

11th Molecular, Cell and Immune Biology Winter Symposium



*organized by the
Molecular, Cellular and Immune Biology Doctoral School,
University of Debrecen*

EFOP-3.6.3-VEKOP-16-2017-00009

Debrecen, 4-5 January, 2018
Venue: IVDI Building

11th Molecular, Cell and Immune Biology Winter Symposium

Programme:

January 4

10:00-10:15 **Opening**
József Tózsér

10:15-10:40 László Fésüs:
Highlights of 2017

10:40-12:15 **Section 1**

Chair: Bálint Bálint

Introductory lecture

10:40-11:00 Lajos Széles:
Divergent molecular principles regulating inflammatory versus antiviral programs in dendritic cells

Regular talks

11:00-11:15 Zsolt Czimmerer:
The transcription factor STAT6 mediates direct repression of inflammatory enhancers and limits activation of alternatively polarized macrophages

11:15-11:30 Károly Jambrovics:
Pathobiological function of transglutaminase 2 in differentiating NB4 acute promyelocytic leukaemia cells

11:30-11:45 Mária Csumita:
Investigation of Interferon Regulatory Factors (IRFs) in dendritic cells activated by TLR ligands and type I interferon

11:45-12:00 Judit Erdei:
Induction of NLRP3 inflammasome activation by heme in human endothelial cells

12:00-12:15 Zsófia Varga:
Secreted IAP antagonists in the regulation of immune response

12:15-13:15 **Lunch break**

13:15-14:45 Section 2

Chair: Zsolt Sarang

Regular talks

- 13:15-13:30 Attila Horvath:
Characterization and modeling of lineage-specific enhancer states and transitions in macrophages
- 13:30-13:45 Dóra Bojcsuk:
Different gene regulators establish a similar expression pattern via super-enhancers
- 13:45-14:00 Edina Erdős:
Gene regulation by COUP-TFII through CTCF mediated loops in cancer cell lines
- 14:00-14:15 Lilla Ozgyin:
Lyophilized whole human cells stored at room temperature preserve multiple RNA species in excellent quality for RNA sequencing
- 14:15-14:30 Csaba Bankó:
Can radiofrequency radiation cause DNA damage in mammalian cells or not?
- 14:30-14:45 Rosevalentine Bosire:
Accessibility of native chromatin to small molecules through biophysical spectacles

14:45-15:15 Coffee break

15:15-17:05 Section 3

Chair: Lajos Széles

Introductory lecture

- 15:15-15:35 Endre Kristóf:
Batokines - importance in human physiology and health

Regular talks

- 15:35-15:50 Attila Pap:
Life without adipose tissue: metabolic characterization of PPAR γ KO mice
- 15:50-16:05 Ágnes Klusóczki:
SGBS preadipocyte cell line can serve as a model for human beige type of browning adipocyte differentiation
- 16:05-16:20 Anett Türk-Mázló:
Role of CTLA-4 in mesenchymal stem cell-mediated immune modulation

- 16:20-16:35 Tibor Sággy:
Loss of transglutaminase 2 sensitizes mice kept on high fat diet to developing obesity and insulin resistance
- 16:35- 16:50 Tamas Imre Csuth:
Study of biotinylated Runx1 and Runx3 transcription factors in murine pluripotent stem cell derived myeloid cells
- 16:50-17:05 Pál Botó:
Zbtb46 suppresses the pluripotent stem cell-based mesodermal and myeloid differentiation

January 5

9:00-10:30 Section 4

Chair: Éva Csósz

Introductory lecture

- 9.00-9:15 András Szabó:
SPINK1 mutations in chronic pancreatitis

Regular talks

- 9:15-9:30 Zsófia Szojka:
Analysis of dual HIV infection on the cellular level: Implication of HIV-2 Vpx in dampening the infectivity of HIV-1
- 9:30-9:45 Viktor Ambrus:
The role of protein dynamics in enzyme evolution
- 9:45-10:00 Norbert Duró:
The role of intrinsically disordered (ID) protein segments in the prion-like aggregation of Mitochondrial Antiviral Signaling (MAVS) protein
- 10:00-10:15 Patricia Kálmán:
In vitro investigation of rexinoid drug combinations for breast cancer prevention
- 10:15-10:30 Ilona Tornyai:
Biomarkers for the early diagnosis of lung cancer: C9 epitope variability

10:30-11:00 Coffee break

11:00-12:15 Section 5

Chair: András Szabó

- 11:00-11:15 Zsófia Budai:
Comparison of the apoptotic and heat necrotic cell uptake by bone marrow-derived macrophages

- 11:15-11:30 Tamás Molnár:
The role of caspase-9 in necroptosis
- 11:30-11:45 Eszter Boldizsár:
TKS4 augments tumor progression
- 11:45-12:00 Máté István Sütő:
Immunomodulatory effects of γ -radiation detoxified endotoxin
- 12:00-12:15 Bogonko Benard Nyakundi:
The contribution of oxidized hemoglobin forms to hemolysis-induced lethality

12:15-13:00 Lunch break

13:00-14:00 Section 6 (Poster viewing Session)

Chair: András Mádi

Posters

Krisztián Bene:

Analysis of molecular targets of the short-chain fatty acid butyrate associated with attenuated inflammation in human dendritic cells

Csaba Fillér:

Investigation of protein interactions of Spp1, a key regulator of meiotic recombination initiation

Lívia Gazda:

Sulfation of human trypsin enhances the release of SPINK1 inhibitor

Fruzsina Kovács:

Determination of the degree of citrullination in the saliva samples of patients with rheumatoid arthritis

Zsuzsanna Kolostyak:

Analysis of all-trans retinoic acid's anti-proliferative effect in human glioblastoma

Zsuzsanna Kolostyak:

Characterization of tumor-associated immune cell populations in syngenic mouse model

Tamás Linkner:

The effects of o-acetyl-transferase A enzyme on the immunomodulatory capacity of *Lactobacillus casei* BL23

Éva Márton:

Plasma miRNAs as diagnostic markers in ovarian cancer

Márton Miskei:

Towards predicting disorder-to-order transitions and fuzzy regions

Nikolas Giannakis:

Lipidomic and transcriptomic profiling of macrophages in inflammation after acute muscle injury in mice

Zsuzsa Szabó:

Characterisation of the isopeptidase activity of human blood coagulation factor XIII-A

Erzsébet Tóth:

Strand-specific R-loop identification in flowering regulation genes of *Arabidopsis thaliana*

14:00-15:35 Section 7

Chair: Róbert Király

Introductory lecture

14:00-14:20 Rita Elek:

Building up a conformational epitope on Transglutaminase 2 enzyme

Regular talks

14:20-14:35 László Imre:

H2A.Z: stable or not stable that is the question

14:35-14:50 Fruzsina Zsólyomi:

Patterns of order-disorder can reveal evolutionary relationships in proteins

14:50-15:05 Gyula Hoffka:

Multiscale simulations on enzymatic catalysis

15:05-15:20 Szabolcs Tarapcsák:

Studying the catalytic cycle of P-glycoprotein using Walker B and A-loop mutants

15:20-15:35 Gabriella Gellén:

Cholesterol-dependent epitope mapping in P-glycoprotein with mass spectrometry

15:35-15:50 Márió Miczi:

Characterization of a recombinant fusion protein-based, fluorescent protease assay for high throughput-compatible substrate screening

15:50 Concluding remarks

József Tózsér (Chair)

László Fésüs

Gábor Szabó

Szilvia Benkő

Sándor Bíró

Mónika Fuxreiter

Bálint Nagy

Éva Rajnavölgyi

Zsuzsa Szondy