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Контакты

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Образование

2008– 2008	Россия, Москва	Московский государственный университет им. М.В. Ломоносова, кафедра биоинженерии биологического факультета	Защита кандидатской диссертации по биологическим наукам (специальность 03.00.02 Биофизика)
2005– 2008	Россия, Долгопрудный	Московский Физико-Технический Институт (Государственный Университет) (МФТИ)	Аспирант.
2002– 2005	Россия, Москва	Институт Биоорганической химии имени академиков М.М. Шемякина и Ю.А. Овчинникова РАН, Учебно Научный Центр.	
1999– 2005	Россия, Долгопрудный	Московский Физико-Технический Институт (Государственный Университет) (МФТИ)	Бакалавр. Магистр.

Работа

2020–наст.вр.	Россия, Долгопрудный	МФТИ	доцент
2002–наст.вр.	Россия, Москва	ИБХ РАН	инж.-иссл. / мнс / нс /снс
2008–2018	Россия, Москва	МГУ им М.В. Ломоносова	научный сотрудник

Работа в ИБХ

2018–наст.вр.	Старший научный сотрудник
2008–2018	Научный сотрудник
2002–2008	Младший научный сотрудник

Владение языками

русский, английский

Научные интересы

Структурная биология, молекулярная биология, биофизика, биохимия, эволюция (биология), эволюция (физика).

Членство в сообществах

FEBS

Степени и звания

Ссылки и контакты

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Гранты и проекты

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- 2022–
2024 [Структурные основы функционирования нейротрофиновых рецепторов](#)
-
- 2020–
2022 [Исследование структурных основ взаимодействия мембранных белков P75 и SORCS2 в процессе внутриклеточной сигнализации](#)
-
- 2018–
2023 [Разработка новых молекулярных инструментов ферментативного и флуорогенного флуоресцентного мечения для прижизненной визуализации в живых системах](#)
-
- 2017–
2018 [Изучение процессов связывания с лигандом и структурной динамики необычного хемокинового рецептора D6R человека с применением спектроскопии ЯМР](#)
-
- 2019–
2022 [Структурная биология мембранных белков для создания новых лекарственных и диагностических средств](#)
-
- 2020–
2022 [Изучение роли внеклеточного примембранного региона и трансмембранного домена рецептора нейротрофинов TrkA в процессе передачи сигнала через мембрану](#)
-
- 2020–
2021 [Исследование структурных основ внутриклеточной сигнализации Толл-подобных рецепторов методами спектроскопии ЯМР в растворе](#)
-
- 2014–
2018 [Структурные основы молекулярных механизмов передачи сигнала интегральными мембранными белками I типа](#)
-

