15 PhD postions in Systems Biology

New EU training network is recruiting candidates

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BestTreat: Building a Microbiome Engineering Toolbox for In-Situ Metabolic Treatments for Non-alcoholic Fatty Liver Disease

Non-alcoholic fatty liver disease (NAFLD) represents one of the most common diseases in the world, with an estimated global prevalence of 24%, largely occurring in overweight and obese individuals, and it encompasses liver conditions ranging from simple steatosis through steatohepatitis to liver cirrhosis. NAFLD is also the most rapidly increasing cause of liver cancer, especially in Western countries. Therefore, it is considered the hepatic manifestation of the metabolic syndrome and its features, including insulin resistance, hyperlipidemia and hypertension, among others. Recent findings have elucidated factors that drive progression from simple steatosis to NAFLD, such as gut microbiome dysbiosis, diet, genetics and intestinal permeability. Despite these advances in NAFLD pathology, **a mechanistic understanding behind inter-patient variability in progression remains poorly understood and novel diagnostic and therapeutic targets are urgently needed, given its prevalence**. Importantly, while the drivers for new applications in NAFLD diagnostics and therapy are originating in the non-academic sector, the state-of-the-art knowledge on gut microbiota and on methods to understand their role in the onset and development of NAFLD are mostly concentrated in academia. Furthermore, the comprehensive understanding of this disease can only be achieved through a multidisciplinary approach, one that could be leveraged to train new researchers to bridge across sectors and through domains of expertise. Accordingly, the BestTreat consortium forms a strategic research and training alliance of carefully selected world-leading partners from Academia and Industry with **a wide range of inter-disciplinary skills from human biology and (bio)chemistry to bioengineering and computer science**. The BestTreat program aims to combine data- and hypothesis-driven approaches with emerging experimental technologies to investigate the complex interactions between the microbiota and its host to identify new therapeutic avenues for NAFLD. In this program, 15 early stage researchers (ESRs) will be trained to be the next generation of academics and entrepreneurs, who can lead the advances in these research fields into market applications.

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