

Detailed Program

Aug. 19.

- 14.00-18.00 Registration, mounting of posters
- 18.00-18.15 Conference opening
- 18.15-18.25 Introductory remarks about Wilhelm Bernhard (Klaus Scherrer, Paris, France)
- 18.25-19.15
W1. Nuclear architecture and disease. (Wilhelm Bernhard Medal Lecture 2013)
Tom Misteli (Bethesda, USA)

A. Nuclear architecture

- 19.15-19.50
A1. Nuclear organization in lymphoid cells: implications for translocations and gene regulation.
Yegor S. Vassetzky (Paris, France)
- 19.50-22.30 Welcome reception, poster viewing

Aug. 20.

A. Nuclear architecture

This session is offered to the memory of Ilya Zbarsky, one of the pioneers of research on nuclear architecture.

Chairman: Anna von Mikecz

- 08.30-09.05
A2. From cell populations to single molecule analysis of chromosome folding.
(Plenary lecture)
Peter Fraser (Cambridge, UK)
- 09.05-09.30
A3. New models of the nucleus and chromosomes.
Ronald Hancock (Québec, Canada)
- 09.30-09.55
A4. An interaction between telomeres and the nucleoskeleton affects chromosome structure.
Steven Kosak (Chicago, USA)
- 09.55-10.20
A5. Involvement of nuclear phospholipids in nuclear structure and functions.
Pavel Hozák (Prague, Czech Republic)
- 10.20-10.35 Break



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Chairman: Ronald Hancock

10.35-11.00

A6. Regulation of aging and metabolism by the *C. elegans* nuclear lamina.
Yosef Gruenbaum (Jerusalem, Israel)

11.00-11.25

A7. The role of eukaryotic genome spatial organization in regulation of transcription.
Sergey Razin (Moscow, Russia)

11.25-11.50

A8. Large scale chromatin organization: the case of PcG bodies.
Ivan Raska (Prague, Czech Republic)

11.50-11.55

Reminiscences to Prof. Zbarsky
Yegor S. Vassetzky (Paris, France)

12.00-13.30

Lunch, poster viewing

Chairman: Beáta G. Vértessy

13.30-13.55

A9. New model of nuclear pore complexes based on lipid-DNA interactions.
Vasily V. Kuvichkin (Moscow, Russia)

13.55-14.20

A10. Putative plant homologs of lamins in plants.
Susana Moreno Díaz de la Espina (Madrid, Spain)

14.20-14.45

A11. Actin family proteins involved in the functional organization of the nucleus.
Masahiko Harata (Sendai, Japan)

14.45-15.10

A12. Nuclear function of a cytoskeletal actin binding protein, Moesin.
Péter Vilmos (Szeged, Hungary)

15.10-15.25

Break

B. Chromatin structure and dynamics

Chairman: Susana Moreno Díaz de la Espina

15.25-16.00

B1. Chromatin replication and epigenome maintenance. (EMBO Young Investigator lecture)
Anja Groth (Copenhagen, Denmark)

16.00-16.25

B2. Reconstitution of the human nuclear proteome after cell division through NLS modulation.
Beáta G. Vértessy (Budapest, Hungary)



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16.25-16.50

B3. Human inactive X chromosome is compacted through a Polycomb-independent SMACHD1-HBIX1 pathway governed by XIST RNA.
Chikashi Obuse (Hokkaido, Japan)

16.50-17.15

B4. Lodestar loads the cohesin complex onto the chromosomes in *Drosophila*.
János Szabad (Szeged, Hungary)

17.15-17.40

B5. Nucleosome-nucleosome stacking: a major element of chromatin structure.
Nikolay Korolev (Nanayng, Singapore)

17.40-19.10

Dinner

Evening

Free program, cultural and touristic events of the Debrecen Flower Carnival 2013

Aug. 21.

