# Genetic training week for PhD students

6th – 10th September, 2021

## Programme



#### Monday, 6th September 2021

- 12.00 12.15 Registration
- 12.15 13.00 Orientation meeting for incomings Agnieszka Możejko – Grant Office, Coordinator of PROM project
- 13.00 15.00 Let's build something together integration games
- 18.00 19.30 Welcoming reception The Poznań Branch of the Polish Academy of Sciences, Działyński Palace, Stary Rynek 78/79 street,

#### Tuesday, 7th September 2021

#### **PART1 Science in detail**

- 10.00 11.15 Lecture (online): 'The application of single-cell sequencing in basic and clinical research Katarzyna Tomczak, PhD, MD Anderson Cancer Center, University of Texas, USA
- 11.30 12.45 Lecture: 'Cardiac tissue engineering general overview and working examples' Tomasz Kolanowski, PhD, Institute of Human Genetics PAS

#### PART 2 Let's get to know each other

- 13.15 13.30 Presentation of the Department of Molecular Pathology Professor Natalia Rozwadowska, Head of Department of Molecular Pathology
- 13.30 13.45 Presentation of the Department of Nucleic Acid Function Szymon Hryhorowicz, PhD, Department of Nucleic Acid Function
- 13.45 14.45 Roundtable talks
- 17.00 19.00 City Tour

Wednesday, 8th September 2021

#### **PART1 Science in detail**

- 10.00 11.15 Lecture: 'Deciphering a mysterious world of epigenetics applications and hematological neoplasias' Marta Kuliś, PhD, August Pi i Sunyer Biomedical Research Institute, University of Barcelona, Spain
- 11.30 12.45 Lecture: 'Sperm DNA fragmentation not everything revolves oxidative stress' Eva Tvrda, PhD, Slovak University of Agriculture in Nitra, Slovakia

#### PART 2 Let's get to know each other

- 13.15 13.30 Presentation of the Department of Cancer Genetics Professor Maciej Giefing, Head of Department of Cancer Genetics
- 13.30 13.45 Presentation of the Department of Reproductive Biology and Stem Cells Marta Olszewska, PhD, Department of Reproductive Biology and Stem Cells
- 13.45 14.00 Presentation of the Department of Molecular and Clinical Genetics Zuzanna Bukowy – Bieryłło, PhD, Department of Molecular and Clinical Genetics

#### 14.00–15.00 Roundtable talks

#### Thursday, 9th September 2021

10.00 – 14.00 Training: Marie Skłodowska - Curie – European Grants for young researchers Paweł Kaczmarek, Expert of Regional Contact Point of EU Framework Programmes in Poznań

#### Friday, 10th September 2021

#### Additional info



WIFI at the Institute: Network: goscie Password: igcpan@2021



#### **Contact:** agnieszka.mozejko@igcz.poznan.pl +48 697 474 825



#### **Roundtable Talks:**

Please schedule your meeting, if you want to talk to a specific researcher. If you prefer to share your scientific interests with a group or give a short presentation, let us know, we will organize it. Click Roundtable talks schedule to make an appointment.



#### Welcoming reception:

For the Welcoming Reception, we invite you to the climatic Dzialyński Palace built between 1773 and 1776, which currently houses the Poznan Branch of the Polish Academy of Sciences. The palace is located at Stary Rynek 78/79, just opposite the town hall. During the party, we provide a unique taste and cultural experience as well as time spent in a pleasant atmosphere.



#### **City tour:**

Poznań is the capital of the Wielkopolska region and is famous for its fairgrounds and rich trade traditions, original dishes, and hospitable atmosphere. The city is the cradle of Poland. The first rulers of the country were buried in the city cathedral.

The Institute of Human Genetics PAS invites you for a short walk around the most beautiful places in Poznań. A qualified guide will be waiting for you on September 7, 2021 (Tuesday) at 5:00 p.m. at Mickiewicz Square, a place commemorating workers' protests of 1956. The tour will end around 7:00 p.m. at the Old Market Square, full of colorful tenement houses where numerous bars and restaurants are hidden.

The bus line 168 runs directly from the Institute, which will take you to the designated location in about half an hour - the bus stop 'Zamek'.

We hope you will be charmed by the capital of Wielkopolska.

