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Адрес

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Образование

2008– 2008	Брюссель, Бельгия	Стажировка в Свободном университете Брюсселя	Моделирование структуры комплекса вазоактивного интестинального пептида (ВИП) с его рецептором. Дизайн селективной пары неорецептор-неолиганд
2003– 2006	Россия, Москва	Московский государственный университет им. М.В. Ломоносова, кафедра биоинженерии биологического факультета	Диплом кандидата физико-математических наук. Тема диссертации: «Новые подходы к молекулярному моделированию трансмембранных доменов рецепторов, действие которых опосредовано G-белками»
1998– 2003	Россия, Москва	Московский государственный университет им. М.В. Ломоносова, кафедра биофизики биологического факультета	Диплом биофизика с отличием по теме: «Молекулярное моделирование человеческих рецепторов MT1 и MT2 мелатонина»
1994– 1998	Россия, Зеленоград	ФМШ №1030	Окончил с золотой медалью

Работа в ИБХ

2018–наст.вр.	Старший научный сотрудник
	Старший научный сотрудник

Членство в советах и комиссиях ИБХ

Ученый совет

Владение языками

Русский, Английский

Награды

2013	Медаль Европейской Академии	За работу «Компьютерное моделирование структуры и функций биомембран и мембранных белков»
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Научные интересы

Меня интересуют принципы пространственной организации белков и механизмы их сворачивания. В первую очередь это касается мембранных белков и рецепторов, таких как G-белоксопращённые рецепторы. Поскольку выбранная мной методическая сфера — это компьютерное моделирование структуры и динамики биомакромолекул, больше всего мне интересно, удастся ли когда-нибудь моделировать все эти важнейшие процессы на компьютере — без такой большой оглядки на эксперимент, которую всегда приходится делать теперь.

Степени и звания

Кандидат наук (Физико-математические науки, 03.00.02 — Биофизика)

Ссылки и контакты

<http://biomolecula.ru>, Scopus: [34569445900](#), [Google Scholar](#), ORCID: [0000-0003-1331-3949](#), ResearcherID: [D-1058-2009](#)

Публикации

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2. Scherbakov KA, Vassilevski AA, **Chugunov AO** (2025). Potassium channel selectivity is determined by square antiprismatic ion chelation. *Int J Biol Macromol* 305 (Pt 1), 140690, [10.1016/j.ijbiomac.2025.140690](#)
3. 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](#)
4. Chernykh MA, Duzheva MA, Kuldyshev NA, Peigneur S, Berkut AA, Tytgat J, Vassilevski AA, **Chugunov AO** (2024). Scorpion Neurotoxin BeM9 Derivative Uncovers Unique Interaction Mode with Nav1.5 Sodium Channel Isoform. *Russ. J. Bioorganic Chem.* 50 (4), 1341–1350, [10.1134/S1068162024040083](#)
5. Zavarzina II, Kuzmenkov AI, Dobrokhotov NA, Maleeva EE, Korolkova YV, Peigneur S, Tytgat J, Krylov NA, Vassilevski AA, **Chugunov AO** (2024). The scorpion toxin BeKm-1 blocks hERG cardiac potassium channels using an indispensable arginine residue. *FEBS Lett* 598 (8), 889–901, [10.1002/1873-3468.14850](#)
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7. 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](#)
8. **Chugunov AO**, Dvoryakova EA, Dyuzheva MA, Simonyan TR, Tereshchenkova VF, Filippova IY, Efremov RG, Elpidina EN (2023). Fighting Celiac Disease: Improvement of pH Stability of Cathepsin L In Vitro by Computational Design. *Int J Mol Sci* 24 (15), 12369, [10.3390/ijms241512369](#)
9. Panina IS, Balandin SV, Tsarev AV, **Chugunov AO**, Tagaev AA, Finkina EI, Antoshina DV, Sheremeteva EV, Paramonov AS, Rickmeyer J, Bierbaum G, Efremov RG, Shenkarev ZO, Ovchinnikova TV (2023). Specific Binding of the α -Component of the Lantibiotic Lichenicidin to the Peptidoglycan Precursor Lipid II Predetermines Its Antimicrobial Activity. *Int J Mol Sci* 24 (2), 1332, [10.3390/ijms24021332](#)
10. Zaigraev MM, Lyukmanova EN, Paramonov AS, Shenkarev ZO, **Chugunov AO** (2022). Orientational Preferences of GPI-Anchored Ly6/uPAR Proteins. *Int J Mol Sci* 24 (1), 11, [10.3390/ijms24010011](#)
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- acetylcholine receptors reduce proliferation of human colorectal adenocarcinoma HT-29 cells. *Acta Naturae* 6 (23), 60–66, [10.32607/20758251-2014-6-4-60-66](https://doi.org/10.32607/20758251-2014-6-4-60-66)
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