

## Резюме: Гончарук Сергей Александрович



### Адрес

Федеральное государственное  
бюджетное учреждение науки  
Институт биоорганической химии им.  
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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	
2008–2018	Россия, Москва	МГУ им М.В. Ломоносова	научный сотрудник

### Работа в ИБХ

2018–наст.вр.	Старший научный сотрудник
	Научный сотрудник

### Владение языками

русский, английский

### Научные интересы

Молекулярная биология, биофизика, генетика, биохимия, эволюция (биологическая), эволюция вселенной.

### Членство в сообществах

FEBS

### Степени и звания

2009	Кандидат наук (Биологические науки, 03.00.02 — Биофизика)
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## Ссылки и контакты

<http://www.penzhouse.com>, ORCID: [0000-0002-0263-6462](https://orcid.org/0000-0002-0263-6462), [Google Scholar](#), ResearcherID: [Q-4481-2016](https://www.researcherid.com/urn/urn:li:org:rid:Q-4481-2016), Scopus: [35322291200](https://scopus.com/authid/detail.uri?authorId=35322291200), SPIN ПИНЦ: 1482-3575, ID ПИНЦ - 1059484

## Гранты и проекты

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2022– наст.вр.	<a href="#">Структурные основы функционирования нейротрофиновых рецепторов</a>
2020– наст.вр.	<a href="#">Исследование структурных основ взаимодействия мембранных белков P75 и SORCS2 в процессе внутриклеточной сигнализации</a>
2019– наст.вр.	<a href="#">Структурная биология мембранных белков для создания новых лекарственных и диагностических средств</a>
2020– наст.вр.	<a href="#">Изучение роли внеклеточного примембранного региона и трансмембранного домена рецептора нейротрофинов TrkA в процессе передачи сигнала через мембрану</a>
2020– 2021	<a href="#">Исследование структурных основ внутриклеточной сигнализации Толл-подобных рецепторов методами спектроскопии ЯМР в растворе</a>
2014– 2018	<a href="#">Структурные основы молекулярных механизмов передачи сигнала интегральными мембранными белками I типа</a>

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## Публикации

1. Artemieva LE, Mineev KS, Arseniev AS, **Goncharuk SA** (2022). Expression, purification and characterization of SORCS2 intracellular domain for structural studies. *Protein Expr Purif* 193, 106058, [10.1016/j.pep.2022.106058](https://doi.org/10.1016/j.pep.2022.106058)
2. Kot EF, Franco ML, Vasilieva EV, Shabalkina AV, Arseniev AS, **Goncharuk SA**, Mineev KS, Vilar M (2022). Intrinsically disordered regions couple the ligand binding and kinase activation of Trk neurotrophin receptors. *iScience* 25 (6), 104348, [10.1016/j.isci.2022.104348](https://doi.org/10.1016/j.isci.2022.104348)
3. Lushpa VA, Goncharuk MV, Lin C, Zalevsky AO, Talyzina IA, Luginina AP, Vakhrameev DD, Shevtsov MB, **Goncharuk SA**, Arseniev AS, Borshchevskiy VI, Wang X, Mineev KS (2021). Modulation of Toll-like receptor 1 intracellular domain structure and activity by Zn<sup>2+</sup> ions. *Commun Biol* 4 (1), 1003, [10.1038/s42003-021-02532-0](https://doi.org/10.1038/s42003-021-02532-0)
4. Franco ML, Nadezhdin KD, Light TP, **Goncharuk SA**, Soler-Lopez A, Ahmed F, Mineev KS, Hristova K, Arseniev AS, Vilar M (2021). Interaction between the transmembrane domains of neurotrophin receptors p75 and TrkA mediates their reciprocal activation. *J Biol Chem* 297 (2), 100926, [10.1016/j.jbc.2021.100926](https://doi.org/10.1016/j.jbc.2021.100926)
5. Mineev KS, **Goncharuk SA**, Goncharuk MV, Povarova NV, Sokolov AI, Baleeva NS, Smirnov AY, Myasnyanko IN, Ruchkin DA, Bukhdruker S, Remeeva A, Mishin A, Borshchevskiy V, Gordeliy V, Arseniev AS, Gorbachev DA, Gavrikov AS, Mishin AS, Baranov MS (2021). NanoFAST: structure-based design of a small fluorogen-activating protein with only 98 amino acids. *Chem Sci* 12 (19), 6719–6725, [10.1039/d1sc01454d](https://doi.org/10.1039/d1sc01454d)
6. Gorokhovatsky AY, Chepurnykh TV, Shcheglov AS, Mokrushina YA, Baranova MN, **Goncharuk SA**, Purtov KV, Petushkov VN, Rodionova NS, Yampolsky IV (2021). The Recombinant Luciferase of the Fungus *Neonothopanus nambi*: Obtaining and Properties. *Dokl Biochem Biophys* 496 (1), 52–55, [10.1134/S1607672921010051](https://doi.org/10.1134/S1607672921010051)
7. Goncharuk MV, Lushpa VA, **Goncharuk SA**, Arseniev AS, Mineev KS (2021). Sampling the cultivation parameter space for the bacterial production of TLR1 intracellular domain reveals the multiple optima. *Protein Expr Purif* 181, 105832, [10.1016/j.pep.2021.105832](https://doi.org/10.1016/j.pep.2021.105832)
8. **Goncharuk SA**, Artemieva LE, Nadezhdin KD, Arseniev AS, Mineev KS (2020). Revising the mechanism of p75NTR activation: intrinsically monomeric state of death domains invokes the 'helper' hypothesis. *Sci Rep* 10 (1), 13686, [10.1038/s41598-020-70721-8](https://doi.org/10.1038/s41598-020-70721-8)

