



**27th
Wilhelm
Bernhard
Workshop
on the
Cell
Nucleus**

19 – 23 Jun 2023
Prague, Czech Republic

Institute of Molecular Genetics
of the Czech Academy of Sciences



COMPLETE PROGRAM



MONDAY 19 JUNE 2023

From 14:00

REGISTRATION

17:00 – 17:30

WORKSHOP OPENING

Pavel Hozak, Roman Lesyk, Yegor Vassetzky
Workshop Chair and Vice-Chairs

17:30 – 17:40

Wilhelm Bernhard Medal Ceremony

17:40 – 18:20

Wilhelm Bernhard Medal Lecture: From nucleolar morphology to phase separation in the cell nucleus

Pavel Hozak, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic

From 18:30

WELCOME BANQUET

TUESDAY 20 JUNE 2023

NUCLEAR COMPARTMENTS AND GENE EXPRESSION

09:00 – 10:20

SESSION CHAIRS: [Christian Schöfer](#) & [Marco Biggiogera](#)

09:00 – 09:20

The Essence of Existence: from the Finalization of the 3D Genome Organization to a Novel Generalized/Unified Evolution Theory

Tobias Aurelius Knoch, Biophysical Genomics, Mannheim, Germany

09:20 – 09:40

Intrinsically Disordered RGG/RG Repeats within Drosophila Nucleolar Proteins Bind Non-coding RNAs Expressed Upon Heat Shock for In Vivo Liquid Phase Condensation

Patrick DiMario, Louisiana State University, Baton Rouge, USA

09:40 – 10:00

Most of the human pol II promoters have small regions with a distinctive physical property

Ohyama Takashi, Waseda University, Tokyo, Japan

10:00 – 10:20

Epigenetic regulation and its modulation via the C-terminal tail of H2A.Z

Gábor Szabó, University of Debrecen, Hungary

10:20 – 10:50

Coffee break

10:50 – 12:10

SESSION CHAIRS: [Reet Kurg](#) & [Masahiko Harata](#)

10:50 – 11:10

HIRA-mediated loading of histone variant H3.3 regulates androgen-induced transcription in prostate cancer by retention of AR/BRD4 complex at enhancers

Alexander M. Ishow, University of Florida College of Medicine, Gainesville, Florida, USA

11:10 – 11:30

Exploring the nuclear functions and nuclear presence of actin via in vivo methods

Péter Borkúti, Biological Research Centre, Szeged, Hungary

11:30 – 11:50

Quantitative super-resolution microscopy reveals the phospholipid identity of the gene expression compartments in human cells and tissues

Péter Hoboth, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic

11:50 – 12:10

Differential Genomic Distribution of Human Histone H1 Variants

Albert Jordan, Institute of Molecular Biology of Barcelona (IBMB-CSIC), Spain

12:10 – 13:10

Lunch break

13:10 – 14:45

SESSION CHAIRS: [Reet Kurg](#) & [Masahiko Harata](#)

13:10 – 13:45
INVITED

Molecular principles of Cajal body formation

David Staněk, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic

13:45 – 14:05

Nuclear actin regulates the 3D genome organization

Piergiorgio Percipalle, New York University Abu Dhabi (NYUAD), United Arab Emirates

14:05 – 14:25

The nuclear import of the drosophila moesin protein is regulated by cytoplasmic retention

Zoltán Kovács, Biological Research Centre, Szeged, Hungary

14:25 – 14:45

Topological arrangement of poised rRNA genes and the nucleolar response to anti-cancer drug CX-5461

Christian Schöfer, Medical University of Vienna, Vienna, Austria

14:45 – 15:15

Coffee break

15:15 – 16:50

SESSION CHAIRS: [Andrea Scharf](#) & [Yegor Vassetzky](#)

15:15 – 15:35

Mercury Chloride reshapes heterochromatin domains and increases nucleolar activity in mouse hepatocytes

Lorena Zannino, University of Pavia, Italy

15:35 – 15:55

Hyperinsulinemia in Brown Adipocytes: Both Insulin and Phosphorylated Insulin Receptor Enter the Nucleus and Reside in Heterochromatin Region

Sara Stojanovic, University of Belgrade, Belgrade, Serbia

15:55 – 16:15

The intrinsically disordered N-terminus of cancer-testis antigen MAGEA10 is responsible for its expression, nuclear localization and aberrant migration

Reet Kurg, Institute of Technology, University of Tartu, Estonia

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16:15 – 16:35	Variability of Human rDNA and Transcription Activity of Ribosomal Genes Evgeny Smirnov, Institute of Biology and Medical Genetics, First Faculty of Medicine, Charles University, Prague, Czech Republic
16:35 – 16:50	A various response to different modes of anti-cancer treatment Oleg Demidov, Inserm UMR1231, University of Burgundy, France
From 19:00	HISTORICAL CENTRE CITY TOUR Meeting point: in front of the Powder Gate (in Czech "Prašná brána")

