HIGH-THROUGHPUT SCREENING FOR TARGET AND DRUG DISCOVERY @ CNC

CNC Advanced Courses 2021
Doctoral Program in Experimental Biology and Biomedicine (PDBEB)

February 1 - 5, 2021

Supported By:

Location: UC-Biotech, Cantanhede
Registration is mandatory
Deadline for registration: January 27, 2021
Maximum number of students: 30
Coordinators: Miguel Mano - mano@ci.uc.pt

www.beb.cnbc.uc.pt

PROGRAM

MONDAY (FEBRUARY 1st)

9.30-10.00 – Welcome and introduction to the course | Miguel Mano
10.00-12.30 – Screening 101: from basic concepts to practical aspects of implementing large-scale functional genomics screenings | Miguel Mano
14.00-15.00 – Principles of automated image analysis & lab tour | Miguel Mano
15.00-17.30 – Hands-on session I: image analysis – Columbus | Miguel Mano

TUESDAY (FEBRUARY 2nd)

9.30-11.30 – High throughput screening in drug discovery | Valentina Adami (University of Trento, Italy)
11.45-12.45 – Small molecule screening: examples from an academic Core Facility | Valentina Adami (University of Trento, Italy)
14.00-17.30 – Hands-on session II: image analysis – Cellprofiler | Ricardo Silva

WEDNESDAY (FEBRUARY 3rd)

9.30-10.30 – CRISPR/Cas9: precise genome editing and beyond | Miguel Mano
10.45-12.15 – Pooled CRISPR screening: Finding needles in the haystack | Roderick Beijersbergen (The Netherlands Cancer Institute, The Netherlands)
14.00-15.30 – Functional selection of tissue protective factors using AAV vector screenings in mice | Mauro Giacca (King’s College London, UK)

16.00-17.00 – SEMINAR - TBD
TBD

THURSDAY (FEBRUARY 4th)

9.30-10.30 – Drug repurposing for COVID-19 using image-based high-throughput screening | Luca Braga (International Centre for Genetic Engineering and Biotechnology, Italy)
10.45-11.45 – Exploring high-content screening to dissect the role of microRNAs in bacterial infection | Ana Eulalio
12.00-13.00 – Translational research and drug discovery for neglected tropical diseases: strategies based on drug combinations and repurposing | Laura Alcantara
14.00-15.30 – New frontiers in target and drug discovery using massively-parallel CRISPR screens | Neville Sanjana (New York University, USA)
16.00-17.30 – Life beyond the pixels: deep learning methods for single cell analysis | Peter Horvath (Szeged Biological Research Centre, Hungary & Institute for Molecular Medicine Finland, Finland)

Friday (February 5th)

14.00-17.00 – Student presentations and wrap-up