Press Release

New Research Project miGut-Health: Personalised Health Blueprint to Prevent and Predict Inflammatory Bowel Disease

miGut-Health partners aim to empower people affected by Crohn's disease and ulcerative colitis by developing interdisciplinary solutions for improved disease prevention and health promotion.

27 February 2023 – Inflammatory Bowel Disease (IBD) encompasses two incurable chronic conditions, Crohn's disease and ulcerative colitis, that cause inflammation and damage in the gastrointestinal tract. IBD progresses over time, and molecular changes in the intestine during the asymptomatic stages of the disease precede diagnosis, often by several years. Active engagement of people living with these diseases in self-care and symptom monitoring is a crucial aspect of IBD care alongside clinical management strategies like diagnosis and treatment. However, more personalised patient engagement strategies, preventive measures, and effective digital health tools are urgently needed. Taking on this mission, the new miGut-Health research project strives to empower people living with IBD by creating state-of-the-art strategies for early disease prediction, prevention, and health monitoring. This will be achieved through data-driven approaches, personalised preventive interventions (such as nutritional changes), and innovative eHealth solutions. The ultimate goal of the 12 partners is to kickstart a shift from disease management to prevention. Over the next four years, the miGut-Health project will receive a total of EUR 7.5 million in funding from the European Union's Horizon Europe programme and the Swiss State Secretariat for Education, Research, and Innovation (SERI).

With over three million people in the EU diagnosed with IBD, the associated annual healthcare costs amount to approximately EUR 5 billion. Moreover, symptoms such as abdominal pain, fatigue, and rectal bleeding can significantly affect an individual's daily life. IBD's unpredictable, alternating periods of remission and relapse add to the mental and physical burden of the disease for people affected by IBD.

To diminish this socio-economic burden, miGut-Health researchers will work in three interconnected directions: searching for gut health biomarkers, assessing personalised prevention measures, and developing citizen health engagement strategies.

Promoting Gut Health through Patient and Citizen Engagement

Novel eHealth technologies enable the active engagement of people in their healthcare. miGut-Health will develop and improve several AI-assisted eHealth platforms that collect Patient Reported Outcome Measures (PROMs) and monitor health status, disease activity and

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nutrition. Through this, researchers will provide personalised recommendations for better disease detection, management, treatment and prevention.

“Our aim in miGut-Health is to empower people living with IBD, individuals at high risk of developing IBD, and healthcare providers by putting them at the centre of our research,” says project coordinator Professor Andre Franke from the Kiel University and the University Hospital Schleswig Holstein, Germany.

Improving Gut Health by Advancing Molecular-Level Understanding of IBD

By measuring gut health biomarkers, such as the gut microbiome, researchers in the miGut-Health project can learn about problems in the digestive system and how to improve gut health.

“Until today, there are only a few validated biomarkers for gut health assessment, which is why we will continue to identify and test existing biomarkers, integrate available extensive omics data, and search for novel biomarkers using state-of-art technologies and methods,” explains project co-coordinator Professor Jurgita Skieceviciene from the Lithuanian University of Health Sciences.

Study groups for the biomarker research will include IBD patients, high-risk disease individuals, and general population cohorts from several countries with a focus on the Faroe Islands, which have the highest IBD incidence worldwide.

The project brings together major European and Israeli experts in biomedical, data and social sciences, software developers, and pan-European patient organisation representatives. The activities in miGut-Health will kick off on 27 February 2023 with a virtual meeting.

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Key Facts
Full Name: miGut-Health – Personalised blueprint of intestinal health
Start Date: 1 January 2023
Duration: 48 months
Budget: EUR 7.5 Mio. (EUR 7.1 Mio. funded by the European Commission, EUR 0.4 Mio. funded by the State Secretariat for Education, Research, and Innovation – SERI as a financial contribution to the Swiss partner)
Coordinator: University Hospital Schleswig Holstein / affiliated entity Kiel University
Website: www.migut-health.eu

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miGut-Health
Personalised blueprint of intestinal health

Project Partners

Belgium
- European Federation of Crohn's and Ulcerative Colitis Associations

Denmark
- Region Hovedstaden

Germany
- University Hospital Schleswig Holstein
  - Kiel University (Affiliated entity)
- Medical Center Hamburg-Eppendorf (UKE)
- Eurice – European Research and Project Office GmbH

Israel
- Weizmann Institute of Science

Italy
- Università Cattolica del Sacro Cuore

Netherlands
- University Medical Center Groningen

Lithuania
- Lithuanian University of Health Sciences

Sweden
- Örebro University

Switzerland
- École Polytechnique Fédérale de Lausanne

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