Резюме: Кирпичников Михаил Петрович



Адрес

Федеральное государственное бюджетное учреждение науки Институт биоорганической химии им. академиков М.М. Шемякина и Ю.А. Овчинникова Российской академии наук, Москва, Россия

Контакты

https://www.ibch.ru/users/737

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

	Ученый совет
2026–наст.вр.	Аттестационная комиссия

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 защитам 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

ORCID: 0000-0001-8170-1607, Scopus: 7005699025

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

1. Smitienko OA, Feldman TB, Cherepanov DA, Petrovskaya LE, Kryukova EA, Shelaev IV, Gostev FE, Kusochek PA, Belov VV, Yakovleva MA, Kolchugina IB, Dolgikh DA, Bochenkova AV, Balashov SP, Nadtochenko VA, **Kirpichnikov MP**, Ostrovsky MA (2026). Role of the chromophore counterion in guiding ultrafast photoreaction dynamics of Exiguobacterium sibiricum rhodopsin. *J Photochem Photobiol A Chem* 481, , 10.1016/j.jphotochem.2026.117374
2. Zijian Y, Isakova AA, Kukovyakina EV, Plotnikova EA, Druzhkova IN, Komarova AD, Sinyushkina SD, Monicheva VS, Yuzhakova DV, Kurnikov AA, Glyavina AM, Subochev PV, Patsap OI, **Kirpichnikov MP**, Gasparian ME, Yagolovich AV, Dolgikh DA (2026). Combining DR5 activation with FGFR1 and VEGFR2 inhibition via an engineered TRAIL-based multimodal fusion protein for dual antitumor and antivascular activity in gastric and colorectal cancer models. *J Drug Target* , 1–23, 10.1080/1061186X.2026.2752418
3. Paramonov AS, Shulepko MA, Chernikov AM, **Kirpichnikov MP**, Lyukmanova EN, Shenkarev ZO (2026). NMR Structure and Dynamics of the Starfish Three-Finger Protein Lystar5.*Russ. J. Bioorganic Chem.* 52 (5), 157, 10.1134/S1068162025605002
4. Atrikhalov RG, Semenova MA, Khodnenko AP, Smirnova OM, Britikov VV, Britikova EV, Ignatova AA, Pakhomov AA, Bochkova ZV, Brazhe NA, Oleinikov VA, Bocharov EV, **Kirpichnikov MP**, Dolgikh DA, Chertkova RV (2026). Development of a Highly Efficient System for the Production of the Holoform of Recombinant Cytoglobin. *Russ. J. Bioorganic Chem.* 52 (5), 147, 10.1134/S1068162026603733
5. Zaigraev MM, Zhivov EA, Chelyadinskii TR, Shulepko MA, Kulbatskii DS, Qing H, Zhenzhen Q, **Kirpichnikov MP**, Shenkarev ZO, Chugunov AO, Lyukmanova EN (2026). Mutagenesis-guided modeling of the Lynx1–α7 nicotinic acetylcholine receptor complex: An iterative feedback-driven approach. *Int J Biol Macromol* , 154624, 10.1016/j.ijbiomac.2026.154624
6. Mamaeva NY, Yakovlev VA, Kristovskiy NV, Feskin PG, Vinnikov RS, Oleinikov PD, Shmakov SA, Shaitan KV, **Kirpichnikov MP**, Shaytan AK (2026). 3D Genome Engineering Using CRISPR/dCas Systems. *Int J Mol Sci* 27 (18), 8104, 10.3390/ijms27188104
7. Isakova AA, Antipova NV, Mazur DV, Druzhkova IN, Gavrina AI, Shuvalova ML, Patsap OI, Bondarenko DA, Murashev AN, **Kirpichnikov MP**, Gasparian ME, Yagolovich AV, Dolgikh DA (2026). Long-Term Culture of U87MG Glioblastoma Cells Reprograms Metabolism, Impacts Aggressiveness and Alters Drug Responses. *Cell Biochem Biophys* 84, 4321–4330, 10.1007/s12013-026-02121-0
8. Bychkov ML, Kirichenko AV, Yashin KS, Medyanik IA, **Kirpichnikov MP**, Lyukmanova EN (2026). Plasma Extracellular Vesicles from Glioblastoma Patients Affect Phenotype and Activate Receptor Tyrosine Kinases in Glioblastoma Cells. *Dokl Biol Sci* , , 10.1134/S0012496625600800
9. Petrovskaya LE, Lukashev EP, Kryukova EA, Dolgikh DA, **Kirpichnikov MP** (2026). Red Shift of the Absorption Maximum of Mutant Exiguobacterium sibiricum Proteorhodopsin: Influence of Amino Acid Substitutions in Helices E and F. *Russ. J. Bioorganic Chem.* 52 (4), 98, 10.1134/S1068162026601242
10. Nolde DE, Kocharovskaya MV, Popov AV, **Kirpichnikov MP**, Lyukmanova EN, Shenkarev ZO (2026). Point Substitution N33D in the Light Chain of Neutralizing Antibody REGN10987 Increases the Fab Affinity to RBD of Omicron BA.1 SARS-CoV-2 Variant. In Silico Study. *Russ. J. Bioorganic Chem.* 52 (3), 70, 10.1134/S1068162026600662
11. Efremenko AV, Dzhumaniiazova I, Abramochkin DV, Shmatin II, Korabeynikova VN, Kryukova EV, **Kirpichnikov MP**, Feofanov AV, Nekrasova OV (2026). Influence of Mutant Alpha-Subunit Kv1.1(A261T) on the Properties of the Heterotetrameric Channel Kv1.1-Kv1.2. *Russ. J. Bioorganic Chem.* 52 (3), 67, 10.1134/S106816202660131X
12. Semenova MA, Atrikhalov RG, Smirnova OM, Britikov VV, Britikova EV, Ignatova AA, Bershatsky YV, Khodnenko AP, Oleynikov IP, Siletsky SA, Vygodina TV, Bocharov EV, **Kirpichnikov MP**, Dolgikh DA, Chertkova RV (2026). Development of Mutant C120S Neuroglobin, Its Characteristics and Interaction

with Cytochrome c. *Russ. J. Bioorganic Chem.* 52 (3), 81, 10.1134/S1068162026601321
13. Kirichenko AV, Bychkov ML, Kulbatskii DS, Shlepova OV, Shulepko MA, Gornostaeva TY, Orekhov PS, Paramonov A, Mikhaylova IN, Burova OS, Medyanik IA, Yashin KS, Wang H, Wang X, **Kirpichnikov MP**, Shenkarev ZO, Lyukmanova EN (2026). Hybrid channels containing the dupα7 subunit mediate resistance to α7-nAChR targeting therapy in metastatic melanoma. *Am J Physiol Cell Physiol* 330 (5), C1491–C1508, 10.1152/ajpcell.00730.2025
14. Arkhipchenko AA, Semenov AN, Chesalin DD, Sidorenko SV, Bodunova DV, Gorokhov ES, Yakovleva MA, Feldman TB, Moysenovich AM, Senin II, Shebardina NG, Tiulina VV, Ramonova AA, Andreev VS, Morozov PV, Bilan DS, Ilyinsky NS, Zernii EY, Maksimov EG, Ostrovsky MA, **Kirpichnikov MP** (2026). Photooxidation Dynamics of Lipofuscin in the Presence of Carotenoid-Binding Protein AstaP: Fluorescence Lifetime Imaging and Pigment Composition Analysis. *J Phys Chem B* 130 (11), 2974–2986, 10.1021/acs.jpcb.5c06621
15. Druzhkova I, Orlova A, Subochev P, Kurnikov A, Glyavina A, Isakova A, Kukovyakina E, Plotnikova E, Gasparian M, Komarova A, Sinyushkina S, Potapov A, Spashchanskii R, Anina A, **Kirpichnikov M**, Dolgikh D, Razansky D, Yagolovich A (2026). Assessment of the angiogenic potential of xenografted tumors by biomedical imaging techniques. *Biomed Opt Express* 17 (3), 1189–1204, 10.1364/BOE.577775
16. Gribkova AK, Armeev GA, **Kirpichnikov MP**, Shaytan AK (2026). (Re)defining the human chromatome: an integrated meta-analysis of localization, function, abundance, physical properties, and domain composition of chromatin proteins. *Nucleic Acids Res* 54 (2), , 10.1093/nar/gkaf1489
17. Isakova AA, Mazur DV, Antipova NV, Druzhkova IN, Mozherov AM, Krasnov KS, Fadeev RS, **Kirpichnikov MP**, Gasparian ME, Yagolovich AV (2026). Temozolomide-induced senescent glioblastoma cells acquire sensitivity to TRAIL death receptor 5-mediated apoptosis. *Med Oncol* 43 (1), 4, 10.1007/s12032-025-03130-4
18. Isakova AA, Antipova NV, Mazur DV, Ivanova EI, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME, Yagolovich AV (2026). Senolytic Properties of DR5-Selective TRAIL in Pancreatic Cancer Cell Lines. *Acta Naturae* 18 (2), 76–84, 10.32607/actanaturae.27844
19. Lyukmanova EN, Gornostaeva TY, Shabelnikov SV, Shenkarev ZO, **Kirpichnikov MP**, Paramonov AS, Bychkov ML (2025). Ly6/uPAR Protein from Asterias rubens Starfish Stimulates Migration and Invasion of Human Epithelial and Immune Cells. *Mar Drugs* 24 (1), 3, 10.3390/md24010003
20. Afonin D, Ukrainets ER, Kotova E, Gerasimova NS, Armeev GA, **Kirpichnikov MP**, Feofanov AV, Studitsky VM (2025). H2A.Z and H3:K56Q Affect Transcription Through Chromatin and Yeast FACT-Dependent Nucleosome Unfolding. *Int J Mol Sci* 26 (22), 10887, 10.3390/ijms262210887
21. Ignatova AA, Efremenko AV, Abramochkin DV, Dzhumaniiazova I, Shmatin II, **Kirpichnikov MP**, Feofanov AV, Nekrasova OV (2025). Properties of Heterochannels Kv(1.1-1.2)2 with Mutation T226R in the Kv1.1 Subunit. *Int J Mol Sci* 26 (19), 9730, 10.3390/ijms26199730
22. Petrovskaya LE, Ziganshin RH, Kryukova EA, Spirina EV, Rivkina EM, Siletsky SA, Dolgikh DA, **Kirpichnikov MP** (2025). Changes in the Protein Composition of the Exiguobacterium sibiricum Membrane with Decreasing Temperature: A Proteomic Analysis. *Russ. J. Bioorganic Chem.* 51 (5), 2000–2013, 10.1134/S1068162025601995
23. Efremenko AV, Kryukova EV, Kazakov OV, **Kirpichnikov MP**, Nekrasova OV, Feofanov AV (2025). Properties of Potassium Channel Kv1.1 on the Basis of Fluorescent Dimer of Alpha-Subunits mKATE2-Kv1.1-Kv1.1 in Neuro-2a Cells. *Russ. J. Bioorganic Chem.* 51 (5), 2055–2063, 10.1134/S106816202560240X
24. Larina MV, Finashutina YP, Kravchuk NA, Misyurin VA, Novoseletsky VN, Balabashin DS, Solopova ON, Sokolova DV, Pokrovsky VS, Dolgikh DA, Aliev TK, Misyurin AV, **Kirpichnikov MP** (2025). Study of the Antiproliferative Activity of a Humanized Antibody to the Cancer-Testis Antigen PRAME. *Russ. J. Bioorganic Chem.* 51 (5), 2089–2099, 10.1134/S1068162025603799
25. Semenova MA, Smirnova OM, Britikov VV, Britikova EV, Khodnenko AP, Bershatskii YV, Ignatova AA, Bocharov EV, **Kirpichnikov MP**, Dolgikh DA, Chertkova RV (2025). Development of a Bacterial

