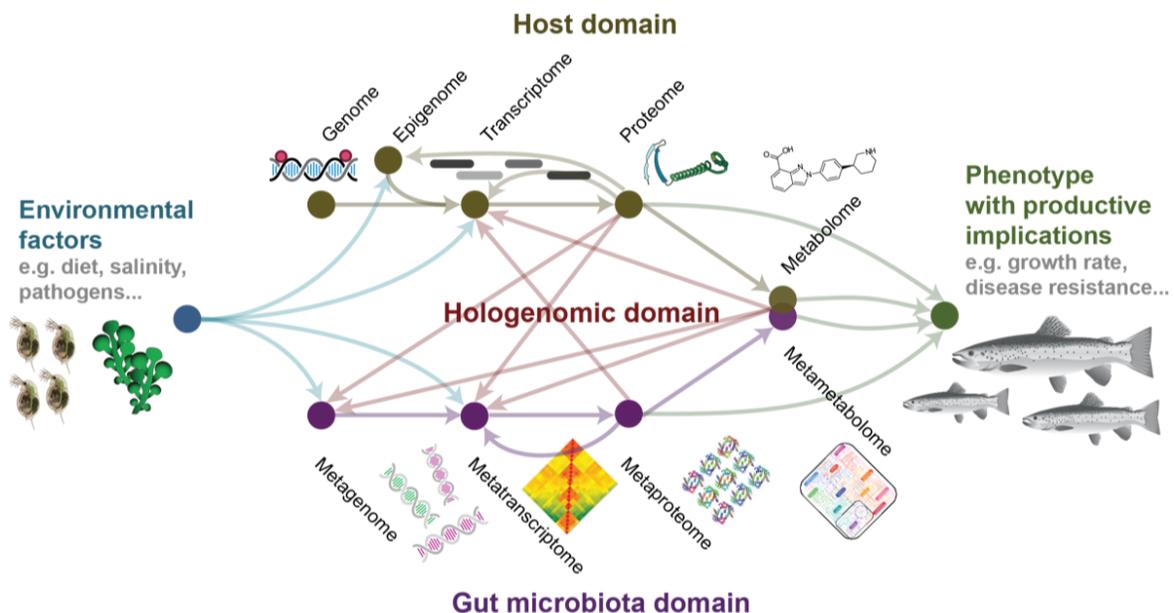




HoloFood Hologenomics for sustainable food production

Food sustainability is a global concern for both consumers and food production companies. There are many unknowns related to optimising food production, in particular with regards to using natural food additives such as pre- and probiotics to encourage growth and well-being of farmed animals. However, there is still much to be discovered about the impact of such additives on the animal microbiome, and on the animal itself. Unless a more holistic approach is taken, whereby both the host animal and their respective microbiome is examined together in their response to their diet, attempts to improve feed additives may never reach their full potential.



To address this issue, HoloFood, an EU-funded Horizon 2020 Innovation Action (grant number 817729) showcases a holistic approach that will improve the efficiency of food production systems, by attempting to decipher the molecular and physiological processes triggered by feed additives across animals with

different genetic background and raised under different controlled environments. The HoloFood project (Hologenomics for sustainable food solutions) runs from 2019-2022.

HoloFood concentrates its efforts on optimizing two main food systems that have high importance within worldwide food economy: chicken and salmon. HoloFood will characterise not only the animals' associated microbiomes' genomes, transcriptomes and metabolomes but will also characterise how the microbiome interacts with animals' genomes and transcriptomes in relation to key performance indices and animal welfare issues. This 'holo-omic solution' will then be piloted in commercial production environments in poultry and aquaculture. The knowledge generated will be used by our industrial partners Chr. Hansen A/S and Lerøy Seafood Group, to optimize food additive administration strategies of already implemented products, by tailoring them to the genetic background and developmental stage of the animals, as well as production environment. This will improve the quantity, quality and safety of the produced food, as well as increase the sustainability of food production and animal welfare. HoloFood will also serve to raise awareness about the importance of microbiomes in food production, and to establish bridges between companies and academia to foster science-based strategies. HoloFood is coordinated by the University of Copenhagen. The innovation action gathers 11 academic and industrial partners from six European countries (Denmark, Norway, Germany, UK, Spain and Poland), forming a dynamic interdisciplinary group of fundamental researchers, applied scientists and industry partners with a track record of bridging basic science to applications in the food industry.

To find out more about the project check out our explainer video here:

<https://www.youtube.com/watch?v=NSQLffZj-AY>

or find out more on [Twitter](#) @HoloFood_EU [LinkedIn page](#) and website www.holofood.eu