to exploit the new knowledge and IP in-house but also benefiting from third party commercialisation of the new IP.

## More information

Please see the CyberColloids website [www.cybercolloids.net](http://www.cybercolloids.net) for more information on our research focus & activities and for a list of our relevant publications.

For more information on the project itself, see the LikeMeat project website [www.likemeat.eu](http://www.likemeat.eu) or read the CORDIS report at [http://cordis.europa.eu/result/rcn/148596\\_en.html](http://cordis.europa.eu/result/rcn/148596_en.html)