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Адрес

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Контакты

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Образование

| | | | |
|-----------|----------------------|------|--|
| 1969–1972 | Россия, Долгопрудный | МФТИ | Аспирант |
| 1969 | Россия, Долгопрудный | МФТИ | Студент (специальность «молекулярная биофизика») |

Работа в ИБХ

| | |
|---------------|---------------------------|
| 2017–наст.вр. | Заведующий отделом |
| 2018–2022 | Главный научный сотрудник |

Членство в советах и комиссиях ИБХ

| |
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| Ученый совет |
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Награды

| | | |
|------|---|--|
| 2017 | Орден «За заслуги перед Отечеством» III степени | |
| 2011 | Орден «За заслуги перед Отечеством» IV степени | |
| 1998 | Орден Почёта | |
| 2006 | Орден Дружбы | |
| 1999 | Государственная премия в области науки и техники | За работу «Принципы структурной организации белков и их применение к конструированию новых белковых молекул: теория и эксперимент» |
| 2016 | Премия РАН имени А.А. Баева | За цикл работ «Рекомбинантные белки как современный инструмент для структурной биологии, биофизики и молекулярной биологии» |
| 2024 | Орден Александра Невского | За большой вклад в развитие отечественной науки, многолетнюю плодотворную деятельность и в связи с 300-летием со дня основания Российской академии наук. |

Членство в сообществах

1994: член-корреспондент Российской академии наук.

1997: действительный член Российской академии наук.

1999-2008: член Ученого совета ИБХ РАН.

Член Президиума РАН. Член бюро Отделения биологических наук РАН.

Председатель Высшей аттестационной комиссии Министерства образования и науки РФ.

Член Совета РФФИ. Член Совета РГНФ.

1992-2000: заместитель председателя Координационного межведомственного совета по приоритетному направлению "Науки о жизни и биотехнология" при Министерстве науки и технологий РФ и Президиуме РАН (с 1998 г. - Координационный совет по приоритетному направлению "Технология живых систем" при Министерстве науки и технологий РФ).

Член специализированного Ученого совета по защитах докторских диссертаций Института биологии гена РАН.

Член Международной сети по белковой инженерии (INPEC).

Член Совета по поддержке ведущих научных школ Российской Федерации и молодых докторов наук.

Член Межведомственной комиссии по проблемам генно-инженерной деятельности. Член Межведомственного научного совета РАН и РАМН по фундаментальным проблемам медицины.

Главный редактор "Биологического вестника Московского университета".

Член редколлегии научных журналов "Биоорганическая химия", "Биотехнология", "Наука в России", "Доклады Российской академии наук".

Степени и звания

| | |
|------|---|
| 1997 | Академик |
| 1994 | Член-корреспондент РАН |
| | Профессор |
| 1987 | Доктор наук (Биологические науки, 03.00.03 — Молекулярная биология) |

Ссылки и контакты

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Гранты и проекты

| | |
|-------------------|---|
| 2024– наст.вр. | Онкотераностика и проблемы резистентности к противоопухолевым и антибактериальным препаратам |
| 2019–2022 | Эпигенетические механизмы биологических процессов и их роль в патогенезе онкологических заболеваний |

Публикации

- Maluchenko N, Saulina A, Geraskina O, Kotova E, Korovina A, Armeev G, **Kirpichnikov M**, Feofanov A, Studitsky V (2025). Poly(ADP-ribose)polymerase 2 is zinc-dependent enzyme and nucleosome reorganizer. *Cell Mol Life Sci* 82 (1), 267, [10.1007/s00018-025-05785-8](https://doi.org/10.1007/s00018-025-05785-8)
- Bochkova ZV, Semenova MA, Smirnova OM, Maksimov GV, Rubin AB, **Kirpichnikov MP**, Dolgikh DA, Chertkova RV, Brazhe NA (2025). The molecular mechanism of redox interaction between neuroglobin and

