

SEARCH, ISOLATION AND SYNTHESIS OF NEW NATURAL PEPTIDES AND PROTEINS

November 1, 14:10 – 16:10

Nakhimov Hall

Session 1

Chairs: Igor KASHEVEROV and Alexander VASSILEVSKI

30 min **Victor TSETLIN**, Yu.N. Utkin, I.E. Kasheverov, I.V. Shelukhina, E.V. Kryukova, D.S. Kudryavtsev *Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow*
Nicotinic receptors, neurotoxins and other ligands: well-known and new

20 min **Yuri UTKIN**¹, N.S. Egorova¹, E.V. Kryukova¹, I.V. Shelukhina¹, M.S. Severyukhina², L.O. Ojomoko¹, L.A. Epifanova¹, M.V. Vladykina¹, A.M. Ismailova², E.R. Shaykhutdinova², I.A. Dyachenko², K.S. Mineev¹, I.E. Kasheverov¹, V.I. Tsetlin¹ *¹Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow; ²Branch of the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Pushchino*
Peptide fragments of three-finger proteins: synthesis and biological activity

15 min **Yaroslav ANDREEV**, T.A. Khasanov, D.I. Osmakov *Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow*
Peptide modulators of ASIC channels from venoms of sea anemones

10 min **Daria POPKOVA**, N. Otstavnykh, O. Sintsova, I. Gladkikh, M. Isaeva, E. Leychenko *Elyakov Pacific Institute of Bioorganic Chemistry, FEB RAS, Vladivostok*
Cnidarians as a potential source of compounds for the treatment of hyperglycemia in diabetes mellitus

15 min **Alexander MENSHOV**¹, A.S. Paramonov², D.V. Popkova¹, O.V. Sintsova¹, Z.O. Shenkarev², I.N. Gladkikh¹, E.V. Leychenko¹ *¹Elyakov Pacific Institute of Bioorganic Chemistry, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia; ²Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow, Russia*
 β -Defensin-like peptides from sea anemone *Heteractis magnifica* as mammalian α -amylase inhibitors

10 min **Lina SON**, I.A. Ivanov, D.S. Kudryavtsev, I.E. Kasheverov *Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow*
Expression of the acetylcholine-binding protein from *Lymnea stagnalis*, a structural analogue of the extracellular domain of nicotinic acetylcholine receptors in the LEXSY expression system

SEARCH, ISOLATION AND SYNTHESIS OF NEW NATURAL PEPTIDES AND PROTEINS

November 1, 16:30 – 18:30

Nakhimov Hall

Session 2

Chairs: Igor KASHEVEROV and Alexander VASSILEVSKI

- 20 min **Elena KUBAREVA**², V.S. Trefilov^{1,2}, O.Y. Burenina³, E.Y. Lindin¹, E.A. Korkunova¹, M.B. Viryasov², M.I. Zvereva¹ ¹Department of Chemistry and ²Belozersky Institute of Physico-Chemical Biology, Lomonosov Moscow State University; ³Skolkovo Institute of Science and Technology, Moscow
The relationship between synthesis of biological active lipopeptide surfactin and 6S RNA-mediated regulation of gene transcription in *Bacillus subtilis*
- 20 min **Pavel PANTELEEV**, V.N. Safronova, I.A. Bolosov, T.V. Ovchinnikova *Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow*
Search for novel inhibitors of bacterial ribosomes among animal host defense peptides
- 15 min **Viatcheslav AZEV**¹, L.K. Baidakova¹, M.Y. Berzina², A.N. Chulin¹, V.N. Kuptsov³, A.I. Miroshnikov²
¹Branch of the Shemyakin & Ovchinnikov Bioorganic Chemistry Institute, Russian Academy of Sciences, Pushchino; ²Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow; ³AVVA RUS, Moscow
Regiospecific preparation method of peptides containing β - or γ -branched dicarboxylic amino acid
- 15 min **Kristina PERFILOVA**¹, A.A. Kapitonova¹, A.A. Antson², R.B. Cooley³, N.N. Sluchanko¹ ¹Bach Institute of Biochemistry, Federal Research Center of Biotechnology, Russian Academy of Sciences, Moscow, Russia; ²York Structural Biology Laboratory, Department of Chemistry, University of York, York, UK; ³Department of Biochemistry and Biophysics, Oregon State University, Corvallis, USA
Approaches to obtaining and studying proteins with site-specific phosphorylation
- 15 min **Kseniia PALKINA**^{1,2}, T.A. Karataeva^{1,2}, M.M. Perfilov^{1,2}, N.M. Markina^{1,2}, E. Garcia-Perez³, M. Vazquez-Vilar³, M. Rodriguez-Rodriguez³, T. Mitiouchkina^{1,2}, O.A. Belozerova², S.I. Kovalchuk², A. Alekberova^{1,2}, A. Balakireva^{1,2}, D. Orzaez³, I.V. Yampolsky^{1,2,4,5}, A.S. Mishin^{1,2}, K.S. Sarkisyan^{1,2,5,6,7} ¹Planta LLC, Moscow, Russia; ²Shemyakin & Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences, Moscow, Russia; ³Instituto de Biología Molecular y Celular de Plantas (IBMCP), Consejo Superior de Investigaciones Científicas (CSIC), Universitat Politècnica de València, Spain; ⁴Pirogov Russian National Research Medical University, Moscow, Russia; ⁵Light Bio Inc, Ketchum, Idaho, USA; ⁶Synthetic Biology Group, MRC London Institute of Medical Sciences, London, UK; ⁷Institute of Clinical Sciences, Faculty of Medicine, Imperial College London, London
Enzymes catalysing the biosynthesis of polyketide hispidin from caffeic acid
- 10 min **Kseniia BEDRITSKIKH**, A.A. Bulygin, N.A. Kuznetsov, A.A. Kuznetsova *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia*
DNA polymerase I from *Massilia aurea* characterisation
- 10 min **Nikita EGORKIN**¹, I.A. Sedlov¹, L.A. Varfolomeeva², K.M. Boyko², N.N. Sluchanko² ¹M.V. Lomonosov Moscow State University, Faculty of Biology; ²Bach Institute of Biochemistry, Federal Research Centre of Biotechnology, Russian Academy of Sciences, Moscow
Unique water-soluble carotenoid-binding protein pigments of Orthoptera