Публикации

1. Gilvanov AR, Myasnyanko IN, **Goncharuk SA**, Goncharuk MV, Kublitski VS, Bodunova DV, Sidorenko SV, Maksimov EG, Baranov MS, Bogdanova YA (2025). Fluorescence Lifetime Multiplexing with Fluorogen-Activating FAST Protein Variants and Red-Shifted Arylidene–Imidazolone Derivative as Fluorogen. *Biosensors (Basel)* 15 (5), , [10.3390/bios15050274](https://doi.org/10.3390/bios15050274)
2. Lushpa VA, Lin C, Talyzina IA, Goncharuk MV, Bocharov EV, Arseniev AS, Wang X, **Goncharuk SA**, Mineev KS (2025). The intracellular domain of TLR2 is capable of high-affinity Zn binding: possible outcomes for the receptor activation. *FEBS Lett* , , [10.1002/1873-3468.70026](https://doi.org/10.1002/1873-3468.70026)
3. Bedanokova DR, Goncharuk MV, Shabalkina AV, Lushpa VA, Arseniev AS, Bocharov EV, Mineev KS, **Goncharuk SA** (2024). Production and Refolding of the Ligand-Binding Domain of TrkA Receptor with the Extracellular Juxtamembrane Region. *Russ. J. Bioorganic Chem.* 50 (6), 2589–2595, [10.1134/S1068162024060232](https://doi.org/10.1134/S1068162024060232)
4. Bogdanova YA, Solovyev ID, Baleeva NS, Myasnyanko IN, Gorshkova AA, Gorbachev DA, Gilvanov AR, **Goncharuk SA**, Goncharuk MV, Mineev KS, Arseniev AS, Bogdanov AM, Savitsky AP, Baranov MS (2024). Fluorescence lifetime multiplexing with fluorogen activating protein FAST variants. *Commun Biol* 7 (1), 799, [10.1038/s42003-024-06501-1](https://doi.org/10.1038/s42003-024-06501-1)
5. Kot EF, **Goncharuk SA**, Franco ML, McKenzie DM, Arseniev AS, Benito-Martínez A, Costa M, Cattaneo A, Hristova K, Vilar M, Mineev KS (2024). Structural basis for the transmembrane signaling and antidepressant-induced activation of the receptor tyrosine kinase TrkB. *Nat Commun* 15 (1), 9316, [10.1038/s41467-024-53710-7](https://doi.org/10.1038/s41467-024-53710-7)
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7. Lushpa VA, Goncharuk MV, Talyzina IA, Arseniev AS, Bocharov EV, Mineev KS, **Goncharuk SA** (2024). TIR domains of TLR family-from the cell culture to the protein sample for structural studies. *PLoS One* 19 (7), e0304997, [10.1371/journal.pone.0304997](https://doi.org/10.1371/journal.pone.0304997)
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9. Kislova S, Motov V, Myasnyanko I, Pytskii I, **Goncharuk S**, Boldyrev I (2024). Conformational transitions of maleic acid segment drive pH induced changes in SMA polymer structure and solubility. *J Mol Liq* 398, , [10.1016/j.molliq.2024.124302](https://doi.org/10.1016/j.molliq.2024.124302)
10. Baleeva NS, Bogdanova YA, Goncharuk MV, Sokolov AI, Myasnyanko IN, Kublitski VS, Smirnov AY, Gilvanov AR, **Goncharuk SA**, Mineev KS, Baranov MS (2024). A Combination of Library Screening and Rational Mutagenesis Expands the Available Color Palette of the Smallest Fluorogen-Activating Protein Tag nanoFAST. *Int J Mol Sci* 25 (5), , [10.3390/ijms25053054](https://doi.org/10.3390/ijms25053054)
11. Goncharuk MV, Vasileva EV, Ananiev EA, Gorokhovatsky AY, Bocharov EV, Mineev KS, **Goncharuk SA** (2023). Facade-Based Bicelles as a New Tool for Production of Active Membrane Proteins in a Cell-Free System. *Int J Mol Sci* 24 (19), , [10.3390/ijms241914864](https://doi.org/10.3390/ijms241914864)
12. Moliner R, Giryh M, Brunello CA, Kovaleva V, Biojone C, Enkavi G, Antenucci L, Kot EF, **Goncharuk SA**, Kaurinkoski K, Kuutti M, Fred SM, Elsilä LV, Sakson S, Cannarozzo C, Diniz CRAF, Seiffert N, Rubiolo A, Haapaniemi H, Meshi E, Nagaeva E, Öhman T, Róg T, Kankuri E, Vilar M, Varjosalo M, Korpi ER, Permi P, Mineev KS, Saarma M, Vattulainen I, Casarotto PC, Castrén E (2023). Psychedelics promote plasticity by directly binding to BDNF receptor TrkB. *Nat Neurosci* 26 (6), 1032–1041, [10.1038/s41593-023-01316-5](https://doi.org/10.1038/s41593-023-01316-5)
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27. Kot EF, Wang Y, **Goncharuk SA**, Zhang B, Arseniev AS, Wang X, Mineev KS (2020). Oligomerization analysis as a tool to elucidate the mechanism of EBV latent membrane protein 1 inhibition by pentamidine. *BIOCHIM BIOPHYS ACTA* 1862 (10), 183380, [10.1016/j.bbamem.2020.183380](https://doi.org/10.1016/j.bbamem.2020.183380)
28. Franco ML, Nadezhdin KD, **Goncharuk SA**, Mineev KS, Arseniev AS, Vilar M (2019). Structural basis of the transmembrane domain dimerization and rotation in the activation mechanism of the TRKA receptor by nerve growth factor. *J Biol Chem* 295 (1), 275–286, [10.1074/jbc.RA119.011312](https://doi.org/10.1074/jbc.RA119.011312)
29. Nadezhdin KD, **Goncharuk SA**, Arseniev AS, Mineev KS (2019). NMR structure of a full-length single-pass membrane protein NRADD. *Proteins* 87 (9), 786–790, [10.1002/prot.25703](https://doi.org/10.1002/prot.25703)
30. **Goncharuk SA**, Artemieva LE, Tabakmakher VM, Arseniev AS, Mineev KS (2018). CARD domain of rat RIP2 kinase: Refolding, solution structure, pH-dependent behavior and protein-protein interactions. *PLoS One* 13 (10), e0206244, [10.1371/journal.pone.0206244](https://doi.org/10.1371/journal.pone.0206244)
31. Kot EF, **Goncharuk SA**, Arseniev AS, Mineev KS (2018). Phase Transitions in Small Isotropic Bicelles. *Langmuir* 34 (11), 3426–3437, [10.1021/acs.langmuir.7b03610](https://doi.org/10.1021/acs.langmuir.7b03610)
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37. Bocharova OV, Bragin PE, Bocharov EV, Mineev KS, **Goncharuk SA**, Arseniev AS (2016). Cell Free expression and purification of the fragments of the receptor tyrosine kinases of the EGFR Family, containing the transmembrane domain with the juxtamembrane region, for structural studies. *BIOL MEMBRANY* 33 (2), 124–132, [10.7868/S0233475516020043](https://doi.org/10.7868/S0233475516020043)
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- structural studies. *Russ. J. Bioorganic Chem.* 41 (6), 631–637, [10.1134/S1068162015060047](https://doi.org/10.1134/S1068162015060047)
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45. (конференция) Lesovoy DM, Bocharov EV, Mayzel ML, **Goncharuk SA**, Goncharuk MV, Volynsky PE, Efremov RG, Arseniev AS (2011). Structural and dynamical model of transmembrane domain of fibroblast growth factor receptor 3. *EUROMAR 2011*, 191.
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