POSTGRADUATE SCHOOL OF MOLECULAR MEDICINE
HIGH THROUGHPUT GENOMIC, TRANSCRIPTOMIC AND STRUCTURAL BIOLOGY TECHNOLOGIES IN BIOMEDICINE
March 29-31, 2021; Venue: ONLINE
Organizers: Postgraduate School of Molecular Medicine/Małopolska Biotechnology Center

March 29, 2021 Molecular diagnostics in medicine and disease modelling

9.30-10.10 Józef Dulak (Jagiellonian University, Krakow, PL) - Genetic engineering for cardiovascular disease modelling and therapy

10.10-10.50 Bartosz Wojtas (Nencki Institute, Warsaw) – Targeted next generation sequencing in personalized oncology

10.50-11.20 Coffee break

11.20-12.00 Marta Miączyńska (International Institute of Molecular and Cellular Biology, Warsaw, PL) - Synthetic lethality interactions in molecular oncology: the VPS4 case

12.00-12.40 **Marcin Tabaka** (Center of New Technologies-University of Warsaw, Warsaw, PL) - Reconstruction of developmental landscapes and cell atlases from single-cell gene expression profiles

12.40-13.30 Lunch break

13.30-14.00 Luca Mazzitelli (10x Genomics, Germany) – Single cell RNA sequencing and its applications

14.00-14.40 Bozena Kaminska (Nencki Institute, Warsaw, PL) - Single cell RNA sequencing in dissecting immune cell heterogeneity in the tumor microenvironment

14.40-15.00 Coffee break

15.00-15.40 Pawel Zawadzki (MNM, Poznan, PL) - Whole-genome based diagnostic tests relaying on genomic scars in detecting PARPi sensitivity

15.40-16.00 Jab-Jot - How to overcome common challenges and bottlenecks in NGS Library Prep

March 30, 2021 Biomolecular structures in medicine

9.30-10.10 Grzegorz Dubin (Malopolska Biotechnology Center, Jagiellonian University, Krakow, PL) - Structural basis of PD-1/PD-L1 checkpoint inhibition

10.10-10.50 Marcin Drag (Wroclaw University of Technology, Wrocław, PL) - Chemical tools for imaging of medically important proteases

10.50-11.20 Coffee break

11.20-12.00 Aleksandra Ellert-Miklaszewska (Nencki Institute, Warsaw, PL) – Novel nanosystems for drug and siRNA delivery to cancer cells

12.00-12.40 Krzysztof Pyrć (Malopolska Biotechnology Center, Jagiellonian University, Krakow, PL) - SARS-CoV-2: drug repurposing and development

12.40-13.20 Dominik Gront (University of Warsaw, PL) - Theory and practice of biomolecular modelling

13.20-14.00 Lunch break

14.00-14.40 Jonathan Heddle (Malopolska Biotechnology Center, Jagiellonian University, Krakow, PL) - Biological nanomachines - natural and artificial

14.40-15.20 Sebastian Glatt (Malopolska Biotechnology Center, Jagiellonian University, Krakow, PL) - tRNA modifications protect the proteome

15.20-16.30 Practicals with Dr. Dominik Gront- Visualization and analysis of deposits from PDB or modelling results

March 31, 2021 Bioinfomatics in biomedicine

9.30-10.10 Jan Kosiński (EMBL, Hamburg, Germany) - Computing molecular structures directly in cells.

10.10-10.50 Maciej Lalowski (Meilahti Clinical Proteomics Core Facility, University of Helsinki, FL and Institute of Bioorganic Chemistry, Poznan, Pas, PL) - Quantitative interaction proteomics of neurodegenerative disease proteins

10.50-11.30 Aleksandra Pękowska (Nencki Institute- Dioscuri Centre of Scientific Excellence, Warsaw, PL) - The implication of chromatin architecture in the regulation of gene expression – from high-throughput assays to functional interrogation.

11.30-11.50 coffee break

11.50-12.30 Jerzy Pieczykolan (Celon Pharma S.A., Preclinical Development Unit R&D, Warsaw, PL) - Effective preclinical drug discovery and development

12.30-13.10 Bartek Wilczyński (University of Warsaw, PL) - Artificial neural networks to predict functional genomic regulatory elements

13.10-14.00 Lunch break

14.00-17.00– practical workshop with the Heddle's group

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