Expression System for Producing 15N/13C-Labeled Neuroglobin and Cytochrome C. *Russ. J. Bioorganic Chem.* 51 (5), 2077–2088, 10.1134/S1068162025602083

26. Shulepko MA, Che Y, Paramonov AS, Kocharovskaya MV, Kulbatskii DS, Ivanova AA, Chugunov AO, Bychkov ML, Kirichenko AV, Shenkarev ZO, **Kirpichnikov MP**, Lyukmanova EN (2025). Pro-Inflammatory Protein PSCA Is Upregulated in Neurological Diseases and Targets β2-Subunit-Containing nAChRs. *Biomolecules* 15 (10), , 10.3390/biom15101381
27. Terekhova VV, Bodunova DV, Gorokhov ES, Tsoraev GV, Sidorenko SV, Vasilev RA, Levitskii SA, Kamenski PA, Loktyushkin AV, Kovalchuk SI, Lukashev EP, Bogdanova YA, Bogdanov AM, Mulashkina TI, Khrenova MG, Gvozdev DA, Yakimov BP, Shirshin EA, Friedrich T, Budisa N, Stepanov AV, Sluchanko NN, Baranov MS, Maksimov EG, **Kirpichnikov MP** (2025). Enabling Fluorescence Lifetime Imaging Multiplexing Using UnaG through Its Modification with Canonical and Noncanonical Amino Acids. *ACS Sens* 10 (9), 6687–6699, 10.1021/acssensors.5c01213
28. Yagolovich AV, Isakova AA, Kukovyakina EV, Zijian Y, Fedulova AS, Avakiants AV, Shaytan AK, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME (2025). Novel Fusion Protein Based on DR5-Specific TRAIL Variant with Enhanced Antitumor Properties. *Biochemistry (Mosc)* 90 (9), 1277–1287, 10.1134/S0006297925602096
29. Efremenko AV, Kryukova EV, Kazakov OV, Ignatova AA, Shmatin II, Korabeynikova VN, Toporova VA, Yakimov SA, **Kirpichnikov MP**, Nekrasova OV, Feofanov AV (2025). Heterochannels Kv(1.1-1.2)2 and Their Interactions with Pore Blockers. *Cells* 14 (17), 1364, 10.3390/cells14171364
30. Koshkina D, Maluchenko N, Nilov D, Lyubitelev A, Korovina A, Pushkarev S, Armeev G, **Kirpichnikov M**, Studitsky V, Feofanov A (2025). Non-Classical H1-like PARP1 Binding to Chromatosome. *Cells* 14 (17), 1309, 10.3390/cells14171309
31. Druzhkova IN, Orlova AG, Fedulova AS, Avakiants AV, Isakova AA, Kukovyakina EV, Zijian Y, Plotnikova EA, Trunova GV, Pankratov AA, Plekhanov AA, Kurnikov AA, Subochev PV, Shaytan AK, Gasparian ME, **Kirpichnikov MP**, Dolgikh DA, Razansky D, Yagolovich AV (2025). Multivalent fusion protein targeting VEGFR2 and DR5 receptors: assessing the antiangiogenic and antitumor effects via multimodal microangiography. *J Transl Med* 23 (1), 949, 10.1186/s12967-025-06859-8
32. Kostin NN, Bobik TV, Konovalova EV, Kocharovskaya MV, Simonova MA, Rushkevich NY, Mokrushina YA, Skryabin GA, Kalinin RS, Kovalchuk SI, Ziganshin RH, Kaluzhskiy LA, Gnedenko OV, Yablokov EO, Ivanov AS, Chernov AS, Kazakov VA, Khokhlova ON, Murashev AN, Hong S, Shramova EI, Schulga AA, Lyukmanova EN, **Kirpichnikov MP**, Smirnov IV, Belogurov AA, Rubtsov YP, Stepanov AV, Zhang H, Gabibov AG, Deyev SM (2025). Fusion of SARS-CoV-2 neutralizing LCB1 peptide with Bacillus amyloliquefaciens RNase improves antiviral efficacy. *Sci Rep* 15 (1), 28039, 10.1038/s41598-025-12444-2
33. Petrovskaya LE, Spirina EV, Sukhanov AY, Kryukova EA, Lukashev EP, Ziganshin RH, Rivkina EM, Dolgikh DA, **Kirpichnikov MP** (2025). Effect of Cultivation Conditions on the Expression of the Exiguobacterium sibiricum Proteorhodopsin Gene. *Biochemistry (Mosc)* 90 (7), 911–920, 10.1134/S0006297925600917
34. 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
35. 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
36. 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
37. 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
38. 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 (1), 160–164, 10.1134/S1607672924601355
39. Kocharovskaya MV, Pichkur EB, Ivannikov AD, Kharlampieva DD, Grafskaia 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
40. 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
41. 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.bbabio.2025.149547
42. 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
43. Shulepko MA, Zhang M, Zhivov EA, Kulbatskii DS, Paramonov AS, Che Y, Kuznetsov AV, Popov AV, **Kirpichnikov MP**, Shenkarev ZO, Lyukmanova EN (2025). Recombinant Production, Species-Specific Activity at the TRPA1 Channel, and Significance of the N-Terminal Residue of ProTx-I Toxin from Thrixopelma PruriensTarantula Venom. *Acta Naturae* 17 (4), 121–129, 10.32607/actanaturae.27590
44. 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
45. Lyukmanova EN, Pichkur EB, Nolde DE, Kocharovskaya MV, Manuvera VA, Shirokov DA, Kharlampieva DD, Grafskaia 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
46. 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
47. 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
48. 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
49. 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
50. 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
51. Lyukmanova EN, Bychkov ML, Chernikov AM, Kukushkin ID, Kulbatskii DS, Shabelnikov SV, Shulepko MA, 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
52. 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
53. 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
54. 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
55. 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
56. 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
57. 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
58. 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
59. 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
60. 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
61. 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
62. 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
63. Bychkov ML, Isaev AB, Andreev-Andrievskiy AA, Petrov K, Paramonov AS, **Kirpichnikov MP**, Lyukmanova EN (2023). Aβ1-42 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

64. 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 α7 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
65. 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
66. 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 alpha7 nicotinic acetylcholine receptor by 14-3-3 protein. *Biochem Biophys Res Commun* 682, 91–96, 10.1016/j.bbrc.2023.09.086
67. 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
68. 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
69. 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
70. 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
71. 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
72. 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
73. 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
74. Orlov NA, Kryukova EV, Efremenko AV, Yakimov SA, Toporova VA, **Kirpichnikov MP**, Nekrasova OV, Feofanov AV (2023). Interactions of the Kv1.1 Channel with Peptide Pore Blockers: A Fluorescent Analysis on Mammalian Cells. *Membranes (Basel)* 13 (7), 645, 10.3390/membranes13070645
75. Lyukmanova EN, Mironov PA, Kulbatskii DS, Shulepko MA, Paramonov AS, Chernaya EM, Logashina YA, Andreev YA, **Kirpichnikov MP**, Shenkarev ZO (2023). Recombinant Production, NMR Solution Structure, and Membrane Interaction of the Phα1β Toxin, a TRPA1 Modulator from the Brazilian Armed Spider Phoneutria nigriventer. *Toxins (Basel)* 15 (6), 378, 10.3390/toxins15060378
76. Semenova MA, Bochkova ZV, Smirnova OM, Ignatova AA, Parshina EY, Ziganshin RH, Bocharov EV, Brazhe NA, Maksimov GV, **Kirpichnikov MP**, Dolgikh DA, Chertkova RV (2023). Development of a

System for Biosynthesis, Isolation and Purification of the Holoform of Recombinant Human Neuroglobin and Its Characteristics. *Russ. J. Bioorganic Chem.* 49 (3), 550–561, 10.1134/S1068162023030196

