

MICRO-B mHealth Lifestyle app - to improve gut microbiota and prevent lifestyle related diseases using personalized diet and food plans.

Introduction: Accumulating knowledge is exposing close links between the gut microbiota and common diseases and syndromes ranging from irritable bowel syndrome (IBS) and diabetes, to neurodegenerative diseases and mental health. **Gut microbiota** is the common term referring to the millions of microbes living in our intestinal tract. These microbes are important for healthy digestion, protection against pathogens, as well as production of key nutrients for our body. As a result of poor knowledge and lack of education of the impact of gut microbiome, overuse of antibiotics and other drugs, imbalanced diet and lack of physical activity and mindful rest, many people suffer from a disturbed gut microbiota; a state referred to as dysbiosis. ***Our gut microbiota is an ecosystem***, comparable with more visual ecosystems, like a forest. Extinction of species, or overgrowth of unwanted species in a forest is often harmful for the forest ecosystem. This is also the case for the ecosystem in our digestive system, where such disturbances cause dysbiosis, directly linked to the above mentioned diseases.

Problem: The rate of lifestyle related diseases are ever increasing. It is threatening for public health and represents an increasing social cost. The lack of understanding the close relation between gut microbiome, food and lifestyle is challenging and is currently given too little attention in public health arena

Solution: We are proposing an exclusive, all-inclusive mobile application on how to restore/ensure a healthy gut microbiome to overcoming lifestyle related diseases and syndromes as well as leading a healthy lifestyle. The app will offer services such as microbial friendly recipes, workouts, calorie counters, meal planning and mental wellness etc with the option of social connectivity to keep users engaged.

Linked to the app we will provide services including analysis of the gut microbiota (**USP**). The customers can order a self sampling kit that will be sent to them and can be used with ease. Upon analysis using our exclusive database linking abundance of microbial species to specific foods, we will provide a personalized diet plan and recommendations of foods, pro- and prebiotics etc., that are tailored to the customers needs to restore a healthy gut microbiota.

The app will provide engaging, motivating and encouraging ways to achieve a desired lifestyle for all users.

Market Size: The global health mHealth Apps market was estimated at 38.2 Billion USD in 2021 and is expected to reach **105.9 Billion USD** in 2030 with a CAGR of **11.8%**. The global personalized nutrition market size is projected to be **16.4 Billion USD** in 2025 with a CAGR of **15.0%**.

Growth potential: Based on the data from the samples and knowledge on general abundance of microbial species, we will make pro-pre and post biotica products that will be offered and sold through the application, online stores and clinics. Private counseling and conversations will be made available. Each aspect of the app can be monetised and developed into an actual service with its own division such as meal planning, workouts etc,. In future, clinics can be set up which will offer fecal microbiota transplantation (FMT), an established method of restoring gut microbiota.

Target Group: The general population, people with lifestyle associated disorders, parents, pregnant women, health enthusiasts, people who are into fitness and teenagers will be our primary target group.

Team: Gro Vatne Røsland, Dhanush Ramesh Anitha.