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IBCh positions

2017–to date	Principal research fellow
2026–2024	Professor

IBCh memberships

Scientific council

Language Proficiency

Russian, English

Titles

Doctor of Science (Chemistry)

Grants and projects

2025–to date	-Разработка противовоспалительных и анальгетических лекарственных средств с новым механизмом действия через модуляцию активности ноцицептивных ионных каналов
2014–2016	-Молекулярные технологии управления нейросигнализацией
2020–2022	-
2017–2019	-
2018–2020	-Изучение фармакологических свойств эндогенных и экзогенных модуляторов кислоточувствительных ионных каналов на экспрессированных рецепторах и на животных моделях in vivo

Publications

1. Galenko-Yaroshevsky PA, Zelenskaya AV, Suzdalev KF, Popova TN, Kvetkina AN, Shamatova MM, Chuyan EN, Ravaeva MY, Murashko RA, Glechyan TR, Sergeeva AV, Ishkhanyan NN, Gulevskaya ON, Chubinskiy-Nadezhdin VI, Krylskii ED, Priymenko NA, Klimovich AA, Leychenko EV, **Kozlov SA** (2026). The TRPV1 Channel Modulator Imidazo[1,2-a]Indole Derivative Exhibits Pronounced and Versatile Anti-Inflammatory Activity In Vivo. *Biomedicines* 14 (1), 60, 10.3390/biomedicines14010060
2. Galenko-Yaroshevsky PA, Zelenskaya AV, Suzdalev KF, Chuyan EN, Ravaeva MY, Murashko RA, Vassiliev PM, Glechyan TR, Sergeeva AV, Leychenko EV, Chubinskiy-Nadezhdin VI, Gulevskaya ON, Korolkova YV,

Shamatova MM, Vasileva VY, Ishkhanyan NN, **Kozlov SA** (2025). Analgesic activity of imidazo[1,2-a]indole derivative and its involvement of TRPV1 and κ-opioid receptors. *Res. Res. Pharm.* 11 (4), 17–37, 10.18413/rrpharmacology.11.641