77. Okhrimenko IS, Kovalev K, Petrovskaya LE, Ilyinsky NS, Alekseev AA, Marin E, Rokitskaya TI, Antonenko YN, Siletsky SA, Popov PA, Zagryadskaya YA, Soloviov DV, Chizhov IV, Zabelskii DV, Ryzhykau YL, Vlasov AV, Kuklin AI, Bogorodskiy AO, Mikhailov AE, Sidorov DV, Bukhalovich S, Tsybrov F, Bukhdruker S, Vlasova AD, Borshchevskiy VI, Dolgikh DA, **Kirpichnikov MP**, Bamberg E, Gordeliy VI (2023). Mirror proteorhodopsins. *Communications Chemistry* 6 (1), 88, 10.1038/s42004-023-00884-8
78. Shingarova LN, Petrovskaya LE, Kryukova EA, Gapizov SS, Dolgikh DA, **Kirpichnikov MP** (2023). Display of Oligo-α-1,6-Glycosidase from Exiguobacterium sibiricum on the Surface of Escherichia coli Cells. *Biochemistry (Mosc)* 88 (5), 716–722, 10.1134/S0006297923050140
79. Petrovskaya LE, Lukashev EP, Mamedov MD, Kryukova EA, Balashov SP, Dolgikh DA, Rubin AB, **Kirpichnikov MP**, Siletsky SA (2023). Oriented Insertion of ESR-Containing Hybrid Proteins in Proteoliposomes. *Int J Mol Sci* 24 (8), , 10.3390/ijms24087369
80. Petrovskaya LE, Lukashev EP, Lyukmanova EN, Shulepko MA, Kryukova EA, Ziganshin RH, Dolgikh DA, Maksimov EG, Rubin AB, **Kirpichnikov MP**, Lanyi JK, Balashov SP (2023). Expression of Xanthorhodopsin in Escherichia coli. *Protein J* 42 (4), 408–420, 10.1007/s10930-023-10109-5
81. Primak AL, Orlov NA, Peigneur S, Tytgat J, Ignatova AA, Denisova KR, Yakimov SA, **Kirpichnikov MP**, Nekrasova OV, Feofanov AV (2023). AgTx2-GFP, Fluorescent Blocker Targeting Pharmacologically Important Kv1.x (x = 1, 3, 6) Channels. *Toxins (Basel)* 15 (3), 229, 10.3390/toxins15030229
82. Toporova VA, Argentova VV, Aliev TK, Panina AA, Dolgikh DA, **Kirpichnikov MP** (2023). Optimization of recombinant antibody production based on the vector design and the level of metabolites for generation of Ig- producing stable cell lines. *J Genet Eng Biotechnol* 21 (1), 23, 10.1186/s43141-023-00474-0
83. Rybchenko VS, Aliev TK, Panina AA, **Kirpichnikov MP**, Dolgikh DA (2023). Targeted Cytokine Delivery for Cancer Treatment: Engineering and Biological Effects. *Pharmaceutics* 15 (2), 336, 10.3390/pharmaceutics15020336
84. Abrikosova VA, Mokrushina YA, Ovchinnikova LA, Larina EN, Terekhov SS, Baranova MN, Lomakin YA, Balabashin DS, Bobik TV, Kaliberda EN, Knorre VD, Shpilevaya MV, Aliev TK, Deryabin DG, Karamova AE, Kubanov AA, **Kirpichnikov MP**, Smirnov IV (2023). B Cell Profiling in Patients with Pemphigus Vulgaris. *Acta Naturae* 15 (1), 13–18, 10.32607/actanaturae.11890
85. Kosarim NA, Armeev GA, **Kirpichnikov MP**, Shaytan AK (2022). Analysis of Ion Atmosphere Around Nucleosomes Using Supercomputer MD Simulations. *Supercomputing Frontiers and Innovations* 9 (2), 56–67, 10.14529/jsfi220205
86. Shenkarev ZO, Chesnokov YM, Zaigraev MM, Chugunov AO, Kulbatskii DS, Kocharovskaya MV, Paramonov AS, Bychkov ML, Shulepko MA, Nolde DE, Kamyshinsky RA, Yablokov EO, Ivanov AS, **Kirpichnikov MP**, Lyukmanova EN (2022). Membrane-mediated interaction of non-conventional snake three-finger toxins with nicotinic acetylcholine receptors. *Commun Biol* 5 (1), 1344, 10.1038/s42003-022-04308-6
87. Orlov NA, Ignatova AA, Kryukova EV, Yakimov SA, **Kirpichnikov MP**, Nekrasova OV, Feofanov AV (2022). Combining mKate2-Kv1.3 Channel and Atto488-Hongotoxin for the Studies of Peptide Pore Blockers on Living Eukaryotic Cells. *Toxins (Basel)* 14 (12), 858, 10.3390/toxins14120858
88. 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 (2022). DR5-Selective TRAIL Variant DR5-B Functionalized with Tumor-Penetrating iRGD Peptide for Enhanced Antitumor Activity against Glioblastoma. *Int J Mol Sci* 23 (20), , 10.3390/ijms232012687
89. Malinina DK, Sivkina AL, Korovina AN, McCullough LL, Formosa T, **Kirpichnikov MP**, Studitsky VM, Feofanov AV (2022). Hmo1 Protein Affects the Nucleosome Structure and Supports the Nucleosome Reorganization Activity of Yeast FACT. *Cells* 11 (19), , 10.3390/cells11192931
90. Isakova A, Artykov A, Vorontsova Y, Dolgikh D, **Kirpichnikov M**, Gasparian M, Yagolovich A (2022).

Application of an Autoinduction Strategy to Optimize the Heterologous Production of an Antitumor Bispecific Fusion Protein Based on the TRAIL Receptor-Selective Mutant Variant in Escherichia coli. *Mol Biotechnol* 65 (4), 581–589, 10.1007/s12033-022-00561-6

91. Shingarova LN, Petrovskaya LE, Kryukova EA, Gapizov SS, Boldyreva EF, Dolgikh DA, **Kirpichnikov MP** (2022). Deletion Variants of Autotransporter from Psychrobacter cryohalolentis Increase Efficiency of 10FN3 Exposure on the Surface of Escherichia coli Cells. *Biochemistry (Mosc)* 87 (9), 932–939, 10.1134/S0006297922090061
92. Bychkov ML, Kirichenko AV, Mikhaylova IN, Paramonov AS, **Kirpichnikov MP**, Shulepko MA, Lyukmanova EN (2022). Extracellular Vesicles Derived from Metastatic Melanoma Cells Transfer α7-nAChR mRNA, Thus Increasing the Surface Expression of the Receptor and Stimulating the Growth of Normal Keratinocytes. *Acta Naturae* 14 (3), 95–99, 10.32607/actanaturae.11734
93. Gerasimova NS, Volokh OI, Pestov NA, Armeev GA, **Kirpichnikov MP**, Shaytan AK, Sokolova OS, Studitsky VM (2022). Structure of an Intranucleosomal DNA Loop That Senses DNA Damage during Transcription. *Cells* 11 (17), , 10.3390/cells11172678
94. Chang HW, Feofanov AV, Lyubitelev AV, Armeev GA, Kotova EY, Hsieh FK, **Kirpichnikov MP**, Shaytan AK, Studitsky VM (2022). N-Terminal Tails of Histones H2A and H2B Differentially Affect Transcription by RNA Polymerase II In Vitro. *Cells* 11 (16), , 10.3390/cells11162475
95. Paramonov AS, Shulepko MA, Makhonin AM, Bychkov ML, Kulbatskii DS, Chernikov AM, Myshkin MY, Shabelnikov SV, Shenkarev ZO, **Kirpichnikov MP**, Lyukmanova EN (2022). New Three-Finger Protein from Starfish Asteria rubens Shares Structure and Pharmacology with Human Brain Neuromodulator Lynx2. *Mar Drugs* 20 (8), , 10.3390/md20080503
96. Petrovskaya LE, Lukashev EP, Siletsky SA, Imasheva ES, Wang JM, Mamedov MD, Kryukova EA, Dolgikh DA, Rubin AB, **Kirpichnikov MP**, Balashov SP, Lanyi JK (2022). Proton transfer reactions in donor site mutants of ESR, a retinal protein from Exiguobacterium sibiricum. *J Photochem Photobiol B* 234, 112529, 10.1016/j.jphotobiol.2022.112529
97. Denisova KR, Orlov NA, Yakimov SA, **Kirpichnikov MP**, Feofanov AV, Nekrasova OV (2022). Atto488-Agitoxin 2—A Fluorescent Ligand with Increased Selectivity for Kv1.3 Channel Binding Site. *Bioengineering (Basel)* 9 (7), , 10.3390/bioengineering9070295
98. Sudarikova AV, Bychkov ML, Kulbatskii DS, Chubinskiy-Nadezhdin VI, Shlepova OV, Shulepko MA, Koshelev SG, **Kirpichnikov MP**, Lyukmanova EN (2022). Mambalgin-2 Inhibits Lung Adenocarcinoma Growth and Migration by Selective Interaction With ASIC1/α-ENaC/γ-ENaC Heterotrimer. *Front Oncol* 12, 904742, 10.3389/fonc.2022.904742
99. Yagolovich AV, Artykov AA, Isakova AA, Vorontsova YV, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME (2022). Optimized Heterologous Expression and Efficient Purification of a New TRAIL-Based Antitumor Fusion Protein SRH–DR5-B with Dual VEGFR2 and DR5 Receptor Specificity. *Int J Mol Sci* 23 (11), , 10.3390/ijms23115860
100. Chertkova RV, Firsov AM, Brazhe NA, Nikelshparg EI, Bochkova ZV, Bryantseva TV, Semenova MA, Baizhumanov AA, Kotova EA, **Kirpichnikov MP**, Maksimov GV, Antonenko YN, Dolgikh DA (2022). Multiple Mutations in the Non-Ordered Red Ω-Loop Enhance the Membrane-Permeabilizing and Peroxidase-like Activity of Cytochrome c. *Biomolecules* 12 (5), , 10.3390/biom12050665
101. Argentova V, Aliev T, Dolgikh D, Pakanová Z, Katrlík J, **Kirpichnikov M** (2022). Features, modulation and analysis of glycosylation patterns of therapeutic recombinant immunoglobulin A. *Biotechnol Genet Eng Rev* 38 (2), 1–23, 10.1080/02648725.2022.2060594
102. Larina MV, Finashutina YP, Lyzhko NA, Misyurin VA, Novoseletsky VN, Dolgikh DA, Solopova ON, Moysenovich AM, Balabashin DS, Aliev TK, Misyurin AV, **Kirpichnikov MP** (2022). Development of a Humanized Antibody 5D3Hu against the PRAME Tumor Antigen. *Russ. J. Bioorganic Chem.* 48 (2), 360–371, 10.1134/S1068162022020133
103. Bychkov ML, Kirichenko AV, Mikhaylova IN, Paramonov AS, Yastremsky EV, **Kirpichnikov MP**, Shulepko MA, Lyukmanova EN (2022). Extracellular Vesicles Derived from Acidified Metastatic Melanoma Cells Stimulate Growth, Migration, and Stemness of Normal Keratinocytes. *Biomedicines*

