

CONFERENCE PROGRAMME

Sunday, 15. 9. 2013

15:00 Registration of participants

16:15 Opening ceremony

Cultural programme

Address of the president of the organizing committee *Aleš Berlec*

Address of the Mayor of Ljubljana *Zoran Jankovič*

Address of the president of the SBD *Marinka Drobnič Košorok*

Cultural programme

17:15 Opening lecture

Chaired by Marinka Drobnič Košorok

Boris Turk: Protease signaling: cysteine cathepsins and their regulation

18:15 Get together & wine tasting

Monday, 16. 9. 2013

8:30 – 10:15 Section I: Cell signaling and membranes

Chaired by Ana Plemenitaš and Gregor Anderluh

8:30 – 8:55 **Alexandre Chenal:** New insights on the membrane translocation process of the CyaA toxin catalytic domain of *Bordetella pertussis*

8:55 – 9:20 **Mojca Benčina:** Molecular mechanism of TLR5 activation by flagellin

9:20 – 9:35 **Valentina Kubale Dvojmoč:** The functional importance of conserved motif in the third intracellular loop of the long form of dopamine receptor type 2 (D2L-R)

9:35 – 9:50 **Tilen Konte:** The high-osmolarity glycerol (HOG) pathway in the obligate halophile *Wallemia ichthyophaga*

9:50 – 10:05 **Mateja Manček-Keber:** Vanadate from air pollutants augments responsiveness to Toll-like receptor signaling

10:15 – 10:40 Coffee break

10:40 – 12:25 Section II: Biotechnology and bionanotechnology

Chaired by Janko Kos and Peter Dovč

10:40 – 11:05 **Tosso Leeb:** Personal genomics in dogs

11:05 – 11:30 **Jerica Sabotič:** Versatility of β -trefoil protease inhibitors from mushrooms

11:30 – 11:45 **Damjana Kastelic:** Nanobodies and selection of new cancer biomarkers

11:45 – 12:00 **Andreja Majerle:** Mammalian cell logic function processing device based on orthogonal NOR genetic gates

12:00 – 12:15 **Jana Erjavec:** Proteins and protein extracts from higher fungi – inhibition of a devastating plant pathogenic bacterium *Ralstonia solanacearum*

12:25 – 14:00 Lunch break

14:00 – 15:45 Section III: Protein structure and function I

Chaired by Igor Križaj and Peter Maček

- 14:00 – 14:25 **Gérard Lambeau:** The family of secreted phospholipases A2: from toxic to therapeutic enzymes
14:25 – 14:40 **Matej Butala:** Structural insight into LexA-RecA* interaction offers new possibilities to fight antibiotic resistance of bacteria
14:40 – 14:55 **Adrijana Leonardi:** *Conus consors* snail venom proteomics proposes functions, pathways, and novel families involved in its venomous system
14:55 – 15:10 **Mojca Lunder:** Peptide modulators of hunger hormone ghrelin
15:10 – 15:25 **Tomaž Marš:** Non-synaptic roles of agrin
15:25 – 15:40 **Marko Novinec:** Identification of a novel allosteric site in cysteine cathepsin K

15:45 – 16:10 Coffee break

16:10 – 18:30 SBD National Assembly with Lapanje awardees lectures

Lapanje award lecture

Vita Dolžan: Farmakogenetika v medicini: od laboratorija do klinične prakse

Lapanje young investigator award lecture I

Jure Ačimovič: Metabolična pot biosinteze holesterola

Lapanje young investigator award lecture II (presented in section VI)

Iva Hafner-Bratkovič: Unlocking of the prion protein globular domain is a crucial step in prion protein conversion

18:30 – 20:30 Poster session I

Tuesday, 17. 9. 2013

8:30 – 10:15 Section IV: Protein structure and function II

Chaired by Boris Turk and Dušan Turk

- 8:30 – 8:55 **Mario Halic:** Argonaute and trimmer generate dicer-independent priRNAs and mature siRNAs
8:55 – 9:20 **Veronika Stoka:** Human cathepsin F: structural and functional aspects
9:20 – 9:35 **Dušan Turk:** High throughput approach to studies of endosomal proteins involved in immune response and their targets from human pathogens
9:35 – 9:50 **Miha Renko:** Structural insight into the lysosomal degradation of glycans
9:50 – 10:05 **Jurij Lah:** What drives binding-coupled folding of an intrinsically disordered protein?

