



Slovak Biophysical Society
Department of Biophysics, Faculty of Science
Center for Interdisciplinary Biosciences,
Technology and Innovation Park
P. J. Šafárik University in Košice



Program

8th Slovak Biophysical Symposium

May 30 – June 1, 2018

Košice, Slovakia

WEDNESDAY, May 30, 2018

12:00 – 14:00 **Registration**

14:00 – 14:10 **Opening ceremony**

14:10 – 15:40 **Session I**

Chair: D. Jancura

14:10 – 15:00

PL1 G. Žoldák:

Single-molecule nanomechanics of protein machines

15:00 – 15:20

SC1 E. Sedlák, A. Plückthun:

Analysis of kinetic stability of antibodies by microcalorimetry

15:20 – 15:40

SC2 E. Dušeková, E. Sedlák:

By substrates modulated Hofmeister effect on catalytic activity of chymotrypsin

15:40 – 16:00 **Coffee break**

16:00 – 17:10 **Session II**

Chair: G. Žoldák

16:00 – 16:20

SC3 M. Petrenčáková, D. Jancura, E. Sedlák:

Characterization of conformational properties of AsLOV2 domain

16:20 – 16:40

SC4 M. Nemergut, E. Sedlák:

The use of DARPin in the purification of MBP-fused proteins

16:40 – 16:55

CP1 Z. Kováčová:

Presentation of SHIMADZU company

16:55 – 17:10

CP2 M. Karabin:

Presentation of HERMES company

17:10 – **Welcome drink**

17:20 – 18:00 **Poster session**

18:00 – 18:30 **Meeting of Slovak BioImaging section**

THURSDAY, May 31, 2018

9:00 – 10:30 **Session III**

Chair: E. Sedlák

9:00 – 9:50

PL2 Z. Bednáriková, M. Gančár, K. Uličná, D. Fedunová, S. S.-S. Wang, J. W. Wu, R. Wang, Y. Tang, L. Ma, B.-B. Zheng, **Z. Gažová:**
Effect of natural and synthetic small molecules on aggregation of globular proteins

9:50 – 10:10

SC5 **A. Antošová**, Z. Bednáriková, M. Koneracka, V. Zavisová, M. Kubovciková, I. Antal, J. Marek, Z. Gažová:
Amino acids functionalized magnetic nanoparticles as lysozyme amyloid inhibitors

10:10 – 10:30

SC6 **A. Hovan**, S. Datta, A. Jutková, D. Jancura, P. Miškovský, G. Bánó:
Phosphorescence kinetics of singlet oxygen produced in nano-particles – modelling and experiments

10:30 – 10:50 **Coffee break**

10:50 – 12:10 **Session IV**

Chair: G. Bánó

10:50 – 11:10

SC7 Z. Pavlínka, T. Teplický, D. Chorvát, N. Ivošević Denardis, **A. Marček Chorvátová:**
Spectroscopy and time-resolved microscopy study of endogenous fluorescence in marine algae *Dunalliella*

11:10 – 11:30

SC8 Z. Kroneková, E. Paulovičová, L. Paulovičová, **J. Kronek:**
Poly(2-isopropenyl-2-oxazoline) as a tool for combined cancer immunotherapy

11:30 – 11:50

SC9 **A. Jutková**, S. Datta, P. Sramková, L. Lenkavská, V. Huntošová, D. Chorvát, P. Miškovský, D. Jancura, J. Kronek:
Poly(2-oxazoline) gradient copolymer nanoparticles for curcumin loading and delivery to cancer cells

11:50 – 12:10

SC13 **P. Jakabčín**, J. Uličný:
Early diagnostics and therapy of gastrointestinal neoplasia (from diagnostics to therapy within 15 minutes)

12:10 – 14:00 **Lunch Break**

14:00 – 15:30 **Session V**

Chair: V. Huntošová

14:00 – 14:50

PL3 S. Tomková, V. Huntošová, G. Wagnieres, **K. Štroffeková:**
Photobiomodulation affects mitochondria morphogenesis and function

14:50 – 15:10

SC11 **A. Zahradníková**, M. Májeková, J. Ševčík:
The effect of central helix mutations on the stability of the N-terminal region of the cardiac ryanodine receptor

15:10 – 15:30

SC12 **I. Zahradník**, M. Hořka:
On the thermal dependence of the electrical capacitance of cell membrane

15:30 – 16:00 **Poster session – Coffee break**

16:00 – 17:00 **SKBS prizes (ceremony and winners lectures)**

17:00 – 18:00 **General Assembly of the Slovak Biophysical Society**

18:45 **Conference dinner**

FRIDAY, June 1, 2018

9:00 – 11:10 **Session VI**

Chair: K. Štroffeková

9:00 – 9:50

PL4 **J. Uličný:**
Architecture of cell DNA – X-ray imaging approach

9:50 – 10:10

SC10 **K. Kopčová**, L. Blaščáková, T. Kožár, M. Fabian, D. Jancura:
Conformational transitions of respiratory cytochrome c oxidase

10:10 – 10:30 **Coffee break**

10:30 – 10:50

SC14 **S. Hrivňak**, J. Uličný, P. Vagovič:
X-ray bioimaging using Bragg Magnifier Microscope

10:50 – 11:10

SC15 **S. Havadej:**
Development of GPU accelerated ray-tracing based X-ray simulation environment

11:10 **Concluding remarks**