MICROB-PREDICT

Focus on human microbiome to fight liver cirrhosis

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 825694.

OUR VISION

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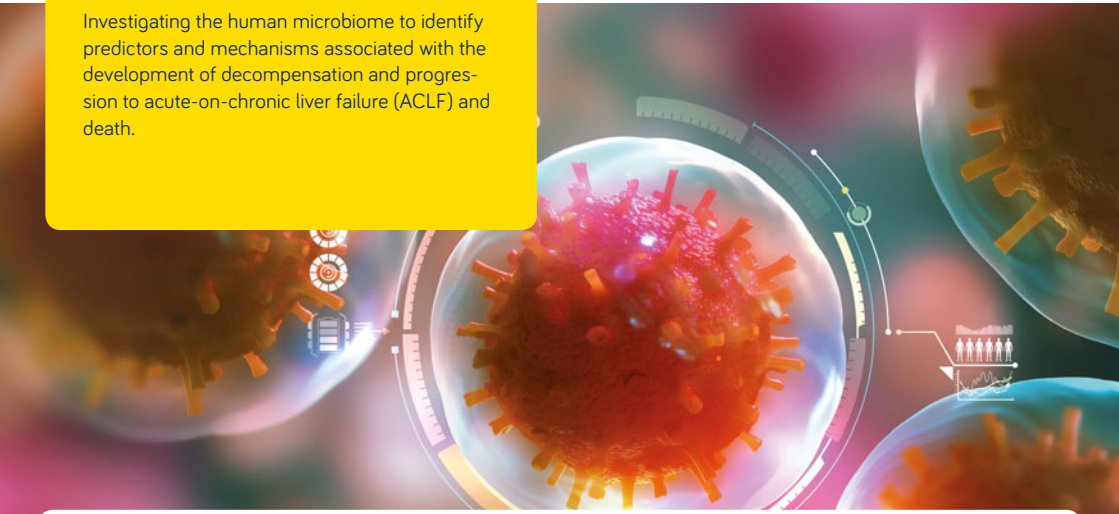
MICROB-PREDICT aims to develop personalised, microbiome-based treatment strategies to prevent and treat decompensated cirrhosis and acute-on-chronic liver failure (ACLF) and reduce mortality by investigating the human microbiome. The goal is to identify predictors and mechanisms associated with the development of decompensated cirrhosis and its progression to ACLF. The need for personalised treatment strategies becomes apparent when considering that there are substantial, yet still largely unexplained, individual differences in developing decompensated cirrhosis and ACLF. At the same time, this observation bears the chance for more effective, more individualised and more targeted treatments.

OUR OBJECTIVES

Investigating the human microbiome to identify predictors and mechanisms associated with the development of decompensation and progression to acute-on-chronic liver failure (ACLF) and death.



SPECIFIC AIMS

- **To identify** major taxonomic and functional microbial traits, which are associated with the development of decompensated cirrhosis and progression to ACLF and their interaction with the host and medication.
- **To validate** the biomarkers and develop (a) novel microbiome-based nanobiosensors connected to smartphones and other easy-to-use tools for end-users of such markers and (b) treatment approaches modifying the microbiome and host co-factors.
- **To use** these tools in the clinical trial of MICROB-PREDICT to personalize treatments, improve the treatment response to approaches modifying the microbiome and host co-factors, and reduce the mortality rate.
- **To decrease** the individual, social and healthcare burden caused by decompensated cirrhosis and ACLF.