10 (3), , 10.3390/biomedicines10030660
104. Artykov AA, Yagolovich AV, Dolgikh DA, **Kirpichnikov MP**, Trushina DB, Gasparian ME (2022). Corrigendum: Death Receptors DR4 and DR5 Undergo Spontaneous and Ligand-Mediated Endocytosis and Recycling Regardless of the Sensitivity of Cancer Cells to TRAIL(Front. Cell Dev. Biol., (2021), 9, (733688), 10.3389/fcell.2021.733688). *Front Cell Dev Biol* 9, 820069, 10.3389/fcell.2021.820069
105. Denisova KR, Orlov NA, Yakimov SA, Kryukova EA, Dolgikh DA, **Kirpichnikov MP**, Feofanov AV, Nekrasova OV (2022). GFP–Margatoxin, a Genetically Encoded Fluorescent Ligand to Probe Affinity of Kv1.3 Channel Blockers. *Int J Mol Sci* 23 (3), , 10.3390/ijms23031724
106. Orekhov PS, Bozdaganyan ME, Voskoboynikova N, Mulkidjanian AY, Karlova MG, Yudenko A, Remeeva A, Ryzhykau YL, Gushchin I, Gordeliy VI, Sokolova OS, Steinhoff HJ, **Kirpichnikov MP**, Shaitan KV (2022). Mechanisms of Formation, Structure, and Dynamics of Lipoprotein Discs Stabilized by Amphiphilic Copolymers: A Comprehensive Review. *Nanomaterials (Basel)* 12 (3), 361, 10.3390/nano12030361
107. Sivkina AL, Karlova MG, Valieva ME, McCullough LL, Formosa T, Shaytan AK, Feofanov AV, **Kirpichnikov MP**, Sokolova OS, Studitsky VM (2022). Electron microscopy analysis of ATP-independent nucleosome unfolding by FACT. *Commun Biol* 5 (1), 2, 10.1038/s42003-021-02948-8
108. Sivkina AL, Feofanov AV, **Kirpichnikov MP**, Akhtar MS, Studitsky VM (2021). Role of the Nhp6 Protein in Nucleosome Unfolding by the FACT Factor. *Moscow Univ Biol Sci Bull* 76 (4), 191–195, 10.3103/S009639252104012X
109. Rybchenko VS, Panina AA, Aliev TK, Solopova ON, Balabashin DS, Novoseletsky VN, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2021). Bispecific Antibodies for IFN-β Delivery to ErbB2+ Tumors. *Biomolecules* 11 (12), , 10.3390/biom11121915
110. Andreeva TV, Maluchenko NV, Sivkina AL, Chertkov OV, Valieva ME, Kotova EY, **Kirpichnikov MP**, Studitsky VM, Feofanov AV (2021). Na+ and K+ Ions Differently Affect Nucleosome Structure, Stability, and Interactions with Proteins. *Microsc Microanal* 28 (1), 243–253, 10.1017/S1431927621013751
111. Khoroshyy P, Tenger K, Chertkova RV, Bocharova OV, **Kirpichnikov MP**, Borovok N, Groma GI, Dolgikh DA, Kotlyar AB, Zimányi L (2021). Kinetics and Energetics of Intramolecular Electron Transfer in Single-Point Labeled TUPS-Cytochrome c Derivatives. *Molecules* 26 (22), , 10.3390/molecules26226976
112. Sharonov GV, Nekrasova OV, Kudryashova KS, **Kirpichnikov MP**, Feofanov AV (2021). Bioengineered System for High Throughput Screening of Kv1 Ion Channel Blockers. *Bioengineering (Basel)* 8 (11), 187, 10.3390/bioengineering8110187
113. Maluchenko NV, Nilov DK, Pushkarev SV, Kotova EY, Gerasimova NS, **Kirpichnikov MP**, Langelier MF, Pascal JM, Akhtar MS, Feofanov AV, Studitsky VM (2021). Mechanisms of nucleosome reorganization by PARP1. *Int J Mol Sci* 22 (22), , 10.3390/ijms222212127
114. Bychkov ML, Kirichenko AV, Shulepko MA, Mikhaylova IN, **Kirpichnikov MP**, Lyukmanova EN (2021). Mambalgin-2 inhibits growth, migration, and invasion of metastatic melanoma cells by targeting the channels containing an asic1a subunit whose up-regulation correlates with poor survival prognosis. *Biomedicines* 9 (10), , 10.3390/biomedicines9101324
115. Artykov AA, Yagolovich AV, Dolgikh DA, **Kirpichnikov MP**, Trushina DB, Gasparian ME (2021). Death Receptors DR4 and DR5 Undergo Spontaneous and Ligand-Mediated Endocytosis and Recycling Regardless of the Sensitivity of Cancer Cells to TRAIL. *Front Cell Dev Biol* 9, 733688, 10.3389/fcell.2021.733688
116. Kulbatskii D, Shenkarev Z, Bychkov M, Loktyushov E, Shulepko M, Koshelev S, Povarov I, Popov A, Peigneur S, Chugunov A, Kozlov S, Sharonova I, Efremov R, Skrebitsky V, Tytgat J, **Kirpichnikov M**, Lyukmanova E (2021). Human Three-Finger Protein Lypd6 Is a Negative Modulator of the Cholinergic System in the Brain. *Front Cell Dev Biol* 9, 662227, 10.3389/fcell.2021.662227
117. Kubanov AA, Deryabin DG, Shpilevaya MV, Karamova AE, Nikonorov AA, Larina EN, Aliev TK, Dolgikh DA, Bobik TV, Smirnov IV, Gabibov AG, **Kirpichnikov MP** (2021). Analysis of the Specificity of Auto-Reactive Antibodies to Individual Fragments of the Extracellular Domain of Desmoglein 3 in Patients with Pemphigus Vulgaris. *Bull Exp Biol Med* 171 (4), 475–479, 10.1007/s10517-021-05254-9

118. Bychkov ML, Shulepko MA, Shlepova OV, Kulbatskii DS, Chulina IA, Paramonov AS, Baidakova LK, Azev VN, Koshelev SG, **Kirpichnikov MP**, Shenkarev ZO, Lyukmanova EN (2021). SLURP-1 Controls Growth and Migration of Lung Adenocarcinoma Cells, Forming a Complex With α7-nAChR and PDGFR/EGFR Heterodimer. *Front Cell Dev Biol* 9, 739391, 10.3389/fcell.2021.739391
119. Yagolovich A, Kuskov A, Kulikov P, Kurbanova L, Bagrov D, Artykov A, Gasparian M, Sizova S, Oleinikov V, Gileva A, **Kirpichnikov M**, Dolgikh D, Markvicheva E (2021). Amphiphilic Poly(N-vinylpyrrolidone) Nanoparticles Conjugated with DR5-Specific Antitumor Cytokine DR5-B for Targeted Delivery to Cancer Cells. *Pharmaceutics* 13 (9), , 10.3390/pharmaceutics13091413
120. Petrovskaya LE, Ziganshin RH, Kryukova EA, Zlobinov AV, Gapizov SS, Shingarova LN, Mironov VA, Lomakina GY, Dolgikh DA, **Kirpichnikov MP** (2021). Increased Synthesis of a Magnesium Transporter MgtA During Recombinant Autotransporter Expression in Escherichia coli. *Appl Biochem Biotechnol* 193 (11), 3672–3703, 10.1007/s12010-021-03634-5
121. Berlina YY, Petrovskaya LE, Kryukova EA, Shingarova LN, Gapizov SS, Kryukova MV, Rivkina EM, **Kirpichnikov MP**, Dolgikh DA (2021). Engineering of thermal stability in a cold-active oligo-1,6-glucosidase from exiguobacterium sibiricum with unusual amino acid content. *Biomolecules* 11 (8), , 10.3390/biom11081229
122. Chertkova RV, Bryantseva TV, Brazhe NA, Kudryashova KS, Revin VV, Nekrasov AN, Yusipovich AI, Brazhe AR, Rubin AB, Dolgikh DA, **Kirpichnikov MP**, Maksimov GV (2021). Amino Acid Substitutions in the Non-Ordered Ω-Loop 70–85 Affect Electron Transfer Function and Secondary Structure of Mitochondrial Cytochrome c. *Crystals (Basel)* 11 (8), , 10.3390/cryst11080973
123. Andreeva TV, Lyubitelev AV, Malyuchenko NV, Studitsky VM, **Kirpichnikov MP**, Feofanov AV (2021). Influence of Linker DNA on Nucleosome Structure according to Single-Particle Fluorescence Microscopy Data. *Moscow Univ Biol Sci Bull* 76 (3), 118–122, 10.3103/S0096392521030019
124. Solopova ON, Finashutina YP, Kasatkina NN, Lyzhko NA, Turba AA, Kesaeva LA, Misyurin VA, Misyurin AV, Larina MV, Aliev TK, **Kirpichnikov MP** (2021). Monoclonal Antibodies to PRAME Protein Slow the Development of PRAME-Expressing Tumor. *Dokl Biochem Biophys* 498 (1), 199–202, 10.1134/S1607672921030091
125. Larina EN, Karasev VS, Shpilevaya MV, Aliev TK, Bochkova OP, Karamova AE, Balabashin DS, Deryabin DG, Bobik TV, Smirnov IV, Kubanov AA, Staroverov SM, Gabibov AG, **Kirpichnikov MP** (2021). Recombinant Fragment of the Extracellular Domain of Human Desmoglein 3 Fused with the Fc-Fragment of Human IgG1 Selectively Adsorbs Autoreactive Antibodies from the Sera of Pemphigus Patients. *Dokl Biochem Biophys* 498 (1), 180–183, 10.1134/S1607672921030054
126. Kudryashova KS, Nekrasova OV, **Kirpichnikov MP**, Feofanov AV (2021). Chimeras of KcsA and Kv1 as a bioengineering tool to study voltage-gated potassium channels and their ligands. *Biochem Pharmacol* 190, 114646, 10.1016/j.bcp.2021.114646
127. Maluchenko NV, Koshkina DO, Feofanov AV, Studitsky VM, **Kirpichnikov MP** (2021). Poly(ADP-Ribosyl) Code Functions. *Acta Naturae* 13 (2), 58–69, 10.32607/actanaturae.11089
128. Yaroshevich IA, Maksimov EG, Sluchanko NN, Zlenko DV, Stepanov AV, Slutskaya EA, Slonimskiy YB, Botnarevskii VS, Remeeva A, Gushchin I, Kovalev K, Gordeliy VI, Shelaev IV, Gostev FE, Khakhulin D, Poddubnyy VV, Gostev TS, Cherepanov DA, Polívka T, Kloz M, Friedrich T, Paschenko VZ, Nadtochenko VA, Rubin AB, **Kirpichnikov MP** (2021). Role of hydrogen bond alternation and charge transfer states in photoactivation of the Orange Carotenoid Protein. *Commun Biol* 4 (1), 539, 10.1038/s42003-021-02022-3
129. Maliar N, Okhrimenko IS, Petrovskaya LE, Alekseev AA, Kovalev KV, Soloviov DV, Popov PA, Rokitskaya TI, Antonenko YN, Zabelskii DV, Dolgikh DA, **Kirpichnikov MP**, Gordeliy VI (2021). Erratum to: Novel pH-Sensitive Microbial Rhodopsin from Sphingomonas paucimobilis. *Dokl Biochem Biophys* 497 (1), 158, 10.1134/S1607672921020198
130. Armeev GA, Kniazeva AS, Komarova GA, **Kirpichnikov MP**, Shaytan AK (2021). Histone dynamics mediate DNA unwrapping and sliding in nucleosomes. *Nat Commun* 12 (1), 2387, 10.1038/s41467-021-22636-9

