

2.1.1.B.

Annual highlights in PREDICT

Center for Molecular Prediction of Inflammatory Bowel Disease was established on March 1, 2021, at Aalborg University Copenhagen. By the end of 2023, PREDICT had 108 full- and part-time employees with a close to 50:50 gender balance. Among our 30 PhD students, postdocs, assistant and associate professors and statisticians, 40% are of international background.

The overall aim of PREDICT is to build a state-of-the-art model for linking biological information from the Danish National Biobank to the wealth of unselected longitudinal population-based information available in the Danish nationwide population-based registers and from regional population-based cohorts, using IBD as a model disease.

Following a 2-3-year establishment phase towards the consolidation of the center, specific and well-defined competence areas took shape in 2023 and continue to develop. Please see Section 2.1.6. Research Plan for a detailed description of the center's research groups.

The center's production of scientific papers in leading journals within the field during the first three years has been steadily increasing. Hence, 45 papers/reviews/editorials/letters were published in 2023 in journals such as *Gastroenterology*, *Gut*, *Nature Review Gastroenterology and Hepatology*, *Nature Communications*, and *Lancet Gastroenterology and Hepatology*. The average impact factor was 15,1. Several of the center's study results were rated in the top 5% of all research outputs scored by Altmetric and hence attracted extensive international media attention during 2023 (please see section 2.1.4. Outreach for examples).

We have thus contributed widely to the lay communication of our research to a broad audience through media stories, interviews and podcasts in Denmark and abroad as well as consistent posting of news on our social media (LinkedIn and Twitter/X) and website about new publications, recruitments, guest researchers, outreach, grants etc. Furthermore, we have been invited to give talks/

present the center vision and research at all the leading, international conferences within the field.

In 2023, we were highly successful in obtaining external grants to the amount of 20 mio DKK.

The broad interest from international colleagues in PREDICT and our work establishing a worldwide unique data infrastructure for IBD research continues. In 2023, we continued and expanded our close collaboration with world-leading institutions such as Mount Sinai Hospital NY, Harvard Medical School, University of Washington, University of North Carolina, KU Leuven, The Francis Crick Institute, University of Edinburgh.

The center has a continuous exchange of international guest researchers; in 2023 e.g. between University of Edinburgh (Professor Charlie Lees 3-month research stay at PREDICT), The Francis Crick Institute, London (PhD student Marie V. Vestergaard 3-month research stay at The James Lee Lab), and Mount Sinai NY (PhD student Henrik A. Jacobsen 1-month research stay).

We have established a popular Master student exchange programme with Imperial College London and each year we attract an increasing number of research year students to PREDICT. Additionally, internationally recognized colleagues show increasing interest to collaborate and to become affiliated to PREDICT as Research Associates.

In 2023, the center was awarded the prestigious 'Top Paper Award 2023' by the *Gut* journal for having published the best international paper in the field of gastroenterology this year.

Together with the Danish National Genome Center and Statistics Denmark, we are working on a visionary pilot project that potentially will allow us to enrich our data analysis with data from Statistics Denmark. The goal is to develop an analysis platform on the supercomputer that will allow data providers to grant access to their selected data resources while retaining complete control over them. This ambitious joint effort is expected to pave the way for even better data research in Denmark. ●