3. Palikov VA, Ismailova AM, Kazakov VA, Kholina AV, Borozdina NA, Mikhaylov ES, Pavlov VM, **Kozlov SA**, Kalabina EA, Dyachenko IA (2025). Awake Rat Model of Ischemic Stroke with Neuropsychiatric Complications During a Seven-Day Observation. *J Vis Exp* 2025-December (226), , 10.3791/69194
4. Osmakov DI, Dubodel ES, Kalinovskii AP, Koshelev SG, Andreev YA, Korolkova YV, **Kozlov SA** (2025). Human acid-sensing ion channel 1a/3 heteromers at a 1:2 ratio expand the functional capabilities of homomeric ASIC3 and are likely to be physiologically relevant. *Natl Sci Rev* 12 (11), nwaf418, 10.1093/nsr/nwaf418
5. Sintsova O, Peigneur S, Kalina R, Otstavnykh N, Garbuz M, Klimovich A, Priymenko N, Shamatova M, Pavlenko A, **Kozlov S**, Gladkikh I, Isaeva M, Tytgat J, Leychenko E (2025). The major component of Heteractis magnifica sea anemone venom, RpIII, exhibits strong subtype selectivity for insects over mammalian voltage-gated sodium channels. *Neuropharmacology* 274, 110466, 10.1016/j.neuropharm.2025.110466
6. Osmakov DI, Khasanov TA, Maleeva EE, Pavlov VM, Palikov VA, Belozerova OA, Koshelev SG, Korolkova YV, Dyachenko IA, **Kozlov SA**, Andreev YA (2025). Two Amino Acid Substitutions Improve the Pharmacological Profile of the Snake Venom Peptide Mambalgin. *Toxins (Basel)* 17 (3), 101, 10.3390/toxins17030101
7. Khasanov TA, Mineev KS, Kalinovskii AP, Korolkova YV, Palikov VA, Palikova YA, Dyachenko IA, **Kozlov SA**, Andreev YA, Osmakov DI (2025). Sea anemone Cys-ladder peptide Ms13-1 induces a pain response as a positive modulator of acid-sensing ion channel 1a. *FEBS J* 292 (10), 2671–2687, 10.1111/febs.70032
8. Khasanov TA, Maleeva EE, Koshelev SG, Palikov VA, Palikova YA, Dyachenko IA, **Kozlov SA**, Andreev YA, Osmakov DI (2024). Mutagenesis of the Peptide Inhibitor of ASIC3 Channel Introduces Binding to Thumb Domain of ASIC1a but Reduces Analgesic Activity. *Mar Drugs* 22 (9), 382, 10.3390/md22090382
9. Kalinovskii AP, Logashina YA, Palikova YA, Palikov VA, Osmakov DI, Mineev KS, Belozerova OA, Shmygarev VI, **Kozlov SA**, Dyachenko IA, Korolkova YV, Andreev YA (2024). A Diterpenoid of the Medicinal Plant Andrographis paniculata Targets Cutaneous TRPV3 Channel and Relieves Itch. *J. Nat. Prod.* 87 (7), 1852–1859, 10.1021/acs.jnatprod.4c00626
10. Osmakov DI, Onoprienko LV, Kalinovskii AP, Koshelev SG, Stepanenko VN, Andreev YA, **Kozlov SA** (2024). Opioid Analgesic as a Positive Allosteric Modulator of Acid-Sensing Ion Channels. *Int J Mol Sci* 25 (3), 1413, 10.3390/ijms25031413
11. Osmakov DI, Tarasova NV, Nedorubov AA, Palikov VA, Palikova YA, Dyachenko IA, Andreev YA, **Kozlov SA** (2023). Nocistatin and Products of Its Proteolysis Are Dual Modulators of Type 3 Acid-Sensing Ion Channels (ASIC3) with Algesic and Analgesic Properties. *Biochemistry (Mosc)* 88 (12-13), 2137–2145, 10.1134/S0006297923120155
12. Wu J, Xiong W, Li J, Liao H, Chai J, Huang X, Lai S, **Kozlov S**, Chu X, Xu X (2023). Peptide TK-HR from the Skin of Chinese Folk Medicine Frog Hoplobatrachus Rugulosus Accelerates Wound Healing via the Activation of the Neurokinin-1 Receptor. *J Med Chem* 66 (23), 16002–16017, 10.1021/acs.jmedchem.3c01434
13. Korolkova Y, Mikov A, Lobas A, Solovyeva E, Surin A, Andreev Y, Gorshkov M, **Kozlov S** (2023). Venom-gland transcriptomics and venom proteomics of the Tibellus oblongus spider. *Sci Data* 10 (1), 820, 10.1038/s41597-023-02703-0
14. Tsetlin V, Shelukhina I, **Kozlov S**, Kasheverov I (2023). Fifty Years of Animal Toxin Research at the Shemyakin–Ovchinnikov Institute of Bioorganic Chemistry RAS. *Int J Mol Sci* 24 (18), 13884, 10.3390/ijms241813884
15. Kalinovskii AP, Pushkarev AP, Mikhailenko AD, Kudryavtsev DS, Belozerova OA, Shmygarev VI, Yatskin ON, Korolkova YV, **Kozlov SA**, Osmakov DI, Popov A, Andreev YA (2023). Dual Modulator of ASIC Channels and GABAA Receptors from Thyme Alters Fear-Related Hippocampal Activity. *Int J Mol Sci* 24 (17), , 10.3390/ijms241713148
16. Danilevich VN, **Kozlov SA**, Sorokin VV, Mulyukin AL (2023). Highly purified DNA-containing cell envelopes from fungi for direct use in PCR. *Anal Chim Acta* 1273, 341528, 10.1016/j.aca.2023.341528
17. Gladkikh IN, Klimovich AA, Kalina RS, Kozhevnikova YV, Khasanov TA, Osmakov DI, Koshelev SG,