131. Chertkova RV, Firsov AM, Kotova EA, Gusev ID, Dolgikh DA, **Kirpichnikov MP**, Antonenko YN (2021). Lysine 72 substitutions differently affect lipid membrane permeabilizing and proapoptotic activities of horse heart cytochrome c. *Biochem Biophys Res Commun* 548, 74–77, 10.1016/j.bbrc.2021.02.023
132. Lyubitelev AV, **Kirpichnikov MP**, Studitsky VM (2021). The Role of Linker Histones in Carcinogenesis. *Russ. J. Bioorganic Chem.* 47 (1), 278–287, 10.1134/S1068162021010143
133. Shulepko MA, Bychkov ML, Shenkarev ZO, Kulbatskii DS, Makhonin AM, Paramonov AS, Chugunov AO, **Kirpichnikov MP**, Lyukmanova EN (2021). Biochemical basis of skin disease Mal de Meleda: SLURP-1 mutants differently affect keratinocyte proliferation and apoptosis. *J Invest Dermatol* 141 (9), 2229–2237, 10.1016/j.jid.2021.01.035
134. Myshkin MY, Paramonov AS, Kulbatskii DS, Surkova EA, Berkut AA, Vassilevski AA, Lyukmanova EN, **Kirpichnikov MP**, Shenkarev ZO (2021). Voltage-Sensing Domain of the Third Repeat of Human Skeletal Muscle NaV1.4 Channel As a New Target for Spider Gating Modifier Toxins. *Acta Naturae* 13 (1), 134–139, 10.32607/actanaturae.11279
135. Smitienko OA, Feldman TB, Petrovskaya LE, Nekrasova OV, Yakovleva MA, Shelaev IV, Gostev FE, Cherepanov DA, Kolchugina IB, Dolgikh DA, Nadtochenko VA, **Kirpichnikov MP**, Ostrovsky MA (2021). Comparative Femtosecond Spectroscopy of Primary Photoreactions of Exiguobacterium sibiricum Rhodopsin and Halobacterium salinarum Bacteriorhodopsin. *J Phys Chem B* 125 (4), 995–1008, 10.1021/acs.jpcb.0c07763
136. Boyko KM, Kryukova MV, Petrovskaya LE, Kryukova EA, Nikolaeva AY, Korzhenevsky DA, Lomakina GY, Novototskaya-Vlasova KA, Rivkina EM, Dolgikh DA, **Kirpichnikov MP**, Popov VO (2021). Structural and Biochemical Characterization of a Cold-Active PMGL3 Esterase with Unusual Oligomeric Structure. *Biomolecules* 11 (1), 1–18, 10.3390/biom11010057
137. Gusev ID, Firsov AM, Chertkova RV, Kotova EA, Dolgikh DA, **Kirpichnikov MP**, Antonenko YN (2020). Study of Interaction of Fluorescent Cytochrome C with Liposomes, Mitochondria, and Mitoplasts by Fluorescence Correlation Spectroscopy. *Russ. J. Bioorganic Chem.* 46 (6), 1162–1171, 10.1134/S1068162020060084
138. Primak AL, Skutel MA, Nekrasova OV, Arseniev AS, **Kirpichnikov MP**, Feofanov AV (2020). Kv1 Potassium Channel Ligands Based On Hongotoxin 1 and Red Fluorescent Protein. *Russ. J. Bioorganic Chem.* 46 (6), 1011–1017, 10.1134/S1068162020060266
139. Paramonov AS, Shulepko MA, Kocharovskaya M, Alenkin AE, Evdokimova AO, Akentiev PI, Shenkarev ZO, **Kirpichnikov MP**, Lyukmanova EN (2020). Bacterial Production and Structural Study of Human Neuromodulator Lynx2. *Russ. J. Bioorganic Chem.* 46 (6), 1261–1269, 10.1134/S1068162020060230
140. Nekrasova OV, Primak AL, Ignatova AA, Novoseletsky VN, Geraskina OV, Kudryashova KS, Yakimov SA, **Kirpichnikov MP**, Arseniev AS, Feofanov AV (2020). N-Terminal Tagging with GFP Enhances Selectivity of Agitoxin 2 to Kv1.3-Channel Binding Site. *Toxins (Basel)* 12 (12), 802, 10.3390/toxins12120802
141. Zabelskii D, Alekseev A, Kovalev K, Rankovic V, Balandin T, Soloviov D, Bratanov D, Savelyeva E, Podolyak E, Volkov D, Vaganova S, Astashkin R, Chizhov I, Yutin N, Rulev M, Popov A, Eria-Oliveira AS, Rokitskaya T, Mager T, Antonenko Y, Rosselli R, Armeev G, Shaitan K, Vivaudou M, Büldt G, Rogachev A, Rodriguez-Valera F, **Kirpichnikov M**, Moser T, Offenhäusser A, Willbold D, Koonin E, Bamberg E, Gordeliy V (2020). Viral rhodopsins 1 are an unique family of light-gated cation channels.*Nat Commun* 11 (1), 5707, 10.1038/s41467-020-19457-7
142. Гусев ИД, Фирсов АМ, Черткова РВ, Котова ЕА, Долгих ДА, **Кирпичников МП**, Антоненко ЮН (2020). Изучение взаимодействия флуоресцентно-меченого цитохрома С с липосомами, митохондриями и митопластами методом флуоресцентной корреляционной спектроскопии. *Bioorg Khim* , , 10.31857/S0132342320060081
143. Argentova VV, Aliev TK, Gasparyan ME, Dolgikh DA, **Kirpichnikov MP** (2020). Effects of Fibroblast Growth Factor-2 and Other Microsupplements on the Productivity of IgG- and IgA-Producing Cell Lines. *APPL BIOCHEM MICRO+* 56 (9), 902–908, 10.1134/S0003683820090021
144. Maliar N, Okhrimenko IS, Petrovskaya LE, Alekseev AA, Kovalev KV, Soloviov DV, Popov PA,

Rokitskaya TI, Antonenko YN, Zabelskii DV, Dolgikh DA, **Kirpichnikov MP**, Gordeliy VI (2020). Novel pH-Sensitive Microbial Rhodopsin from Sphingomonas paucimobilis. *Dokl Biochem Biophys* 495 (1), 342–346, 10.1134/S1607672920060162