Chairman: Lóránt Székvölgyi

08.30-09.05

B6. Nuclear architecture studied in space and time: current state and perspectives.
(Plenary lecture)
Thomas Cremer (München, Germany)

09.05-09.30

B7. Barr body architecture and development studied with 3D super resolution fluorescence microscopy: X-inactivation is characterized by the collapse of a functional nuclear compartment present in active chromosome territories.
Marion Cremer (München, Germany)

09.30-09.55

B8. Pronounced co-localization of immunoglobulin genes and their enhancers in transcription factories at the nuclear periphery in plasma cells.
William Garrard (Dallas, USA)

09.55-10.20

B9. Nuclear topology of H3 histones revealed by structured illumination imaging.
Christian Schöfer (Vienna, Austria)

10.20-10.35

Break

Chairman: Jürgen Bode

10.35-11.00

B10. Regulation of transcription at PML nuclear bodies.
Peter Hemmerich (Jena, Germany)

11.00-11.25

B11. Cell differentiation is dependent on Caspase-mediated genome alterations.
Lynn Megeney (Ottawa, Canada)

- 11.25-11.50
B12. Single-strand discontinuities and R-loops mark higher-order chromatin domains.
Gábor Szabó (Debrecen, Hungary)
- 11.50-12.15
B13. Mouse nuclear MYOSIN I knock-out shows interchangeability and redundancy of
myosin isoforms in the cell nucleus.
Tomas Venit (Prague, Czech Republic)
- 12.30-14.15 Lunch
- 13.15-14.15 Meeting of the International Committee
- 14.30-16.30 Sightseeing in Debrecen (visit to the [Reformed College](#) of Debrecen, viewing
[Munkácsy's Christ Trilogy](#) in the Déri museum)
- 17.00-23.00 Excursion to Paripa Csárda

Aug. 22.

C. Transcription, posttranscriptional processes

Chairman: Pavel Hozák

- 08.30-09.05
C1. Bimodal regulation of RNA polymerase II transcription kinetics by histone
acetylation in single living cells. (Plenary lecture)
Hiroshi Kimura (Osaka, Japan)
- 09.05-09.30
C2. Temporal and spatial characteristics of the assembly of the exon junction core
complex and associated proteins on Balbani ring gene pre-mRNPs/mRNPs *in vivo*.
Lars Wieslander (Stockholm, Sweden)
- 09.30-09.55
C3. Genome-wide approaches allow dissecting signal-specific transcriptional
regulation.
László Nagy (Debrecen, Hungary)
- 09.55-10.20
C4. Encode data and pervasive transcription - the question about the size of primary
transcripts.
Klaus Scherrer (Paris, France)
- 10.20-10.45
C5. Contribution of histone variant H2A.Z isoforms to transcriptional activation in
hyper-acetylated chromatin.
Masayuki Kusakabe (Sendai, Japan)
- 10.45-11.00 Break

Chairman: Lars Wieslander

11.00-11.25

C6. Co-regulation of the NF-kappaB signaling pathway by Heat Shock Factor 1.
Piotr Widlak (Gliwice, Poland)

11.25-11.50

C7. Reactive oxygen species and the regulation of gene expression.
Joanna Rzeszowska-Wolny (Gliwice, Poland)

11.50-12.15

C8. The role of transcription factors in control of ovarian functions.
Alexander Sirotkin (Nitra, Slovakia)

12.15-14.00 Lunch, poster viewing

D. DNA replication, recombination, repair

Chairman: Piotr Widlak

14.00-14.35

D1. Replication damage induced by topoisomerase- and poly(ADPribose)polymerase-
induced protein-DNA complexes. (Plenary lecture)
Yves Pommier (Bethesda, USA)

14.35-15.00

D2. Topoisomerase I-DNA cleavage complexes impact on CpG island promoters.
Giovanni Capranico (Bologna, Italy)

15.00-15.25

D3. Geometry and plasticity of DNA during replication: the benefit of DNA
entanglements.
Jorge B. Schvartzman (Madrid, Spain)

15.25-15.50

D4. Dual effect of heat shock on DNA replication and genome integrity.
Artem K. Velichko (Moscow, Russia)

15.50-16.05 Break

Chairman: Nikolajs Sjakste

16.05-16.30

D5. Chromosome organization in budding yeast: functional role towards DNA repair.
Emmanuelle Fabre (Paris, France)