#### Lecturers



#### Katarzyna Tomczak, MD Anderson Cancer Center, University of Texas

Katarzyna possesses a strong expertise at the area of molecular biology, stem cells, cancer (epi)genomics and immunology, which she gained while working at laboratories in Poland, France and the USA. Currently she works at the Department of Translational Molecular Pathology in Dr. Haymaker's lab where she leads the cutting-edge single cell sequencing efforts towards profiling clinical trial specimens of different tumor types. Dr. Tomczak is an active member of MDACC Cancer Immune Monitoring and Analysis Center (CIMAC) working group, as well as Mesothelioma Immune Genomic Group.



#### Tomasz Kolanowski, PhD, Institute of Human Genetics PAS

Tomasz is a trained molecular biologist and stem cell specialist focused on mechanisms of human heart development and regeneration. He gained the PhD in Poland, while working over 3 years as a postdoctoral scientist in Gottingen and Dresden, Germany. He was also a visiting scholar in Leeds, UK. Currently developing advanced culture systems for iPSC-derived cardiomyocytes and other cells. He is a PI in a FIBRODrive project concerning human fibroblast influence on cardiomyocyte maturation using 3D tissue systems. He is striving to elucidate control mechanisms of early human heart tissue specification.



### Marta Kuliś, PhD, August Pi i Sunyer Biomedical Research Institute, University of Barcelona

Marta's research interests are focused on the epigenetic and molecular mechanisms involved in the pathogenesis of lymphoid neoplasms, as well as during normal B cell differentiation process. From the last years, she is participating in the collaborative studies that use epigenomics to decipher the causes and consequences of the aberrant transcriptional programs in a variety of lymphoid tumors. In particular, a detailed multiomics approach to characterize normal and neoplastic B cells serves to understand the role of the epigenetics in the origin, evolution and clinical manifestations of haematological malignancies.



#### Eva Tvrda, PhD, Slovak University of Agriculture in Nitra

Eva is a senior research scientist at the Department of Animal Physiology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra. She is the head of the Laboratory for Andrology and Molecular Toxicology at the AgroBioTech Research Center. She has published over 100 articles and 10 book chapters on the topics of male reproduction, reproductive toxicology, oxidative balance and antioxidants. Currently, she is interested in the causes and mechanisms underlying ex vivo sperm DNA fragmentation in animals and humans as well as novel molecular markers to assess individual sperm freezability. Dr. Eva Tvrdá is a former Sciex MNS ch and Fulbright fellow, member for the European Federation of Animal Science and the Association for Applied Animal Andrology.



#### Prof. Natalia Rozwadowska, Head of Department of Molecular Pathology

Natalia's research focuses on understanding the function of stem cells both in normal and pathological processes. She used stem cells to model human cell development as well as to provide the potential source for regenerative therapies development. In her scientific activity, she cooperates with many academic units as well as biotechnological companies. She is committed in science communication and as the founder of "Gen-i-juz" Association, she actively coordinates workshops and scientific dessimintaion events in IHG PAS.

#### Prof. Maciej Giefing, Head of Department of Cancer Genetics





#### Szymon Hryhorowicz, PhD, Department of Nucleic Acids Function

Szymon's research focuses on the role of the endocannabinoid system in inflammatory bowel disease. In particular, he studies the molecular mechanisms controlling the activation of cannabinoid CB1 and CB2 receptors in mucosal inflammation and the expression profile of genes involved in cannabinoid metabolism. Concerning the SARS-CoV2 pandemic, he is also involved in the analysis of novel virus variants using high throughput sequencing techniques.



#### Marta Olszewska, PhD, Department of Reproductive Biology and Stem Cells

Marta have been working in the Department of Reproductive Biology and Stem Cells since 2004. Now she holds the position of Assistant Professor. Her scientific interests concern: cytogenetics of male infertility (incl. chromosome aberrations and 3D nuclear organization of the human sperm cell), searching for mutations responsible for decreased sperm count (incl. experimental mouse models), and also epigenetics of male germ cells (methylation of DNA, histones, acetylation vs. chromatin integrity and seminology). Currently, she is a PI of two grant projects (in total involved in 10 projects at all).



#### Zuzanna Bukowy - Bieryłło, PhD, Department of Molecular and Clinical Genetics

Zuzanna is an Assistant Professor at the Department of Molecular and Clinical Genetics. She is interested in primary ciliary dyskinesia, which is a genetic disorder causing impaired movement of cilia present in different systems of human organism. In her research, she employs many methods, which use cells from respiratory epithelium, including in vitro ciliogenesis of primary respiratory epithelial cells, high-speed videomicroscopy (SAVA software) and immunofluorescent staining of ciliary proteins.