Monastyrnaya MM, Andreev YA, Leychenko EV, **Kozlov SA** (2023). Anxiolytic, Analgesic and Anti-Inflammatory Effects of Peptides Hmg 1b-2 and Hmg 1b-4 from the Sea Anemone Heteractis magnifica. *Toxins (Basel)* 15 (5), 341, 10.3390/toxins15050341

18. Khudina OG, Burgart YV, Malkova NA, Shchegolkov EV, Krasnykh OP, Triandafilova GA, Malysheva KO, Solodnikov SY, Dubodel ES, Korolkova YV, **Kozlov SA**, Borisevich SS, Mozhaitsev ES, Saloutin V (2023). 5-Alkoxy-1-aryl-3-polyfluoroalkylpyrazoles with Antinociceptive Activity: Partial Agonists of TRPV1 Ion Channels. *ChemMedChem* 18 (12), e202300063, 10.1002/cmdc.202300063
19. Pislyagin EA, Menchinskaya ES, Gladkikh IN, Kvetkina AN, Sintsova OV, Popkova DV, Kozlovskiy SA, Gorpenchenko TY, Likhatskaya GN, Kaluzhskiy LA, Ivanov AS, Andreev YA, **Kozlov SA**, Dmitrenok PS, Aminin DL, Leychenko EV (2023). Recombinant Analogs of Sea Anemone Kunitz-Type Peptides Influence P2X7 Receptor Activity in Neuro-2a Cells. *Mar Drugs* 21 (3), , 10.3390/md21030192
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21. Kalina RS, Gladkikh IN, Klimovich AA, Kozhevnikova YV, Kvetkina AN, Rogozhin EA, Koshelev SG, **Kozlov SA**, Leychenko EV (2022). First Anti-Inflammatory Peptide AnmTX Sco 9a-1 from the Swimming Sea Anemone Stomphia coccinea. *Biomolecules* 12 (11), , 10.3390/biom12111705
22. Tereshin MN, Komyakova AM, Stepanenko VN, Myagkikh IV, Shoshina NS, Korolkova YV, Leychenko EV, **Kozlov SA** (2022). Optimized method for the recombinant production of a sea anemone's peptide. *MENDELEEV COMMUN* 32 (6), 745–746, 10.1016/j.mencom.2022.11.012
23. Kalina RS, Kasheverov IE, Koshelev SG, Sintsova OV, Peigneur S, Pinheiro-Junior EL, Popov RS, Chausova VE, Monastyrnaya MM, Dmitrenok PS, Isaeva MP, Tytgat J, **Kozlov SA**, Kozlovskaya EP, Leychenko EV, Gladkikh IN (2022). Nicotinic Acetylcholine Receptors Are Novel Targets of APETx-like Toxins from the Sea Anemone Heteractis magnifica. *Toxins (Basel)* 14 (10), , 10.3390/toxins14100697
24. Osmakov DI, Kalinovskii AP, Belozerova OA, Andreev YA, **Kozlov SA** (2022). Lignans as Pharmacological Agents in Disorders Related to Oxidative Stress and Inflammation: Chemical Synthesis Approaches and Biological Activities. *Int J Mol Sci* 23 (11), , 10.3390/ijms23116031
25. Khokhlova ON, Borozdina NA, Sadovnikova ES, Pakhomova IA, Rudenko PA, Korolkova YV, **Kozlov SA**, Dyachenko IA (2022). Comparative Study of the Aftereffect of CO2 Inhalation or Tiletamine–Zolazepam–Xylazine Anesthesia on Laboratory Outbred Rats and Mice. *Biomedicines* 10 (2), , 10.3390/biomedicines10020512
26. Kalinovskii AP, Osmakov DI, Koshelev SG, Lubova KI, Korolkova YV, **Kozlov SA**, Andreev YA (2022). Retinoic Acid-Differentiated Neuroblastoma SH-SY5Y Is an Accessible In Vitro Model to Study Native Human Acid-Sensing Ion Channels 1a (ASIC1a). *Biology (Basel)* 11 (2), , 10.3390/biology11020167
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