145. Маляр Н, Охрименко ИС, Петровская ЛЕ, Алексеев АА, Ковалев КВ, Соловьев ДВ, Попов ПА, Рокицкая ТИ, Антоненко ЮН, Забельский ДВ, Долгих ДА, **Кирпичников МП**, Горделий ВИ (2020). Новый pH-чувствительный микробный родопсин из Sphingomonas paucimobilis. *ДАН. Науки о жизни* 495 (1), 658–662, 10.31857/S2686738920060256
146. Siletsky SA, Lukashev EP, Mamedov MD, Borisov VB, Balashov SP, Dolgikh DA, Rubin AB, **Kirpichnikov MP**, Petrovskaya LE (2020). His57 controls the efficiency of ESR, a light-driven proton pump from Exiguobacterium sibiricum at low and high pH. *BIOCHIM BIOPHYS ACTA* 1862 (1), 148328, 10.1016/j.bbabio.2020.148328
147. Paramonov AS, Kocharovskaya MV, Tsarev AV, Kulbatskii DS, Loktyushov EV, Shulepko MA, **Kirpichnikov MP**, Lyukmanova EN, Shenkarev ZO (2020). Structural Diversity and Dynamics of Human Three-Finger Proteins Acting on Nicotinic Acetylcholine Receptors. *Int J Mol Sci* 21 (19), 1–26, 10.3390/ijms21197280
148. Panina AA, Toporova VA, Rybchenko VS, Balabashin DS, Argentova VV, Yakimov SA, Solopova ON, Aliev TK, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2020). Development of the Bispecific Antibody in Fab-scFv Format Based on an Antibody to Human Interferon Beta-1 and Antibody to HER2 Receptor. *Russ. J. Bioorganic Chem.* 46 (4), 572–581, 10.1134/S1068162020040159
149. Shulepko MA, Bychkov ML, Lyukmanova EN, **Kirpichnikov MP** (2020). Recombinant Analogue of the Human Protein SLURP-1 Inhibits the Growth of U251 MG and A172 Glioma Cells. *Dokl Biochem Biophys* 493 (1), 211–214, 10.1134/S1607672920040134
150. Balabashin DS, Kaliberda EN, Smirnov IV, Mokrushina YA, Bobik TV, Aliev TK, Dolgikh DA, **Kirpichnikov MP** (2020). Development of a Serum-Free Media Based on the Optimal Combination of Recombinant Protein Additives and Hydrolysates of Non-animal Origin to Produce Immunoglobulins. *APPL BIOCHEM MICRO+* 56 (5), 595–603, 10.1134/S0003683820050038
151. Rybchenko VS, Panina AA, Novoseletsky NV, Balabashin DS, Yakimov SA, Solopova ON, Sveshnikov PG, Aliev TK, Dolgikh DA, **Kirpichnikov MP** (2020). Generation and Characterization of Human Interferon-beta Neutralizing Humanized Antibody. *Russ. J. Bioorganic Chem.* 46 (5), 778–786, 10.1134/S1068162020050209
152. Kulbatskii DS, Shulepko MA, Sluchanko NN, Yablokov EO, Kamyshinsky RA, Chesnokov YM, **Kirpichnikov MP**, Lyukmanova EN (2020). Efficient screening of ligand-receptor complex formation using fluorescence labeling and size-exclusion chromatography. *Biochem Biophys Res Commun* 532 (1), 127–133, 10.1016/j.bbrc.2020.08.021
153. **(конференция)** Orlov N, Ignatova A, Nekrasova O, **Kirpichnikov M**, Feofanov A (2020). Design of far-red fluorescent Kv1.3 channel for membrane expression in eukaryotic cells and its interactions with hongotoxin1. *Microsc Microanal* , , 10.1017/S1431927620017936
154. Bychkov M, Shulepko M, Osmakov D, Andreev Y, Sudarikova A, Vasileva V, Pavlyukov MS, Latyshev YA, Potapov AA, **Kirpichnikov M**, Shenkarev ZO, Lyukmanova E (2020). Mambalgin-2 Induces Cell Cycle Arrest and Apoptosis in Glioma Cells via Interaction with ASIC1a. *Cancers (Basel)* 12 (7), 1–20, 10.3390/cancers12071837
155. Misyurin VA, Finashutina YP, Turba AA, Larina MV, Solopova ON, Lyzhko NA, Kesaeva LA, Kasatkina NN, Aliev TK, Misyurin AV, **Kirpichnikov MP** (2020). Epitope Analysis of Murine and Chimeric Monoclonal Antibodies Recognizing the Cancer Testis Antigen PRAME. *Dokl Biochem Biophys* 492 (1), 135–138, 10.1134/S1607672920030072
156. Malyuchenko NV, Koshkina DO, Korovina AN, Gerasimova NS, **Kirpichnikov MP**, Studitsky VM, Feofanov AV (2020). The Effect of Gossypol on the Structure of Nucleosomes.*Moscow Univ Biol Sci Bull* 75 (3), 142–146, 10.3103/S0096392520030050
157. Малюченко НВ, Кошкина ДО, Коровина АН, Герасимова НС, **Кирпичников МП**, Студитский ВМ, Феофанов АВ (2020). Effect of gossypol on nucleosome structure.*ВМУ.Биология* 75 (3), 170–175.

158. Kryukova MV, Petrovskaya LE, Novototskaya-Vlasova KA, Kryukova EA, Yakimov SA, Nikolaeva AY, Boyko KM, Dolgikh DA, **Kirpichnikov MP** (2020). Effect of Cysteine Residue Substitution in the GCSAG Motif of the PMGL2 Esterase Active Site on the Enzyme Properties. *Biochemistry (Mosc)* 85 (6), 709–716, 10.1134/S0006297920060085
159. Maliar N, Kovalev K, Baeken C, Balandin T, Astashkin R, Rulev M, Alekseev A, Ilyinsky N, Rogachev A, Chupin V, Dolgikh D, **Kirpichnikov M**, Gordeliy V (2020). Crystal structure of the N112A mutant of the light-driven sodium pump KR2. *Crystals (Basel)* 10 (6), 1–15, 10.3390/cryst10060496
160. Bychkov ML, Shulepko MA, Vasileva VY, Sudarikova AV, **Kirpichnikov MP**, Lyukmanova EN (2020). ASIC1a Inhibitor mambalgin-2 Suppresses the Growth of Leukemia Cells by Cell Cycle Arrest. *Acta Naturae* 12 (2), 101–116, 10.32607/actanaturae.10949
161. Panina AA, Rybchenko VS, Solopova ON, Balabashin DS, Yakimov SA, Aliev TK, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2020). Recombinant Bispecific Antibodies to the Human ErbB2 Receptor and Interferon-Beta. *Acta Naturae* 12 (2), 95–104, 10.32607/actanaturae.10903
162. Shulepko MA, Bychkov ML, Shlepova OV, Shenkarev ZO, **Kirpichnikov MP**, Lyukmanova EN (2020). Human secreted protein SLURP-1 abolishes nicotine-induced proliferation, PTEN down-regulation and α7-nAChR expression up-regulation in lung cancer cells. *Int Immunopharmacol* 82, 106303, 10.1016/j.intimp.2020.106303
163. Rybchenko VS, Balabashin DS, Panina AA, Solopova ON, Yakimov SA, Aliev TK, Dolgikh DA, **Kirpichnikov MP** (2020). Production of the Extracellular Part of the ErbB2 Receptor for the Study of Immunobiologicals. *Russ. J. Bioorganic Chem.* 46 (3), 327–333, 10.1134/S106816202003019X
164. Artykov AA, Belov DA, Shipunova VO, Trushina DB, Deyev SM, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME (2020). Chemotherapeutic Agents Sensitize Resistant Cancer Cells to the DR5-Specific Variant DR5-B more Efficiently than to TRAIL by Modulating the Surface Expression of Death and Decoy Receptors. *Cancers (Basel)* 12 (5), , 10.3390/cancers12051129
165. Shenkarev ZO, Shulepko MA, Bychkov ML, Kulbatskii DS, Shlepova OV, Vasilyeva NA, Andreev-Andrievsky AA, Popova AS, Lagereva EA, Loktyushov EV, Koshelev SG, Thomsen MS, Dolgikh DA, Kozlov SA, Balaban PM, **Kirpichnikov MP**, Lyukmanova EN (2020). Water-Soluble Variant of Human Lynx1 Positively Modulates Synaptic Plasticity and Ameliorates Cognitive Impairment Associated with a7-nAChR Dysfunction. *J Neurochem* 155 (1), 45–61, 10.1111/jnc.15018
166. Yagolovich AV, Artykov AA, Karmakova TA, Vorontsova MS, Pankratov AA, Andreev-Andrievsky AA, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME (2020). Genetically Modified DR5-Specific TRAIL Variant DR5-B Revealed Dual Antitumor and Protumoral Effect in Colon Cancer Xenografts and an Improved Pharmacokinetic Profile. *Transl Oncol* 13 (4), 100762, 10.1016/j.tranon.2020.100762
167. Argentova V, Aliev T, Dolgikh D, **Kirpichnikov MP** (2020). EFFECTS of SUCCINIC ACID SUPPLEMENTATION on STABLE CELL LINE GROWTH, AGGREGATION, and IGG and IGA PRODUCTION. *Curr Pharm Biotechnol* 21 (10), 990–996, 10.2174/1389201021666200312130957
168. Bychkov ML, Shulepko MA, Shlepova OV, Lyukmanova EN, **Kirpichnikov MP** (2020). Recombinant Analogue of the Human Protein SLURP-1 Inhibits the Growth of Multicellular Spheroids Reconstructed from Carcinoma Cells. *Dokl Biochem Biophys* 489 (1), 392–395, 10.1134/S1607672919060103
169. Maluchenko NV, Sultanov DS, Kotova EY, **Kirpichnikov MP**, Studitsky VM, Feofanov AV (2020). Histone Tails Promote PARP1-Dependent Structural Rearrangements in Nucleosomes. *Dokl Biochem Biophys* 489 (1), 377–379, 10.1134/S1607672919060061
170. Balobanov V, Chertkova R, Egorova A, Dolgikh D, Bychkova V, **Kirpichnikov M** (2020). The Kinetics of Amyloid Fibril Formation by de Novo Protein Albebetin and Its Mutant Variants. *Biomolecules* 10 (2), , 10.3390/biom10020241
171. Boyko KM, Kryukova MV, Petrovskaya LE, Nikolaeva AY, Korzhenevsky DA, Novototskaya-Vlasova KA, Rivkina EM, Dolgikh DA, **Kirpichnikov MP**, Popov VO (2020). Crystal structure of PMGL2 esterase from the hormone-sensitive lipase family with GCSAG motif around the catalytic serine. *PLoS One* 15 (1), e0226838, 10.1371/journal.pone.0226838
172. Argentova VV, Aliev TK, Gasparian ME, Dolgikh DA, **Kirpichnikov MP** (2020). Effects of fibroblast

growth factor-2 and other microsupplements on the productivity of IgG and IgA producing cell lines. *Biotekhnologiya* 36 (1), 44–52, 10.21519/0234-2758-2020-36-1-44-52

