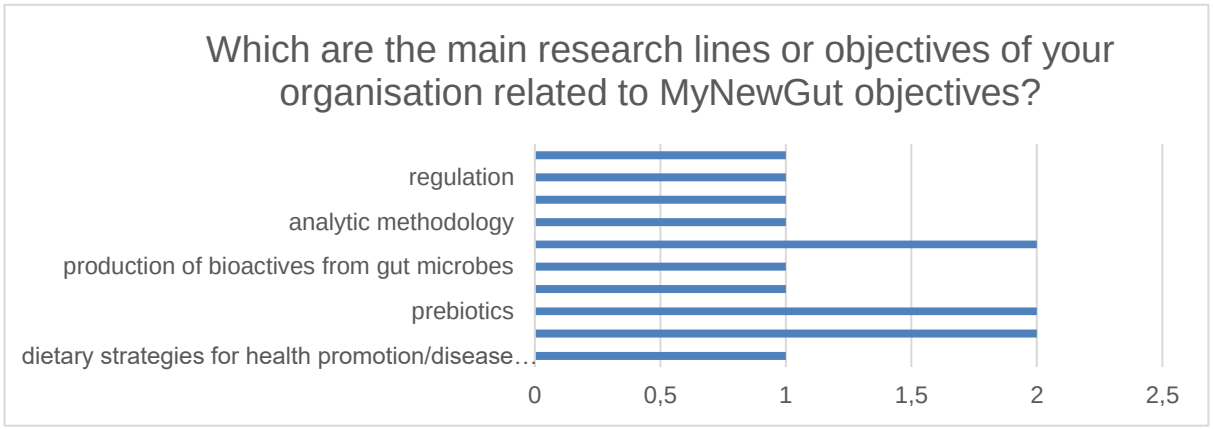
Q&A with MyNewGut's User Advisory Board (UAB)

We interviewed members of MyNewGut's UAB, to find out their views on topics related to MyNewGut's objectives. Find their answers below to learn about their current interests and future needs and perspectives on the gut microbiome.



Which type of dietary, pre- or pro-biotic applications are of interest, and in which population groups?

- We need to establish to what extent non-communicable diseases (NCDs) can be reduced/prevented by nutritional interventions that impact on the microbiota, the gut barrier, the immune system and/or the enteric nervous system. In order to be inclusive for all, we suggest an approach that will define and address special populations separately. Examples are differentiation on the basis of age, income and gender.

- Population of interest are infants, children and adolescents. Diseases include any gastrointestinal, liver or pancreatic disease, obesity, but also nutritional aspects trough improvement of health and prevention of diseases (e.g. infection).

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What is needed to better document the health benefits of the specific dietary components, pre- and pro-biotics? What are the priorities? What are the endpoints that we should be looking at?

- To gain a better understanding of the impact of variation in microbiome function (rather than solely composition) and go beyond descriptive correlation studies to establish where this can be targeted by diet to achieve meaningful benefits.

- Endpoints definitely depend on the research. Please refer to: Core data necessary for reporting clinical trials on nutrition in infancy. Ann Nutr Metab. 2015;66(1):31-5.

Do you think we need to standardise the methodologies applied in microbiome research to speed-up the translation of science into applications and authorisation of microbiome-based foods/ingredients/medicinal foods/drugs? Which area (analytic procedures, study models, intervention trials, etc.) needs standardisation?

- Methodologies should be standardised in all area of research.

Do you think that microbiome-based predictive biomarkers of disease risk could help in developing dietary preventive strategies?

- There is a need for targeted hypothesis driven long-term intervention studies, not solely focusing on accepted biomarkers, but also on functional intermediate endpoints or even hard endpoints.

- Yes, in future.

Do you think that microbiome-based predictive biomarkers of disease risk could help in developing dietary preventive strategies?

- By clarifying the cause-consequence relationships in the data described to date to generate working hypotheses that can be tested in well-designed human intervention studies.

- Predictive tools and models could definitely help, however some of these models should be long lasting as the effect of the microbiota modification and its influence on the disease could have major confounding factors and could have a postponed effect.

What options do you see for more open and collaborative approaches to develop and commercialize microbiome-based products that have a positive impact on the health of individuals?

- Via pre-competitive strategic research approaches.

- Regarding microbiome-based products, there are several options which could be of clinical interest – fecal transplant replacement in ulcerative colitis and C. difficile colitis; probiotics in different products (strains or combinations which are scientifically proven as effective).

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Do you think microbiome science could contribute to improved dietary recommendations? How?

- It could create awareness that one health benefit should not be obtained at the expense of another health benefit, by conducting integrative studies on the different physiological effects induced by foods or food constituents.
- There is a very high possibility; there is evidence that microbime change can be in some extent influenced by the diet, pre-and pro-biotic use etc.

To what extent will the microbiome play a role in personalised nutrition?

- By targeting specific population groups in nutritional interventions, progress will be made towards (semi)-personalised nutrition.
- Based on the current knowledge it is hard to estimate the exact extent.

How could researchers contribute to evidence-based public health recommendations and policies based on microbiome science? Do you think there are enough mechanisms to strengthen this collaboration?

- Definitely, well performed basic research followed by clinical studies (mainly randomized controlled trials) would result in recommendations which are evidence based.

Which communication strategies can help to inform health care professionals/dietitians/public about progress in microbiome research?

- More collaborative, joint projects.

What is the role of consumers in succeeding in the development of microbiome-based products/applications?

- An improved understanding of societal acceptance and demand for new products is key.
- Consumers could have a role in the development of projects in the premarketing phase.

Which role do you think research institutions should have in the maintenance of the food industry competitiveness?

- The current societal challenges we face are so big that no one can tackle these on his own: collaborations with all relevant players (food industry, academia, research institutes, policy makers) are key.
- Product development by the food industries should be based on the research results provided by the research institutions. Research should aim to give specific answers (e.g. which probiotic strain to use for prevention of respiratory tract infections).

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Do you think the EU's funding scheme is contributing to boosting competitiveness/innovation of the European food industry? What could be improved?

- Fostering public-private collaborations.
- EU funding can contribute, but it is hard for us estimate to what extent.

Which are the most important innovation drivers for the industry in the microbiome field?

- Developments in the microbiome field can help provide the basis for a more personalised and customised food supply. In the future society, every citizen will have access not only to sufficient and affordable food, but will have exactly the 'right' food for him or her in terms of his/her preferences and physiological and psychological needs. To achieve this goal we need to better understand not only why and how consumers choose and eat food but also what food actually does inside us after it is eaten e.g. what is the impact on our gut microbiota.
- Innovation drivers should be innovative (novel) ideas, collaborative work and investment in new technologies.

Which are the most important barriers for the industry in the microbiome field?

- Consumer engagement and acceptance of new products.
- Demographic changes.
- Sector maturity: the sector players will therefore need to find new ways to address the low translation of valuable research results into successful innovations.
- Innovation barriers would be lack of resource (microbiome related research requires substantial funds), sample size and competitiveness rather than collaboration.

How could our project help consumers in making informed food choices?

- Diverse choices will be available that make eating a cultural and social experience while simultaneously maintaining one's health and agility in various life stages. It is therefore important to deliver new and effective two-way communication pathways, and identify the untapped potential for associated services (technology and information and communication technology) that can help with this task.
- Based on the results of the research on how microbiome changes with food and physical activity, more evidence based recommendations could be given.

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