- cytochrome c. *Int J Biol Macromol* 318 (Pt 3), 145040, [10.1016/j.ijbiomac.2025.145040](https://doi.org/10.1016/j.ijbiomac.2025.145040)
3. Yagolovich AV, Isakova AA, Kukovyakina EV, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME (2025). Combined Effects of Cytokine TRAIL-Based DR5-Specific Fusion Protein with Olaparib on Tumor Cell Lines with Different BRCA Mutation Status. *Russ. J. Bioorganic Chem.* 51 (3), 1128–1136, [10.1134/S1068162024606694](https://doi.org/10.1134/S1068162024606694)
 4. Shi X, Fedulova AS, Kotova EY, Maluchenko NV, Armeev GA, Chen Q, Prasanna C, Sivkina AL, Feofanov AV, **Kirpichnikov MP**, Nordensköld L, Shaytan AK, Studitsky VM (2025). Histone tetrasome dynamics affects chromatin transcription. *Nucleic Acids Res* 53 (8), , [10.1093/nar/gkaf356](https://doi.org/10.1093/nar/gkaf356)
 5. Gornostaeva TY, Shlepova OV, Kukushkin ID, Paramonov AS, **Kirpichnikov MP**, Lyukmanova EN (2025). Changes in the Repertoire of Extracellular Vesicles Secreted by Skin Keratinocytes by the Human Protein SLURP-2. *Dokl Biochem Biophys* 521, 160–164, [10.1134/S1607672924601355](https://doi.org/10.1134/S1607672924601355)
 6. Kocharovskaya MV, Pichkur EB, Ivannikov AD, Kharlampieva DD, Grafaskaia EN, Lyukmanova EN, **Kirpichnikov MP**, Shenkarev ZO (2025). Structure and dynamics of Alpha B.1.1.7 SARS-CoV-2 S-protein in complex with Fab of neutralizing antibody REGN10987. *Biochem Biophys Res Commun* 755, 151558, [10.1016/j.bbrc.2025.151558](https://doi.org/10.1016/j.bbrc.2025.151558)
 7. Alekhin VA, Nazarova SF, Gizatullina DR, Lopatina ET, **Kirpichnikov MP**, Ostrovsky MA, Gordeliy VI, Ilyinsky NS (2025). Lysosome Functioning as a Process that Slows Down Aging. *Biochem (Mosc) Suppl Ser A Membr Cell Biol* 19 (1), 3–11, [10.1134/S1990747824700387](https://doi.org/10.1134/S1990747824700387)
 8. Petrovskaya LE, Bolshakov VA, Lukashev EP, Kryukova EA, Maksimov EG, Rubin AB, Dolgikh DA, Balashov SP, **Kirpichnikov MP** (2025). Engineering of thermal stability in the recombinant xanthorhodopsin from *Salinibacter ruber*. *BIOCHIM BIOPHYS ACTA* 1866 (2), 149547, [10.1016/j.bbabi.2025.149547](https://doi.org/10.1016/j.bbabi.2025.149547)
 9. Yagolovich AV, Gasparian ME, Isakova AA, Artykov AA, Dolgikh DA, **Kirpichnikov MP** (2025). Design Strategies and Clinical Prospects of Cytokine TRAIL Death Receptor Agonists. *RUSS CHEM REV* 94 (2), RCR5154, [10.59761/RCR5154](https://doi.org/10.59761/RCR5154)
 10. Shlepova OV, Bychkov ML, Shipunova VO, Shramova EI, Shulepko MA, Gornostaeva TY, Kiseleva EA, Kukushkin ID, Kazakov VA, Tukhovskaya EA, Dyachenko IA, Murashev AN, Shenkarev ZO, Deyev SM, **Kirpichnikov MP**, Lyukmanova EN (2025). Combination with a Low Dose of Doxorubicin Further Boosts the Antitumor Effect of SLURP-1 In Vivo and Associates with EGFR Down-Regulation. *Acta Naturae* 17 (1), 87–96, [10.32607/actanaturae.27526](https://doi.org/10.32607/actanaturae.27526)
 11. Lyukmanova EN, Pichkur EB, Nolde DE, Kocharovskaya MV, Manuvera VA, Shirokov DA, Kharlampieva DD, Grafaskaia EN, Svetlova JI, Lazarev VN, Varizhuk AM, **Kirpichnikov MP**, Shenkarev ZO (2024). Structure and dynamics of the interaction of Delta and Omicron BA.1 SARS-CoV-2 variants with REGN10987 Fab reveal mechanism of antibody action. *Commun Biol* 7 (1), 1698, [10.1038/s42003-024-07422-9](https://doi.org/10.1038/s42003-024-07422-9)
 12. Ignatova AA, Kryukova EV, Novoseletsky VN, Kazakov OV, Orlov NA, Korabeynikova VN, Larina MV, Fradkov AF, Yakimov SA, **Kirpichnikov MP**, Feofanov AV, Nekrasova OV (2024). New High-Affinity Peptide Ligands for Kv1.2 Channel: Selective Blockers and Fluorescent Probes. *Cells* 13 (24), 2096, [10.3390/cells13242096](https://doi.org/10.3390/cells13242096)