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WHY IT MATTERS

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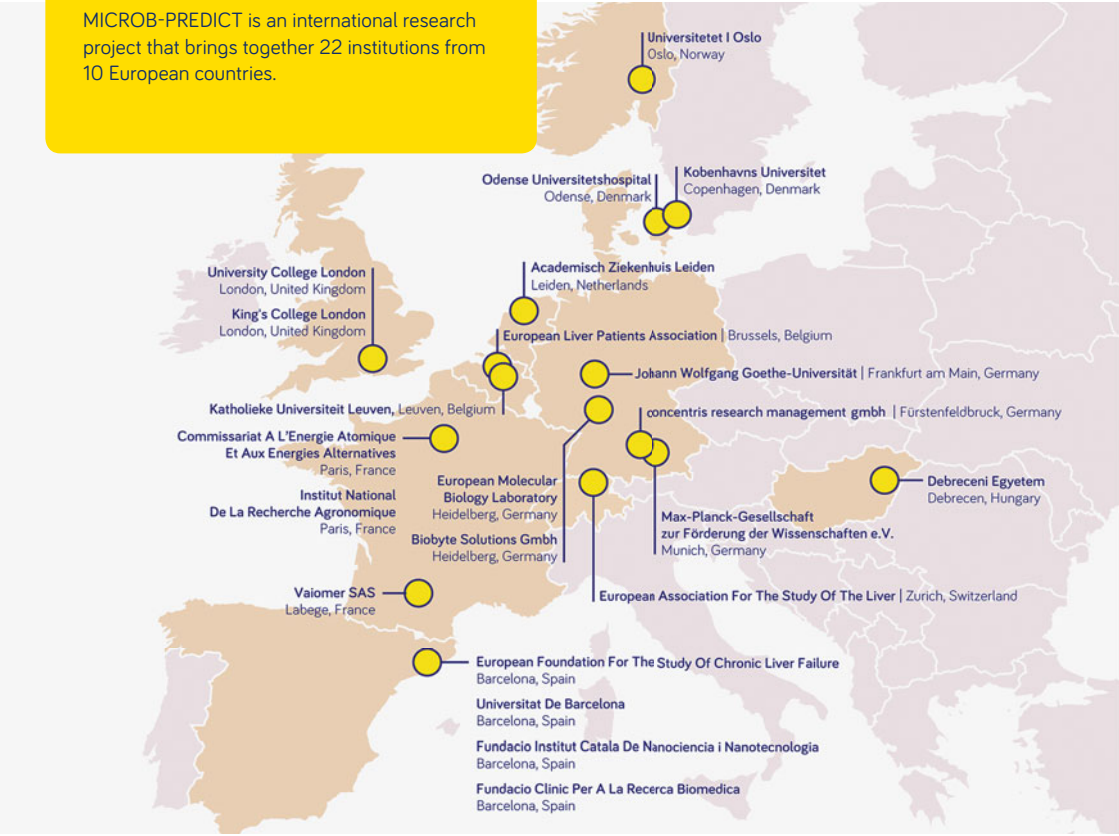
Worldwide, 1.2 million people die of end-stage chronic liver disease (cirrhosis) every year, while less than 10% of the research focuses on decompensated cirrhosis and ACLF. End-stage cirrhosis is a major cause of morbidity and mortality, and has a large socioeconomic impact because of high health care costs and the patients' inability to work or seek employment. Patients show symptoms, start suffering, and eventually die of liver cirrhosis when the body essentially can't compensate the sequelae of liver dysfunction any longer. That's why it's called decompensated, as opposed to compensated, cirrhosis.

Eventually, it may progress to acute-on-chronic liver failure (ACLF) and death. Therefore, it is crucial to develop novel treatments and help cirrhosis patients earlier, faster and better.

MEMBERS

MICROB-PREDICT is an international research project that brings together 22 institutions from 10 European countries.



BASIC FACTS AND FIGURES

FULL PROJECT TITLE	MICROBiome-based biomarkers to PREDICT decompensation of liver cirrhosis and treatment response
START DATE	01 January 2019
DURATION TIME	75 months (6 ¼ years)
PARTICIPANTS	22 institutions from 10 European countries
EC FUNDING	15 million €
PROJECT WEBSITE	www.microb-predict.eu

JOIN US FOR COLLABORATION!

Contact us, if you would like to add data and collaborate with our studies.

Contact

PROJECT COORDINATOR	**Prof. Dr. Dr. med. Jonel Trebicka** Professor for Translational Hepatology at GUF (Germany) › jonel.trebicka@efclif.com
PROJECT MANAGEMENT	**concentris research management gmbh** › pmo@microb-predict.eu

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