

XLIV Winter School of the Faculty of Biochemistry, Biophysics and Biotechnology, Jagiellonian University, Kraków, Poland;

„No stress – no life”

The forty fourth Winter School of the Faculty of Biochemistry, Biophysics and Biotechnology of Jagiellonian University, „No stress – no life”, was held on 14–18 February 2017 in Zakopane and was organized under the honorary patronage of the Dean, Professor Zbigniew Madeja, and additional patronage of the Polish Biochemical Society.

This year’s School was devoted to the current topics related to molecular mechanisms used by the organisms in response to stress factors and conditions. 152 attendees of the School from 13 scientific institutions (including two from USA and France) presented 16 plenary lectures, 23 short talks and 71 posters. The presentations were grouped into the following sessions:

- Modifications of biological macromolecules under conditions of cellular stress;
- Stress adaptation in plants;
- The stressful life of pathogenic microbes;
- Cellular stress reactions in human health and disease;
 - Skeletal muscle and heart regeneration;
 - Oxidative stress;
 - Neurobiology of stressful life;
- All stresses great and small.

The Winter School offered an excellent opportunity for the attendees to familiarize themselves with research being conducted at the Faculty of Biochemistry, Biophysics and Biotechnology, and at other research institutions both in Poland and abroad.

The Winter School’s programme also contained special attractions including the “Ski and snow fun” event held at the Koziniec Ski Czarna Góra that included the 7th Annual Professor Zygmunt Wasylewski Memorial Ski Race Competition. Thanks, in large part, to the beautiful weather, many of the School attendees enthusiastically participated also in the race in snowshoes. The evenings ended with fun during the welcome banquet, the cocktail party and the costume/mask party.

The major financial support for the Winter School was provided by special funds of the Faculty of Biochemistry, Biophysics and Biotechnology of Jagiellonian University which is a partner of the Leading National Research Center (KNOW) (supported by the Ministry of Science and Higher Education) and by the Zygmunt Wasylewski Foundation for the Faculty of Biochemistry, Biophysics and Biotechnology of Jagiellonian University. However, the School would not have taken place without the generous support of external sponsors, including the Polish Biochemical Society, „SHIM-POL A.M. Borzymowski” E. Borzymowska-Reszka A. Reszka Sp.j., VWR International Sp. z o.o., Lab-JOT Ltd. Sp. z o.o. Sp. k., Merck Sp. z o.o., Panalytica Sp. z o.o., GE Medical Systems Polska Sp. z o.o., PerkinElmer Polska Sp. z o.o., CELLLAB Krzysztof Grabowski, Eppendorf Poland Sp. z o.o., EURx Sp. z o.o., A&A Biotechnology, Sarstedt Sp. z o.o., Cheminst Polska Aleksander Prychidny, Lab Empire s.c. Ewa Magdalena Lach Grażyna Pyczula, Genomed S.A., MEDianus Sp. z o.o., Wydawnictwo Naukowe PWN S.A., Bruker Polska Sp. z o.o.

This special issue of *Acta Biochimica Polonica* contains 9 articles (1 review, 7 full experimental papers and 1 short communication) prepared on the basis of selected presentations at the Winter School. In a review article by Czyż and coworkers the “Connexin-dependent intercellular stress signaling in tissue homeostasis and tumor development” is characterized. Górska and coworkers present experimental evidence that “Glucagon-like peptide-1 receptor agonist stimulates mitochondrial bioenergetics in human adipocytes”. Karkowska-Kuleta and coworkers characterize in detail the “Binding of human plasminogen and high-molecular-mass kininogen by cell surface-exposed proteins of *Candida parapsilosis*”. Muszyńska and coworkers present their work on the „Selection and analysis of a DNA aptamer binding α -amanitin from *Amanita phalloides*”. Razny and coworkers introduce a hypothesis on a “Relation of protein glycation, oxidation and nitration with osteocalcin level in obese subjects”. „The effect of bisphenol A on growth, pigment composition and photosystem II activity of *Arabidopsis thaliana*” is characterized by Rapala and coworkers. Szczygiel and coworkers write how they have performed an „Optimization of Western blotting analysis for the isolation and detection of membrane xenobiotic transporter ABCG2”. In a short communication, Piwowarczyk and coworkers report an increased nanomechanical deformability of the invasive Cx43^{high} sub-line of human prostate DU145 cells.

On behalf of the Organizing Committee

Andrzej Kozik and Maria Rapała-Kozik