 13. Lyukmanova EN, Kirichenko AV, Medyanik IA, Yashin KS, **Kirpichnikov MP**, Bychkov ML (2024). Extracellular Vesicles from Plasma of Patients with Glioblastoma Promote Invasion of Glioblastoma Cells Even After Tumor Resection. *Biomedicines* 12 (12), 2834, [10.3390/biomedicines12122834](https://doi.org/10.3390/biomedicines12122834)
 14. Шлепова ОВ, Горностаева ТЯ, Кукушкин ИД, Азев ВН, Бычков МЛ, Шенкарёв ЗО, **Кирпичников МП**, Люкманова ЕН (2024). Пептид, имитирующий петлю II эпителиального белка человека SLURP-2, повышает жизнеспособность и стимулирует миграцию кератиноцитов кожи. *Acta Naturae* 16 (4), 86–94, [10.32607/actanaturae.27494](https://doi.org/10.32607/actanaturae.27494)
 15. Kvetkina AN, Oreshkov SD, Mironov PA, Zaigraev MM, Klimovich AA, Deriavko YV, Menshov AS, Kulbatskii DS, Logashina YA, Andreev YA, Chugunov AO, **Kirpichnikov MP**, Lyukmanova EN, Leychenko EV, Shenkarev ZO (2024). Sea Anemone Kunitz Peptide HCIQ2c1: Structure, Modulation of TRPA1 Channel, and Suppression of Nociceptive Reaction In Vivo. *Mar Drugs* 22 (12), 542, [10.3390/md22120542](https://doi.org/10.3390/md22120542)
 16. Lyukmanova E, Kirichenko A, Kulbatskii D, Isaev A, Kukushkin I, Che Y, **Kirpichnikov M**, Bychkov M (2024). Water-Soluble Lynx1 Upregulates Dendritic Spine Density and Stimulates Astrocytic Network and Signaling. *Mol Neurobiol* 62 (5), 5531–5545, [10.1007/s12035-024-04627-1](https://doi.org/10.1007/s12035-024-04627-1)
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- Zhao R, Guo W, **Kirpichnikov MP**, Shenkarev ZO, Paramonov AS (2024). In Search of the Role of Three-Finger Starfish Proteins. *Mar Drugs* 22 (11), , [10.3390/md22110488](https://doi.org/10.3390/md22110488)
18. Isaev AB, Bychkov ML, Kulbatskii DS, Andreev-Andrievskiy AA, Mashkin MA, Shulepko MA, Shlepova OV, Loktyushov EV, Latanov AV, **Kirpichnikov MP**, Lyukmanova EN (2024). Upregulation of cholinergic modulators Lypd6 and Lypd6b associated with autism drives anxiety and cognitive decline. *Cell Death Discov* 10 (1), 444, [10.1038/s41420-024-02211-z](https://doi.org/10.1038/s41420-024-02211-z)
 19. Smitienko OA, Feldman TB, Petrovskaya LE, Kryukova EA, Shelaev IV, Gostev FE, Cherepanov DA, Kolchugina IB, Dolgikh DA, Nadtochenko VA, **Kirpichnikov MP**, Ostrovsky MA (2024). Ultrafast Photochemical Reaction of Exiguobacterium sibiricum Rhodopsin (ESR) at Alkaline pH. *Russ. J. Bioorganic Chem.* 50 (4), 1285–1293, [10.1134/S1068162024040058](https://doi.org/10.1134/S1068162024040058)
 20. Chertkova RV, Oleynikov IP, Pakhomov AA, Sudakov RV, Semenova MA, Arutyunyan AM, Ptushenko VV, **Kirpichnikov MP**, Dolgikh DA, Vygodina TV (2024). The Increase in the Peroxidase Activity of the Cytochrome C with Substitutions in the Universal Binding Site Is Associated with Changes in the Ability to Interact with External Ligands. *Int J Mol Sci* 25 (15), 8237, [10.3390/ijms25158237](https://doi.org/10.3390/ijms25158237)
 21. Petrovskaya LE, Kryukova EA, Bolshakov VA, Lukashev EP, Siletsky SA, Mamedov MD, Sudakov RV, Dolgikh DA, **Kirpichnikov MP** (2024). Fusion Proteins Containing Proteorhodopsin from Exiguobacterium sibiricum. *Russ. J. Bioorganic Chem.* 50 (3), 741–752, [10.1134/S1068162024030063](https://doi.org/10.1134/S1068162024030063)