10:15 – 10:40 Coffee break

10:40 – 12:25 Section V: Systems biology and functional genomics I

Chaired by Maja Rupnik and Kristina Gruden

- 10:40 – 11:05 **Rattei Thomas:** Computational methods for microbial and environmental genomics
11:05 – 11:30 **Kristina Gruden:** Modeling of plant signaling response to viral infection
11:30 – 11:45 **David Dobnik:** MicroRNAs in potato-PVY interaction

11:45 – 12:00 **Andrej Steyer:** Upgrading of current viral diagnostics in gastroenteritis cases with next generation sequencing

12:00 – 12:15 **Ines Mandić-Mulec:** Metagenomics: a path to novel bacterial laccases

12:25 – 13:45 Lunch break

13:45 – 15:30 Section VI: Molecular basis of disease I

Chaired by Boris Rogelj and Radovan Komel

13:45 – 14:10 **Christopher E. Shaw:** Expanded G4C2 repeats linked to C9ORF72 ALS and FTD form length-dependent RNA foci, sequester RNA binding proteins and are neurotoxic

14:10 – 14:35 **Serge Muyldermans:** Nanobodies: natural camelid single domain antibodies. Anything antibodies can do, nanobodies can - probably - do better.

14:35 – 14:50 **Anja Pišlar:** Role of γ -enolase in neuronal development and degeneration: regulation by cysteine protease cathepsin X

14:50 – 15:05 Lapanje young investigator award lecture II: **Iva Hafner-Bratkovič:** Unlocking of the prion protein globular domain is a crucial step in prion protein conversion

15:05 – 15:20 **Alja Videtič Paska:** Genetics and suicidal behaviour

15:20 – 17:20 Poster session II

20:15 Conference dinner

Announcement of the winners of the best poster award

Wednesday, 18. 9. 2013

9:00 – 10:45 Round table discussion

Moderated by Blaž Cigić

Guests: Roman Jerala, Matjaž Zorko, Janko Kos, Jurij Lah

Challenges in education

Accumulation of data : understanding

Information technology : personal contact

Motivated students : unmotivated students

Mentor : young researcher

10:45 – 11:10 Coffee break

11:10 – 12:55 Section VII: Molecular basis of disease II

Chaired by Tamara Lah Turnšek and Simon Horvat

11:10 – 11:35 **Tadej Battelino:** Glucose variability induced oxidative stress and closed-loop insulin delivery

11:35 – 12:00 **Simon Horvat:** Identification of a novel gain-of function adipose-derived lean gene

12:00 – 12:15 **Sergej Pirkmajer:** Methotrexate promotes AMPK activation in skeletal muscle

12:15 – 12:30 **Neli Hevir:** Oxidative metabolism of estrogens promote cancer initiation in precancerous endometrium - new evidence

12:30 – 12:45 **Katarina Maher:** NLRP3 inflammasome activation is regulated by cytosolic cathepsin inhibitor stefin B

12:45 – 12:50 Roche farmacevtska družba d.o.o. commercial presentation

12:55 – 14:15 Lunch break

14:15 – 16:00 Section VIII: Systems biology and functional genomics II

Chaired by Damjana Rozman and Dušan Kordiš

14:15 – 14:40 **Jernej Ule:** hiCLIP reveals the atlas of RNA structures recognized by Staufen 1

14:40 – 15:05 **Jure Piškur:** Yeast fermentation ability evolved as a multi step process which reshaped the carbon metabolism

15:05 – 15:20 **Anja Korenčič:** Phase determination of clock genes in peripheral tissues

15:20 – 15:35 **Rok Košir:** Circadian gene expression patterns are influenced by mouse genotype

15:35 – 15:50 **Dušan Kordiš:** Genesis and regulatory wiring of retroelement-derived domesticated genes: a phylogenomic perspective

16:00 – 16:20 Coffee break

16:20 – 17:10 Closing lecture

Chaired by Boris Turk

Francisco E. Baralle: Molecular mechanisms of TDP-43 self-regulation and aggregation. The role in the pathogenesis of Amyotrophic Lateral Sclerosis (ALS) and Frontotemporal Lobar Degeneration (FTLD).

17:20 Closing ceremony