9. 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)
10. 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)
11. 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)
12. **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)
13. 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)
14. Mineev KS, **Goncharuk SA**, Goncharuk MV, Volynsky PE, Novikova EV, Arseniev AS (2017). Spatial structure of TLR4 transmembrane domain in bicelles provides the insight into the receptor activation mechanism. *Sci Rep* 7 (1), 6864, [10.1038/s41598-017-07250-4](https://doi.org/10.1038/s41598-017-07250-4)
15. Mineev KS, Nadezhdin KD, **Goncharuk SA**, Arseniev AS (2017). Façade detergents as bicelle rim-forming agents for solution NMR spectroscopy. *Nanotechnol Rev* 6 (1), 93–103, [10.1515/ntrev-2016-0069](https://doi.org/10.1515/ntrev-2016-0069)
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23. Mineev KS, Lesovoy DM, Usmanova DR, **Goncharuk SA**, Shulepko MA, Lyukmanova EN, Kirpichnikov MP, Bocharov EV, Arseniev AS (2014). NMR-based approach to measure the free energy of transmembrane helix-helix interactions. *BIOCHIM BIOPHYS ACTA* 1838 (1), 164–172, [10.1016/j.bbamem.2013.08.021](https://doi.org/10.1016/j.bbamem.2013.08.021)
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28. **Goncharuk SA**, Goncharuk MV, Mayzel ML, Lesovoy DM, Chupin VV, Bocharov EV, Arseniev AS, Kirpichnikov MP (2011). Bacterial Synthesis and Purification of Normal and Mutant Forms of Human FGFR3 Transmembrane Segment. *Acta Naturae* 3 (3), 77–84.
29. **Goncharuk SA**, Shulga AA, Ermolyuk YS, Kuzmichev PK, Sobol VA, Bocharov EV, Chupin VV, Arseniev AS, Kirpichnikov MP (2009). Bacterial synthesis, purification, and solubilization of membrane protein KCNE3, a regulator of voltage-gated potassium channels. *Biochemistry (Mosc)* 74 (12), 1344–1349, [10.1134/S0006297909120074](https://doi.org/10.1134/S0006297909120074)