16.30-16.55

D6. Intrinsic homology-sensing and assembling property of chromatin.
Takashi Ohyama (Tokyo, Japan)

16.55-17.20

D7. Antagonistic DNA unwinding mechanisms of RecQ helicases.
Ralf Seidel (Munster, Germany)

17.20-17.45

D8. Heterochromatin Protein 1beta - a key factor in DNA repair and replication.
Jurek Dobrucki (Krakow, Poland)

17.45-18.10

D9. Wag the dog: the tale of the H3K4 methylated histone tail in recombination initiation.
Lóránt Székvölgyi (Debrecen, Hungary)

18.10-19.45 Dinner

20.30-22.00 [Ferenc Snétberger](#) concert

Aug. 23.

E. Pathological aspects, therapeutical targets

Chairman: Marion Schmidt-Zachman

08.30-09.05

E1. Enhancing DNA damage foci persistence to promote cancer cell senescence: targeting chromatin and metabolism. (Plenary lecture)
Stephen J. Kron (Chicago IL, USA)

09.05-09.30

E2. Reversible senescence - restescence - is a unique response of breast epithelial cells to prolonged cell cycle arrest.
Dean Jackson (Manchester, UK)

09.30-09.55

E3. The LINC complex in nuclear function.
Elisabeth McNally (Chicago, USA)

09.55-10.20

E4. The role of amyloid in nuclear function and dysfunction.
Anna von Mikecz (Duesseldorf, Germany)

10.20-10.30 Break

Chairman: Peter Hemmerich

10.30-10.55

E5. Cell Cycle Control of genomic signaling.
Richard G. Pestell (Philadelphia, USA)

10.55-11.20

E6. Haploinsufficiency of an Rb-E2F1-Condensin II complex causes replication stress and contributes to mesenchymal cancers.
Frederick A. Dick (London, Canada)

11.20-11.45

E7. Reversible polyploidy and parasexual phenomena in tumour cells induced by DNA and spindle damage.
Jekaterina Erenpreisa (Riga, Latvia)

11.45-12.10

E8. Nucleolar demethylases NO52 and NO66: important players in the development of hematological malignancies.
Marion Schmidt-Zachman (Heidelberg, Germany)

12.10-12.35

E9. The role of proteinase inhibitors in the nucleus.
Natasha Kopitar-Jerala (Ljubljana, Slovenia)

12.35-14.00

Lunch, poster viewing

F. Novel methodical approaches

Chairman: Yosef Gruenbaum

14.00-14.35

F1. Changes to cellular water and ion content by nucleolar stress: investigation by a cryo-correlative nano imaging approach. (Plenary lecture)
Dominique Ploton (Reims, France)

14.35-15.00

F2. Breakdown of nuclear quality control: single-cell imaging of nucleolar protein aggregation in a living organism.
Andrea Scharf (Duesseldorf, Germany)

15.00-15.25

F3. Liganded RXR display highly dynamic behavior governed principally by co-activator binding as revealed by single cell imaging.
György Vámosi (Debrecen, Hungary)

15.25-15.40

F4. Fluidigm products in single-cell gene expression analysis and in quantitative RT-PCR.
Radoslav Silar (BioTech-Europe, Czech Republic)

15.40-15.55

Break

Chairman: György Vámosi

15.55-16.20

F5. Specific inhibitors of nuclear transport; potential anti-virals.
David Jans (Clayton, Australia)

16.20-16.45

F6. Site-specific recombinases: from tag-and-target- to tag-and-exchange-based genomic modifications.
Jürgen Bode (Hannover, Germany)

16.45-17.10


F7. Antimutagenic and repair-stimulating derivative of 1,4-dihydropyridine AV-153 intercalates in DNA in a single strand break site between two pyrimidines.
Nikolajs Sjakste (Riga, Latvia)

17.10-17.35

F8. ChIP efficiency is changed by fixation-induced poly(ADP)ribosylation.
Sascha Beneke (Zurich, Switzerland)

17.35-17.45

Conference closing, concluding remarks



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18.30- Banquet dinner, farewell party

Aug. 24.

Departure