 22. Bychkov ML, Shlepova OV, Shulepko MA, Kulbatskii DS, Bertrand D, Kirichenko AV, Shenkarev ZO, **Kirpichnikov MP**, Lyukmanova EN (2024). Human Epithelial Protein SLURP-2 as a Prototype of Drugs for Wound Healing. *Russ. J. Bioorganic Chem.* 50 (3), 696–705, [10.1134/S1068162024030014](https://doi.org/10.1134/S1068162024030014)
 23. Yagolovich AV, Isakova AA, Artykov AA, Vorontsova YV, Mazur DV, Antipova NV, Pavlyukov MS, Shakhparonov MI, Gileva AM, Markvicheva EA, Plotnikova EA, Pankratov AA, **Kirpichnikov MP**, Gasparian ME, Dolgikh DA (2024). Correction: Yagolovich et al. DR5-Selective TRAIL Variant DR5-B Functionalized with Tumor-Penetrating iRGD Peptide for Enhanced Antitumor Activity against Glioblastoma. 2022, , 12687. *Int J Mol Sci* 25 (10), , [10.3390/ijms25105334](https://doi.org/10.3390/ijms25105334)
 24. Semenova MA, Bochkova ZV, Smirnova OM, Maksimov GV, **Kirpichnikov MP**, Dolgikh DA, Brazhe NA, Chertkova RV (2024). Charged Amino Acid Substitutions Affect Conformation of Neuroglobin and Cytochrome c Heme Groups. *Curr Issues Mol Biol* 46 (4), 3364–3378, [10.3390/cimb46040211](https://doi.org/10.3390/cimb46040211)
 25. Isakova AA, Artykov AA, Plotnikova EA, Trunova GV, Khokhlova VA, Pankratov AA, Shuvalova ML, Mazur DV, Antipova NV, Shakhparonov MI, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME, Yagolovich AV (2023). Dual targeting of DR5 and VEGFR2 molecular pathways by multivalent fusion protein significantly suppresses tumor growth and angiogenesis. *Int J Biol Macromol* 255, 128096, [10.1016/j.ijbiomac.2023.128096](https://doi.org/10.1016/j.ijbiomac.2023.128096)
 26. Semenova MA, Smirnova OM, Ignatova AA, Parshina EY, Maksimov GV, **Kirpichnikov MP**, Dolgikh DA, Chertkova RV (2023). Development of Mutant Forms of Neuroglobin with Substitutions in the Interaction Surface with Cytochrome c. *Russ. J. Bioorganic Chem.* 49 (6), 1483–1488, [10.1134/S1068162023060274](https://doi.org/10.1134/S1068162023060274)
 27. Oleinikov PD, Fedulova AS, Armeev GA, Motorin NA, Singh-Palchevskaia L, Sivkina AL, Feskin PG, Glukhov GS, Afonin DA, Komarova GA, **Kirpichnikov MP**, Studitsky VM, Feofanov AV, Shaytan AK (2023). Interactions of Nucleosomes with Acidic Patch-Binding Peptides: A Combined Structural Bioinformatics, Molecular Modeling, Fluorescence Polarization, and Single-Molecule FRET Study. *Int J Mol Sci* 24 (20), 15194, [10.3390/ijms242015194](https://doi.org/10.3390/ijms242015194)
 28. Lyukmanova EN, Zaigraev MM, Kulbatskii DS, Isaev AB, Kukushkin ID, Bychkov ML, Shulepko MA, Chugunov AO, **Kirpichnikov MP** (2023). Molecular Basis for Mambalgin-2 Interaction with Heterotrimeric α -ENaC/ASIC1a/ γ -ENaC Channels in Cancer Cells. *Toxins (Basel)* 15 (10), 612, [10.3390/toxins15100612](https://doi.org/10.3390/toxins15100612)
 29. Bychkov ML, Isaev AB, Andreev-Andrievskiy AA, Petrov K, Paramonov AS, **Kirpichnikov MP**, Lyukmanova EN (2023). A β 1-42 Accumulation Accompanies Changed Expression of Ly6/uPAR Proteins, Dysregulation of the Cholinergic System, and Degeneration of Astrocytes in the Cerebellum of Mouse Model of Early Alzheimer Disease. *Int J Mol Sci* 24 (19), 14852, [10.3390/ijms241914852](https://doi.org/10.3390/ijms241914852)
 30. Shlepova OV, Shulepko MA, Shipunova VO, Bychkov ML, Kukushkin ID, Chulina IA, Azev VN, Shramova EI, Kazakov VA, Ismailova AM, Palikova YA, Palikov VA, Kalabina EA, Shaykhutdinova EA, Slashcheva GA, Tukhovskaya EA, Dyachenko IA, Murashev AN, Deyev SM, **Kirpichnikov MP**, Shenkarev ZO, Lyukmanova EN (2023). Selective targeting of α 7 nicotinic acetylcholine receptor by synthetic peptide mimicking loop I of human SLURP-1 provides efficient and prolonged therapy of epidermoid carcinoma in vivo. *Front Cell Dev*