173. **(конференция)** Skutel M, Primak A, **Kirpichnikov M**, Arseniev A, Feofanov A, Nekrasova O (2020). RFP-tagged Hongotoxin 1 and Its Interactions with KscA-Kv1.1 Hybrid Channels. *Microsc Microanal* , , 10.1017/S1431927620017900
174. Panina AA, Rybchenko VS, Solopova ON, Balabashin DS, Yakimov SA, Aliev TK, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2020). Recombinant bispecific antibodies to the human ErbB2 receptor and interferon-beta. *Acta Naturae* 12 (2), 95–104, 10.32607/ACTANATURAE.11156
175. Bychkov ML, Shulepko MA, Vasileva VY, Sudarikova AV, **Kirpichnikov MP**, Lyukmanova EN (2020). ASIC1a Inhibitor mambalgin-2 suppresses the growth of leukemia cells by cell cycle arrest. *Acta Naturae* 12 (2), 111–116, 10.32607/ACTANATURAE.11158
176. Stanishneva-Konovalova TB, Semenyuk PI, Kurochkina LP, Pichkur EB, Vasilyev AL, Kovalchuk MV, **Kirpichnikov MP**, Sokolova OS (2019). Cryo-EM reveals an asymmetry in a novel single-ring viral chaperonin. *J Struct Biol* 209 (2), 107439, 10.1016/j.jsb.2019.107439
177. Kryukova MV, Petrovskaya LE, Kryukova EA, Lomakina GYu, Yakimov SA, Maksimov EG, Boyko KM, Popov VO, Dolgikh DA, **Kirpichnikov MP** (2019). Thermal Inactivation of a Cold-Active Esterase PMGL3 Isolated from the Permafrost Metagenomic Library. *Biomolecules* 9 (12), 880, 10.3390/biom9120880
178. Myshkin MY, Männikkö R, Krumkacheva OA, Kulbatskii DS, Chugunov AO, Berkut AA, Paramonov AS, Shulepko MA, Fedin MV, Hanna MG, Kullmann DM, Bagryanskaya EG, Arseniev AS, **Kirpichnikov MP**, Lyukmanova EN, Vassilevski AA, Shenkarev ZO (2019). Cell-Free Expression of Sodium Channel Domains for Pharmacology Studies. Noncanonical Spider Toxin Binding Site in the Second Voltage-Sensing Domain of Human Nav1.4 Channel. *Front Pharmacol* 10, 953, 10.3389/fphar.2019.00953
179. Myshkin MY, Dubinnyi MA, Kulbatskii DS, Lyukmanova EN, **Kirpichnikov MP**, Shenkarev ZO (2019). CombLabel: rational design of optimized sequence-specific combinatorial labeling schemes. Application to backbone assignment of membrane proteins with low stability. *J Biomol NMR* 73 (10-11), 531–544, 10.1007/s10858-019-00259-z
180. Malyuchenko NV, Kotova EY, **Kirpichnikov MP**, Studitsky VM, Feofanov AV (2019). PARP1 Binding to DNA Breaks and Hairpins Alters Nucleosome Structure. *Moscow Univ Biol Sci Bull* 74 (3), 158–162, 10.3103/S0096392519030076
181. Yagolovich AV, Artykov AA, Dolgikh DA, **Kirpichnikov MP**, Gasparian ME (2019). A New Efficient Method for Production of Recombinant Antitumor Cytokine TRAIL and Its Receptor-Selective Variant DR5-B. *Biochemistry (Mosc)* 84 (6), 627–636, 10.1134/S0006297919060051
182. Gapizov SS, Petrovskaya LE, Shingarova LN, Kryukova EA, Boldyreva EF, Lukashev EP, Yakimov SA, Svirshchevskaya EV, Dolgikh DA, **Kirpichnikov MP** (2019). Fusion with an albumin-binding domain improves pharmacokinetics of an αvβ3-integrin binding fibronectin scaffold protein. *J Appl Biochem* 66 (4), 617–625, 10.1002/bab.1762
183. Ostrovsky MA, **Kirpichnikov MP** (2019). Prospects of Optogenetic Prosthesis of the Degenerative Retina of the Eye. *Biochemistry (Mosc)* 84 (5), 479–490, 10.1134/S0006297919050031
184. Shenkarev ZO, Shulepko MA, Peigneur S, Myshkin MY, Berkut AA, Vassilevski AA, Tytgat J, Lyukmanova EN, **Kirpichnikov MP** (2019). Recombinant Production and Structure-Function Study of the Ts1 Toxin from the Brazilian Scorpion Tityus serrulatus. *Dokl Biochem Biophys* 484 (1), 9–12, 10.1134/S1607672919010034
185. Bychkov M, Shenkarev Z, Shulepko M, Shlepova O, **Kirpichnikov M**, Lyukmanova E (2019). Water-soluble variant of human Lynx1 induces cell cycle arrest and apoptosis in lung cancer cells via modulation of α7 nicotinic acetylcholine receptors. *PLoS One* 14 (5), e0217339, 10.1371/journal.pone.0217339
186. Ilina EN, Solopova EV, Aliev TK, Larina MV, Balabashin DS, Varlamov NE, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2019). The Generation of the Human mAb RabD4 Specific to the Rabies Virus Glycoprotein and Characterization Thereof. *Dokl Biochem Biophys* 485 (1), 126–128,

10.1134/S1607672919020133
187. Nekrasov AN, Alekseeva LG, Pogosyan RA, Dolgikh DA, **Kirpichnikov MP**, de Brevern AG, Anashkina AA (2019). A minimum set of stable blocks for rational design of polypeptide chains.*Biochimie* 160, 88–92, 10.1016/j.biochi.2019.02.006
188. **Kirpichnikov MP**, Ostrovsky MA (2019). Optogenetics and Vision. *HER RUSS ACAD SCI+* 89 (1), 34–38, 10.1134/S1019331619010039
189. Chang HW, Valieva ME, Safina A, Chereji RV, Wang J, Kulaeva OI, Morozov AV, **Kirpichnikov MP**, Feofanov AV, Gurova KV, Studitsky VM (2018). Mechanism of FACT removal from transcribed genes by anticancer drugs curaxins. *Sci Adv* 4 (11), eaav2131, 10.1126/sciadv.aav2131
190. Ilina EN, Solopova ON, Balabashin DS, Larina MV, Aliev TK, Grebennikova TV, Losich MA, Zaykova ON, Sveshnikov PG, Dolgikh DA, **Kirpichnikov MP** (2018). Generation and Characterization of a Neutralizing Monoclonal Antibody Against Rabies Virus. *Russ. J. Bioorganic Chem.* 44 (6), 695–704, 10.1134/S1068162019010072
191. Feofanov AV, Andreeva TV, Studitsky VM, **Kirpichnikov MP** (2018). Reversibility of Structural Rearrangements in Mononucleosomes Induced by Ionic Strength. *Moscow Univ Biol Sci Bull* 73 (3), 157–161, 10.3103/S0096392518030070
192. Siletsky SA, Mamedov MD, Lukashev EP, Balashov SP, Dolgikh DA, Rubin AB, **Kirpichnikov MP**, Petrovskaya LE (2018). Elimination of proton donor strongly affects directionality and efficiency of proton transport in ESR, a light-driven proton pump from Exiguobacterium sibiricum. *BIOCHIM BIOPHYS ACTA* 1860 (1), 1–11, 10.1016/j.bbabio.2018.09.365
193. Bychkov ML, Vasilyeva NA, Shulepko MA, Balaban PM, **Kirpichnikov MP**, Lyukmanova EN (2018). Lynx1 Prevents Long-Term Potentiation Blockade and Reduction of Neuromodulator Expression Caused by Aβ1-42 and JNK Activation. *Acta Naturae* 10 (3), 57–61, 10.32607/20758251-2018-10-3-57-61
194. Argentova VV, Aliev TK, Zarubaev VV, Klotchenko SA, Shtro AA, Sergeeva MV, Toporova VA, Dolgikh DA, Sveshnikov PG, Vasin AV, **Kirpichnikov MP** (2018). Erratum to: In vitro Antiviral Activity of Recombinant Antibodies of IgG and IgA Isotypes to Hemagglutinin of the Influenza A Virus (Molecular Biology, (2017) 51, (804), 10.1134/S0026893317060024). *Mol Biol* 52 (5), 786, 10.1134/S0026893318090017
195. **(конференция)** Valieva M, Chertkov O, Karlova M, **Kirpichnikov MP**, Feofanov AV, Sokolova OS, Studitsky V (2018). Multiple Conformations of Compact Dhmdeosomes: Analysis by Electron Microscopy. *Microsc Microanal* 24 (S1), 1242–1243, 10.1017/S1431927618006694
196. **(конференция)** Armeev GA, Lubitelev AV, Studitsky VM, Feofanov AV, **Kirpichnikov MP** (2018). SpFRET Microscopy Analysis of Distances between DNA Linkers in Mononucleosomes. *Microsc Microanal* 24 (S1), 1394–1395, 10.1017/S1431927618007456
197. Belikov NE, Melnikova IA, Demina OV, Petrovskaya LE, Kryukova EA, Dolgikh DA, Kuzmichev PK, Chupin VV, Lukin AY, Shumsky AN, Chizhov I, Levin PP, **Kirpichnikov MP**, Varfolomeev SD, Khodonov AA (2018). The effect of the chromophoric group modification on the optical properties of retinal proteins. *MENDELEEV COMMUN* 28 (4), 406–408, 10.1016/j.mencom.2018.07.022
198. Lyukmanova EN, Bychkov ML, Sharonov GV, Efremenko AV, Shulepko MA, Kulbatskii DS, Shenkarev ZO, Feofanov AV, Dolgikh DA, **Kirpichnikov MP** (2018). Human secreted proteins SLURP-1 and SLURP-2 control the growth of epithelial cancer cells via interactions with nicotinic acetylcholine receptors. *Br J Pharmacol* 175 (11), 1973–1986, 10.1111/bph.14194
199. Shingarova LN, Petrovskaya LE, Zlobinov AV, Gapizov SS, Kryukova EA, Birikh KR, Boldyreva EF, Yakimov SA, Dolgikh DA, **Kirpichnikov MP** (2018). Construction of Artificial TNF-Binding Proteins Based on the 10th Human Fibronectin Type III Domain Using Bacterial Display. *Biochemistry (Mosc)* 83 (6), 708–716, 10.1134/S0006297918060081
200. Shenkarev ZO, Karlova MG, Kulbatskii DS, **Kirpichnikov MP**, Lyukmanova EN, Sokolova OS (2018). Recombinant Production, Reconstruction in Lipid–Protein Nanodiscs, and Electron Microscopy of Full-Length α-Subunit of Human Potassium Channel Kv7.1. *Biochemistry (Mosc)* 83 (5), 562–573,