WEDNESDAY 21 JUNE 2023

NUCLEAR LIPIDS AND PHASE SEPARATION IN HEALTH AND DISEASE (organized as a workshop of the COST Action 19105 – EpiLipidNET)

09:00 – 10:15	SESSION CHAIRS: <i>David Staněk & Martin Sztacho</i>
09:00 – 09:20	The role of phosphatidylinositol 4,5-bisphosphate in transcription Ludovica Antiga, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic
09:20 – 09:55 INVITED	Phosphoinositide 3-kinase signalling in the nucleolus Aurélia E. Lewis, University of Bergen, Bergen, Norway
09:55 – 10:15	Mechanism of phase separation at PML nuclear bodies Peter Hemmerich, Leibniz-Institute on Aging – Fritz Lipman Institute, Germany
10:15 – 10:45	<i>Coffee break</i>
10:45 – 12:00	SESSION CHAIRS: <i>David Staněk & Martin Sztacho</i>
10:45 – 11:20 INVITED	HP1 mediated phase separation regulates gene expression in development and disease Heinrich Leonhardt, Ludwig Maximilians University Munich, Munich, Germany
11:20 – 11:40	Localization and molecular mechanisms of nuclear functions of phosphoinositide-3,4-bisphosphate Ana Miladinovic, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic
11:40 – 12:00	Biomolecular condensates as a storage site for immature transcripts in plant cells Karolina Majewska, Nicolaus Copernicus University in Toruń, Poland
12:00 – 13:00	<i>Lunch break</i>

13:00 – 14:15	POSTER SESSION
14:15 – 14:45	<i>Coffee break</i>
14:45 – 16:35	SESSION CHAIRS: <i>Peter Hemmerich & Pavel Hozak</i>
14:45 – 15:20 INVITED	Nuclear Inositide Signalling: Role of PLCs in Health and Disease Lucio Cocco, University of Bologna, Bologna, Italy
15:20 – 15:40	Molecular basis for interaction of intrinsically disordered proteins with nuclear PIP2 compartments Martin Sztacho, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic
15:40 – 16:15 INVITED	DNA methylation, methyl readers and heterochromatin organization Cristina Cardoso, Technical University of Darmstadt, Germany
18:00	<i>Arranged bus departure from EMMY Residence****</i>
From 19:00	SOCIAL DINNER AT THE STRAHOV MONASTERY BREWERY
22:30	<i>Arranged bus departure from Strahov Monastery Brewery to EMMY Residence****</i>

THURSDAY 22 JUNE 2023

DNA REPLICATION, REPAIR AND DISEASE

09:00 – 10:20	SESSION CHAIRS: <i>Nikolajs Sjakste & Piotr Widlak</i>
09:00 – 09:20	Repair and misrepair of telomeric DNA in dynamic interactions with PML bodies and nuclear lamina in doxorubicin-treated cancer cell lines Jekaterina Erenpreisa, Latvian Biomedicine Research & Study Centre, Riga, Latvia
09:20 – 09:25	Young Researcher Award Ceremony
09:25 – 10:00 INVITED	ADP-ribose metabolism, DNA strand breaks and disease Hana Hanzlíková, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic
10:00 – 10:20	Identification of potential readers of ADP-ribosylated DNA adducts in cell-free extracts Gustave Roussy / University of Paris-Saclay, France
10:20 – 10:50	<i>Coffee break</i>

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10:50 – 12:05	SESSION CHAIRS: <i>Nikolajs Sjakste & Piotr Widlak</i>
10:50 – 11:25 INVITED	PML compartment and nucleolus: when both structures meet together Pavla Vašicová, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic
11:25 – 11:45	CHD5 promotes homologous recombination-specific chromatin changes to govern DNA double-strand break repair pathway choice David Yu, Emory University School of Medicine, Atlanta, Georgia, USA
11:45 – 12:05	Radiation-Induced Bystander Effect Mediated by Exosomes Involves the Replication Stress in Recipient Cells Piotr Widlak, Clinical Research Support Centre, Medical University of Gdańsk, Gdańsk, Poland
12:05 – 13:05	Lunch break
13:05 – 14:40	SESSION CHAIRS: <i>Nikolajs Sjakste & Piotr Widlak</i>
13:05 – 13:40 INVITED	The role of nuclear PI(4,5)P2 in papillomavirus associated cancer development Baki Akgül, Institute of Virology, University Hospital Cologne, Germany
13:40 – 14:00	Why chromosomal translocations are cell lineage-specific? Yegor Vassetzky, Gustave Roussy / University of Paris-Saclay, France
14:00 – 14:20	In-vivo approaches to study DNA repair in plant roots and protoplasts: rebooting laser microirradiation for plant samples Michal Franek, Central European Institute of Technology (CEITEC), Czech Republic
14:20 – 14:40	Protein crowding in DNA repair foci probed by fluorescence lifetime imaging microscopy Svitlana Levchenko, Jagiellonian University, Kraków, Poland
14:40 – 15:10	Coffee break

