The Personalised Medicine Network
Personalised Medicine Research Theme
Center for Genomics and Personalised Medicine

SEMINARS
Approaches to Personalised Medicine at Health
From September to December 2022

October 27th 2022 at 14.00 – 15.30
Eduard Biermann (1252-204), The Lakeside Theatres, Aarhus University, Bartholins Allé 3, 8000 Aarhus C

Mikkel Heide Schierup, Bioinformatics Research Centre (BIRC)

Title: Mutational processes in the male germline
Mutations are the raw material of evolution, but also in many cases the cause of severe medical conditions. Each human child is born with typically 70-100 new mutations, where around 80% originated in the father. These mutations can be identified either from sequencing of trios (father, mother and child) or directly from deep sequencing of testis samples or semen samples. From such experiments, we hope to be able to characterise the mutational process along the genome and over the lifetime of a father and to predict the probability on passing on severe mutations to the next generation.

Jacob Skou Pedersen, Department of Clinical Medicine (MOMA) and Bioinformatics Research Centre (BIRC)

Title: Machine learning in cancer genomics: from scientific insights to clinical applications
Cancer genomics is a young, fast-moving field. In fifteen years it has gone from being a new scientific discipline to a widely used clinical tool. Statistical modeling and machine learning have been integral to its success. I will describe the development in scientific questions and clinical uses of cancer genomics, with a focus on the associated machine-learning challenges. Examples will include cancer driver detection, mutational signature inference, genomics-based diagnosis, and the use of precision medicine.

Coffee and cake will be served after the seminar

Sign up here: https://events.au.dk/personalisedmedicineseminar7/signup