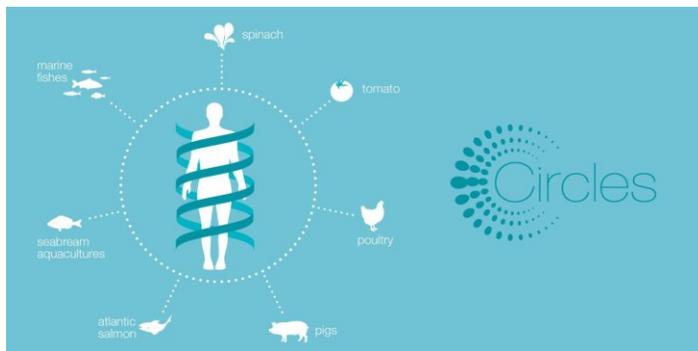




CIRCLES Unlocking the potential of microbiomes for sustainable food production

Access to safe, nutritious, high quality and affordable food is a basic necessity, that currently comes with many economic and environmental problems. With our global population increasing, how will we provide, sustain and improve the provision of healthy foods in a sustainable and fair fashion?

Controlling mIcRobiomes CircuLations for bETter food Systems (CIRCLES; grant number 818290) is an EU-funded project under the Horizon 2020 research framework which runs from November 2018 to October 2024. In total, 30 European organisations have joined the effort to find solutions for the challenges that our food systems face, such as a growing population, soil erosion, water shortages and rising temperatures. How can this be done? CIRCLES has identified natural microbiomes as key players with incredible potential in the making of more sustainable, resilient, competitive, diverse, responsible and inclusive food systems.



To achieve a representative sample of the whole food system, CIRCLES expert partners and institutions are exploring microbiome interactions and circulations across six food chains:

- spinach
- tomatoes
- poultry
- pigs
- Atlantic salmon (farmed and wild)
- Seabream (farmed and wild)

By gaining knowledge on the microbiomes found on a variety of food systems, CIRCLES is developing and implementing smart microbiome modulators (SMMs) and is applying them in integrative circular actions in smart microbiome food systems (SMFSs). By using evidence-based approaches to exploit strategic microbiome functionalities, SMFSs will be able to be more productive, safe, sustainable and resilient, creating more responsible, secure and transparent future EU food systems. CIRCLES is also creating smart microbiome food products from these SMFSs, which take into account different needs such as food quality, sustainability and human health. In short, CIRCLES provides the scientific knowledge to exploit natural microbiomes for the sustainable production of high quality and healthy food.

During the project, European citizens and workers in these food chains are informed and engaged, with a view to better understand the interlink between microbiomes, sustainable food and environment.

Unfortunately, with the [COVID-19](#) pandemic the research aspect of the project had to slow down. However, some incredible efforts to mitigate the effects of the pandemic and to engage with the wider public were put in place, creating some amazing resources, such as [videos](#) by our researchers, [blogposts](#) on various microbiome-related topics and even some scientific [publications](#). Check out our [resources](#) section to find out more!

Want to find out more about how microbiomes can help improve our food systems? Find the CIRCLES project on [Twitter](#) @SciFoodHealth with the hashtag [#CIRCLESEU](#) and on [Instagram](#) @microbesforlife or check out our [website](#).