NOVEL METHODS IN NUCLEAR RESEARCH AND DIAGNOSTICS

15:10 – 16:30	SESSION CHAIRS: <i>Anna von Mikecz & Gábor Szabó</i>
15:10 – 15:30	Detecting DNA Breaks, DNA Fragments and Cytosolic DNA in Cells In Vitro and Tissue Cryosections Using STRIDE Techniques Jurek Dobrucki, Jagiellonian University, Kraków, Poland
15:30 – 15:50	Pollutants – single worm proteomics bring the environment to the lab Anette Limke, IUF – Leibniz Research Institute of Environmental Medicine at Heinrich-Heine-University Düsseldorf, Germany

15:50 – 16:10	Advanced correlative workflows for cryo-electron tomography on frozen-hydrated lamella for the study of multicellular organisms Vlada Filimonenko, Institute of Molecular Genetics of the Czech Academy of Sciences, Prague, Czech Republic
16:10 – 16:30	The nucleus is the command center for populations and ecosystems Andrea Scharf, Missouri University of Science and Technology, USA
	FREE EVENING

FRIDAY 23 JUNE 2023

PATHOGENESIS AND CANCER (organized as a Symposium of the Society for Histochemistry)

09:00 – 10:30	SESSION CHAIRS: <i>Klara Weipoltshammer & Katarzyna Lisowska</i>
09:00 – 09:10	Welcome from the SfH president Klara Weipoltshammer, Medical University of Vienna, Austria
09:10 – 09:30	Fat induced Nuclear Rupture Dennis Discher, University of Pennsylvania, Philadelphia, USA
09:30 – 09:50	Effects of Heat and Cold Shock on Epigenetics: Insights on Methylation and Chromatin Structure Claudio Casali, Department of Biology and Biotechnology “L. Spallanzani”, University of Pavia, Italy
09:50 – 10:10	The interaction of two viral nuclear transcription factors HIV-1 Tat and EBV Zta induces immune evasion of EBV-infected B cells Anna Shmakova, Gustave Roussy / University of Paris-Saclay, France
10:10 – 10:30	Targeting the 3D genomic and epigenetic changes in Mantle Cell Lymphoma Ana Kapurkhina, Gustave Roussy / University of Paris-Saclay, France
10:30 – 11:00	Coffee break

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11:00 – 12:20	SESSION CHAIRS: Nick Barlev
11:00 – 11:20	Gene expression profiles of GABAergic neuronal loss by nanoparticle exposure Dang Tri Le, IUF - Leibniz Research Institute for Environmental Medicine, Düsseldorf, Germany
11:20 – 11:40	Negative prognostic signature in ovarian cancer Katarzyna Lisowska, Center of Translational Research and Molecular Biology of Cancer, Maria Skłodowska-Curie National Research Institute of Oncology, Gliwice Branch, Gliwice, Poland
11:40 – 12:00	Transcriptional regulation of oxidative phosphorylation by nuclear myosin 1 protects cells from metabolic reprogramming and tumorigenesis in mice Tomáš Venit, New York University Abu Dhabi (NYUAD), United Arab Emirates
12:00 – 12:20	Targeting mitochondria as a novel therapeutic approach to overcome TKI resistance of NSCLC cells: the role of paraptosis Nick Barlev, School of Medicine Nazarbayev University, Astana, Kazakhstan
12:20 – 12:30	CLOSING REMARKS
12:30 – 14:00	LUNCH
From 14:00	DEPARTURES

BOOK OF ABSTRACTS



BOARD MEETINGS

Seminary room (2.102) – 2nd floor

MONDAY 19 JUNE 2023

15:30 – 16:30

I. WBW International Committee Meeting [MEMBERS ONLY]

THURSDAY 22 JUNE 2023

16:30 – 17:30

Society for Histochemistry Business Meeting

FRIDAY 23 JUNE 2023

12:30 – 13:30

II. WBW International Committee Meeting [MEMBERS ONLY]

SOCIAL PROGRAM

MONDAY 19 JUNE 2023

From 18:30

Welcome Banquet

THURSDAY 22 JUNE 2023

From 19:00

Historical Centre City Tour (signed up participants)

Meeting point: in front of the Powder Gate (in Czech “Prašná brána”), Nám. Republiky 5, 110 00 Staré Město

FRIDAY 23 JUNE 2023

18:00

Arranged bus departure from EMMY Residence****, K Zelené louce 2a, 148 00 Praha-Kunratice

From 19:00

Social Dinner at the Strahov Monastery Brewery, Strahovské nádvoří 301, 118 00 Praha 1-Hradčany

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by the WBW International Committee and supported
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Local organizer:
Prof. Pavel Hozak,
secretary of the WBW International Committee



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