

## CHEMISTRY AND BIOLOGY OF ENZYMES

October 30, 14:30 – 16:30

Potemkin Hall

### Session 1

Chairs: Olga LAVRIK and Ivan SMIRNOV

25 min **Patrick MASSON**<sup>1</sup>, Z. Shaihutdinova<sup>1,2</sup> <sup>1</sup>*Biochemical Neuropharmacology lab, Kazan Federal University;*  
<sup>2</sup>*Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences, Kazan*

**Slow equilibria in human butyryl cholinesterase at work: physiological and pharmaco-toxicological relevance?**

25 min **Dmitry ZHARKOV** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk*

**Abasic sites: The Achilles' heel of DNA**

20 min **Maria KHRENOVA**, T.I. Mulashkina, A.M. Kulakova, I.V. Polyakov *Emanuel Institute of Biochemical Physics, Russian Academy of Sciences, Moscow*

**Molecular mechanisms of the P–O bond cleavage in active sites of enzymes**

20 min **Nikita KUZNETSOV** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences,, Novosibirsk*

**Molecular kinetic mechanisms of biocatalysis and control of substrate specificity of enzymes**

15 min **Tatyana KURGINA**, N.A. Moor, M.M. Kutuzov, A.A. Ukraintsev, O.I. Lavrik *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk*

**Protein factor HPF1 stimulates PARP1 and PARP2 activity in the context of nucleosomes**

15 min **Dmitry NILOV** *Lomonosov Moscow State University, Moscow*

**Studying the mechanism of PARP proteins using molecular modeling**

## CHEMISTRY AND BIOLOGY OF ENZYMES

October 30, 16:50 – 19:10

Potemkin Hall

### Session 2

Chairs: Olga LAVRIK and Dmitry ZHARKOV

20 min **Alexey KHOMUTOV** *Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow*  
**Phosphorus analogues of glutamic acid and S-adenosylmethionine: synthesis and biological activity**

20 min **Ivan SMIRNOV** *Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow*

**The technologies of biocatalysts screening: yesterday, today, tomorrow**

20 min **Stanislav TEREKHOV** *Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow*

**Deep functional profiling of antibody repertoires**

20 min **Ilya DEMIDYUK**, M.A. Karaseva *NRC «Kurchatov Institute», Moscow*

**Protease S from *Photorhabdus laumondii*: on the way to unraveling biological functions**

15 min **Anna BURTSEVA**<sup>1,2</sup>, K.M. Boyko<sup>1</sup>, T.N. Baimukhametov<sup>3</sup>, M.A. Bolshakov<sup>4</sup>, V.O. Popov<sup>1</sup>, A.A. Ashikhmin<sup>4</sup>  
<sup>1</sup>Research Center of Biotechnology, Russian Academy of Sciences, Moscow; <sup>2</sup>Moscow Institute of Physics and Technology (National Research University), Dolgoprudny; <sup>3</sup>National Research Center "Kurchatov Institute", Moscow; <sup>4</sup>Institute of Fundamental Problems of Biology, Russian Academy of Sciences, FRC "Pushchino Scientific Center for Biological Research", Russian Academy of Sciences, Pushchino

**Architecture of light-harvesting LH2 complexes from the purple sulfur bacteria *Ectothiorhodospira haloalkaliphila***

15 min **Larisa VARFOLOMEEVA**<sup>1</sup>, A.Y. Solovieva<sup>1</sup>, N.S. Shipkov<sup>1</sup>, N.I. Dergousova<sup>1</sup>, M.G. Khrenova<sup>2</sup>, K.M. Boyko<sup>1</sup>, T.V. Tikhonova<sup>1</sup>, V.O. Popov<sup>1,3</sup> <sup>1</sup>Federal Research Centre «Fundamentals of Biotechnology», Russian Academy of Sciences; <sup>2</sup>Department of Chemistry, Lomonosov Moscow State University; <sup>3</sup>Faculty of Biology, Lomonosov Moscow State University, Mosco

**Structural basis of thiocyanate oxidation in the trinuclear copper center of thiocyanate dehydrogenase**

15 min **Mikhail KONSTANTINOV**, I. Toropygin *Orechovich Institute of Biomedical Chemistry, Moscow*

**Determination of kinetic parameters of proteolytic enzymes using isotope-labeled standards and MALDI-TOF/TOF mass spectrometry**

15 min **Kirill ANTONETS** *St Petersburg State University, St Petersburg*

**Analysis of bacterial genomic data as a path to understanding the biosynthesis of biologically active substances**