10.1134/S0006297918050097
201. Männikkö R, Shenkarev ZO, Thor MG, Berkut AA, Myshkin MY, Paramonov AS, Kulbatskii DS, Kuzmin DA, Castañeda MS, King L, Wilson ER, Lyukmanova EN, **Kirpichnikov MP**, Schorge S, Bosmans F, Hanna MG, Kullmann DM, Vassilevski AA (2018). Spider toxin inhibits gating pore currents underlying periodic paralysis. *Proc Natl Acad Sci U S A* 115 (17), 4495–4500, 10.1073/pnas.1720185115
202. Aliev TK, Dementyeva IG, Toporova VA, Argentova VV, Pozdnyakova LP, Bokov MN, Votchitseva YA, Dolgikh DA, Varfolomeyev SD, Sveshnikov PG, **Kirpichnikov MP** (2018). The development and study of recombinant immunoglobulin a to hemagglutinins of the influenza virus. *Acta Naturae* 10 (2), 30–36, 10.32607/20758251-2018-10-2-3036
203. Aliev TK, Dementeva IG, Toporova VA, Argentova VV, Pozdnyakova LP, Bokov MN, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2018). The Development and Inmmunochemical Properties of the Dimer of Immunoglobulin A Specific to the Influenza Virus A Hemagglutinin. *Dokl Biochem Biophys* 478 (1), 34–36, 10.1134/S160767291801009X
204. Gapizov SS, Petrovskaya LE, Shingarova LN, Svirschevskaya EV, Dolgikh DA, **Kirpichnikov MP** (2018). The effect of TNF and VEGF on the properties of Ea.hy926 endothelial cells in a model of multi-cellular spheroids. *Acta Naturae* 10 (1), 34–42, 10.32607/20758251-2018-10-1-34-42
205. Petrovskaya LE, Zlobinov AV, Shingarova LN, Boldyreva EF, Gapizov SS, Novototskaya-Vlasova KA, Rivkina EM, Dolgikh DA, **Kirpichnikov MP** (2018). Fusion with the cold-active esterase facilitates autotransporter-based surface display of the 10th human fibronectin domain in Escherichia coli. *Extremophiles* 22 (1), 141–150, 10.1007/s00792-017-0990-7
206. Panina AA, Dementieva IG, Aliev TK, Toporova VA, Balabashin DS, Bokov MN, Pozdnyakova LP, Shemchukova OB, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2018). Recombinant antibodies to the Ebola virus glycoprotein. *Acta Naturae* 9 (4), 84–91, 10.32607/20758251-2017-9-4-84-91
207. Ilina EN, Larina MV, Aliev TK, Dolgikh DA, **Kirpichnikov MP** (2018). Recombinant monoclonal antibodies for rabies post-exposure prophylaxis. *Biochemistry (Mosc)* 83 (1), 1–12, 10.1134/S0006297918010017
208. Paramonov AS, Kulbatskii DS, Loktyushov EV, Tsarev AV, Dolgikh DA, Shenkarev ZO, **Kirpichnikov MP**, Lyukmanova EN (2018). Recombinant production and structural studies of the human Lypd6 and Lypd6b proteins. *Russ. J. Bioorganic Chem.* 43 (6), 644–652, 10.1134/S1068162017060127
209. Алиев ТК, Дементьева ИГ, Топорова ВА, Аргентова ВВ, Позднякова ЛП, Боков МН, Долгих ДА, Свешников ПГ, **Кирпичников МП** (2018). Получение и иммунохимические свойства димера иммуноглобулина А, специфичного к гемагглютинину вируса гриппа А. *Dokl Akad Nauk* 478 (5), 593–595, 10.7868/S0869565218050213
210. Aliev TK, Dementyeva IG, Toporova VA, Argentova VV, Pozdnyakova LP, Bokov MN, Votchitseva YA, Dolgikh DA, Varfolomeyev SD, Sveshnikov PG, **Kirpichnikov MP** (2018). The Development and Study of Recombinant Immunoglobulin A to Hemagglutinins of the Influenza Virus. *Acta Naturae* 10 (2), 30–36, 10.32607/20758251-2018-10-2-30-36
211. Gasparian ME, Bychkov ML, Yagolovich AV, **Kirpichnikov MP**, Dolgikh DA (2017). The effect of cisplatin on cytotoxicity of anticancer cytokine TRAIL and its receptor-selective mutant variant DR5-B1. *Dokl Biochem Biophys* 477 (1), 385–388, 10.1134/S1607672917060114
212. Myshkin MY, Paramonov AS, Kulbatskii DS, Lyukmanova EN, **Kirpichnikov MP**, Shenkarev ZO (2017). “Divide and conquer” approach to the structural studies of multidomain ion channels by the example of isolated voltage sensing domains of human Kv2.1 and Nav1.4 channels. *Russ. J. Bioorganic Chem.* 43 (6), 634–643, 10.1134/S1068162017060103
213. Karlova MG, Volokh OI, Chertkov OV, **Kirpichnikov MP**, Studitsky VM, Sokolova OS (2017). Purification and concentration of RNA polymerase on Ni-lipid monolayers. *Russ. J. Bioorganic Chem.* 43 (6), 658–663, 10.1134/S1068162017060048
214. Argentova VV, Aliev TK, Zarubaev VV, Klotchenko SA, Shtro AA, Sergeeva MV, Toporova VA, Dolgikh DA, Sveshnikov PG, Vasin VA, **Kirpichnikov MP** (2017). In vitro Antiviral Activity of Recombinant Antibodies of IgG and IgA Isotypes to Hemagglutinin of the Influenza A Virus. *Mol Biol (Mosk)* 51 (6),

927–937, 10.7868/S0026898417060052
215. Argentova VV, Aliev TK, Zarubaev VV, Klotchenko SA, Shtro AA, Sergeeva MV, Toporova VA, Dolgikh DA, Sveshnikov PG, Vasin VA, **Kirpichnikov MP** (2017). In vitro Antiviral Activity of Recombinant Antibodies of IgG and IgA Isotypes to Hemagglutinin of the Influenza A Virus. *Mol Biol* 51 (6), 804–812, 10.1134/S0026893317060024
216. Nekrasova O, Yakimov S, **Kirpichnikov M**, Feofanov A (2017). Recombinant scorpion toxins: Focus on four-disulfide peptide blockers of Kv1-channels. *Bioengineered* 9 (1), 25–29, 10.1080/21655979.2017.1373530
217. Panina AA, Dementyeva IG, Aliev TK, Toporova VA, Bokov MN, Pozdnyakova LP, Shemchukova OB, Dolgikh DA, Sveshnikov PG, **Kirpichnikov MP** (2017). Chimeric fab fragments of antibodies to recombinant Ebola virus glycoprotein. *Russ. J. Bioorganic Chem.* 43 (4), 409–420, 10.1134/S1068162017040069
218. Lyubitelev AV, Studitsky VM, Feofanov AV, **Kirpichnikov MP** (2017). Effect of sodium and potassium ions on conformation of linker parts of nucleosomes. *Moscow Univ Biol Sci Bull* 72 (3), 146–150, 10.3103/S0096392517030075
219. Nekrasova OV, Volyntseva AD, Kudryashova KS, Novoseletsky VN, Lyapina EA, Illarionova AV, Yakimov SA, Korolkova YV, Shaitan KV, **Kirpichnikov MP**, Feofanov AV (2017). Complexes of Peptide Blockers with Kv1.6 Pore Domain: Molecular Modeling and Studies with KcsA-Kv1.6 Channel. *J Neuroimmune Pharmacol* 12 (2), 260–276, 10.1007/s11481-016-9710-9
220. Chertkova RV, Brazhe NA, Bryantseva TV, Nekrasov AN, Dolgikh DA, Yusipovich AI, Sosnovtseva O, Maksimov GV, Rubin AB, **Kirpichnikov MP** (2017). New insight into the mechanism of mitochondrial cytochrome c function. *PLoS One* 12 (5), e0178280, 10.1371/journal.pone.0178280
221. Argentova VV, Aliev TK, Toporova VA, Rybchenko VS, Dolgikh DA, **Kirpichnikov MP** (2017). Studies on the influence of different designs of eukaryotic vectors on the expression of recombinant IgA. *Moscow Univ Biol Sci Bull* 72 (2), 63–68, 10.3103/S0096392517020018
222. Smitienko OA, Nekrasova OV, Kudriavtsev AV, Yakovleva MA, Shelaev IV, Gostev FE, Dolgikh DA, Kolchugina IB, Nadtochenko VA, **Kirpichnikov MP**, Feldman TB, Ostrovsky MA (2017). Femtosecond and picosecond dynamics of recombinant bacteriorhodopsin primary reactions compared to the native protein in trimeric and monomeric forms. *Biochemistry (Mosc)* 82 (4), 490–500, 10.1134/S0006297917040113
223. Paramonov AS, Lyukmanova EN, Myshkin MY, Shulepko MA, Kulbatskii DS, Petrosian NS, Chugunov AO, Dolgikh DA, **Kirpichnikov MP**, Arseniev AS, Shenkarev ZO (2017). NMR investigation of the isolated second voltage-sensing domain of human Nav1.4 channel. *BIOCHIM BIOPHYS ACTA* 1859 (3), 1–33, 10.1016/j.bbamem.2017.01.004
224. Shulepko MA, Lyukmanova EN, Shenkarev ZO, Dubovskii PV, Astapova MV, Feofanov AV, Arseniev AS, Utkin YN, **Kirpichnikov MP**, Dolgikh DA (2017). Towards universal approach for bacterial production of three-finger Ly6/uPAR proteins: Case study of cytotoxin I from cobra N. oxiana. *Protein Expr Purif* 130, 13–20, 10.1016/j.pep.2016.09.021
225. Nekrasova O, Kudryashova K, Fradkov A, Yakimov S, Savelieva M, **Kirpichnikov M**, Feofanov A (2017). Straightforward approach to produce recombinant scorpion toxins—Pore blockers of potassium channels. *J Biotechnol* 241, 127–135, 10.1016/j.jbiotec.2016.11.030
226. System Error!