Biol 11, 1256716, [10.3389/fcell.2023.1256716](https://doi.org/10.3389/fcell.2023.1256716)

31. Petrovskaya LE, Siletsky SA, Mamedov MD, Lukashev EP, Balashov SP, Dolgikh DA, **Kirpichnikov MP** (2023). Features of the Mechanism of Proton Transport in ESR, Retinal Protein from *Exiguobacterium sibiricum*. *Biochemistry (Mosc)* 88 (10), 1544–1554, [10.1134/S0006297923100103](https://doi.org/10.1134/S0006297923100103)
32. Sluchanko NN, Kapitonova AA, Shulepko MA, Kukushkin ID, Kulbatskii DS, Tugaeva KV, Varfolomeeva LA, Minyaev ME, Boyko KM, Popov VO, **Kirpichnikov MP**, Lyukmanova EN (2023). Crystal structure reveals canonical recognition of the phosphorylated cytoplasmic loop of human $\alpha 7$ nicotinic acetylcholine receptor by 14-3-3 protein. *Biochem Biophys Res Commun* 682, 91–96, [10.1016/j.bbrc.2023.09.086](https://doi.org/10.1016/j.bbrc.2023.09.086)
33. Chertkova RV, Oleynikov IP, Pakhomov AA, Sudakov RV, Orlov VN, Semenova MA, Arutyunyan AM, Ptushenko VV, **Kirpichnikov MP**, Dolgikh DA, Vygodina TV (2023). Mutant Cytochrome C as a Potential Detector of Superoxide Generation: Effect of Mutations on the Function and Properties. *Cells* 12 (18), 2316, [10.3390/cells12182316](https://doi.org/10.3390/cells12182316)
34. Andreeva TV, Maluchenko NV, Efremenko AV, Lyubitelev AV, Korovina AN, Afonin DA, **Kirpichnikov MP**, Studitsky VM, Feofanov AV (2023). Epigallocatechin Gallate Affects the Structure of Chromatosomes, Nucleosomes and Their Complexes with PARP1. *Int J Mol Sci* 24 (18), , [10.3390/ijms241814187](https://doi.org/10.3390/ijms241814187)
35. Idzhilova OS, Kolotova DE, Smirnova GR, Abonakour A, Dolgikh DA, Petrovskaya LE, **Kirpichnikov MP**, Ostrovsky MA, Malyshev AY (2023). Nonselective Expression of Short-Wavelength Cone Opsin Improves Learning in Mice with Retinal Degeneration in a Visually Guided Task. *Dokl Biol Sci* 510 (1), 167–171, [10.1134/S0012496623700369](https://doi.org/10.1134/S0012496623700369)
36. Semenova MA, Chertkova RV, **Kirpichnikov MP**, Dolgikh DA (2023). Molecular Interactions between Neuroglobin and Cytochrome c: Possible Mechanisms of Antiapoptotic Defense in Neuronal Cells. *Biomolecules* 13 (8), , [10.3390/biom13081233](https://doi.org/10.3390/biom13081233)
37. Shulepko MA, Bychkov ML, **Kirpichnikov MP**, Lyukmanova EN (2023). Recombinant SLURP-1 Inhibits Growth and Migration of U251 MG Glioma by Cell Cycle Arrest and Modulation of MAPK and AKT Signaling Pathways. *Russ. J. Bioorganic Chem.* 49 (4), 768–774, [10.1134/S1068162023040180](https://doi.org/10.1134/S1068162023040180)
38. Bychkov ML, Kirichenko AV, Paramonov AS, **Kirpichnikov MP**, Lukmanova EN (2023). Accumulation of β -Amyloid Leads to a Decrease in Lynx1 and Lypd6B Expression in the Hippocampus and Increased Expression of Proinflammatory Cytokines in the Hippocampus and Blood Serum. *Dokl Biochem Biophys* 511 (1), 145–150, [10.1134/S1607672923700217](https://doi.org/10.1134/S1607672923700217)
39. Stefanova ME, Volokh OI, Chertkov OV, Armeev GA, Shaytan AK, Feofanov AV, **Kirpichnikov MP**, Sokolova OS, Studitsky VM (2023). Structure and Dynamics of Compact Dinucleosomes: Analysis by Electron Microscopy and spFRET. *Int J Mol Sci* 24 (15), , [10.3390/ijms241512127](https://doi.org/10.3390/ijms241512127)
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