

## Резюме: Чугунов Антон Олегович



### Адрес

Федеральное государственное  
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Институт биоорганической химии им.  
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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
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## 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-белоксопосредствованные рецепторы. Поскольку выбранная мной методическая сфера — это компьютерное моделирование структуры и динамики биомолекул, 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>

## Публикации

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2. Kvetkina AN, Oreshkov SD, Mironov PA, Zaigraev MM, Klimovich AA, Deriavko YV, Menshov AS, Kulbatskii DS, Logashina YA, Andreev YA, **Chugunov AO**, Kirpichnikov MP, Lyukmanova EN, Leychenko EV, Shenkarev ZO (2024). Sea Anemone Kunitz Peptide HCIQ2c1: Structure, Modulation of TRPA1 Channel, and Suppression of Nociceptive Reaction In Vivo. *Mar Drugs* 22 (12), 542, [10.3390/md22120542](https://doi.org/10.3390/md22120542)
3. 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](https://doi.org/10.1134/S1068162024040083)
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5. Karnaukhov VK, Shcherbinin DS, **Chugunov AO**, Chudakov DM, Efremov RG, Zvyagin IV, Shugay M (2024). Structure-based prediction of T cell receptor recognition of unseen epitopes using TCRen. *NAT COMPUT SCI* 4, 510–521, [10.1038/s43588-024-00653-0](https://doi.org/10.1038/s43588-024-00653-0)
6. Lyukmanova EN, Zaigraev MM, Kulbatskii DS, Isaev AB, Kukushkin ID, Bychkov ML, Shulepko MA, **Chugunov AO**, Kirpichnikov MP (2023). Molecular Basis for Mambalgins-2 Interaction with Heterotrimeric  $\alpha$ -ENaC/ASIC1a/ $\gamma$ -ENaC Channels in Cancer Cells. *Toxins (Basel)* 15 (10), 612, [10.3390/toxins15100612](https://doi.org/10.3390/toxins15100612)
7. **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](https://doi.org/10.3390/ijms241512369)
8. 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  $\alpha$ -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](https://doi.org/10.3390/ijms24021332)
9. 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](https://doi.org/10.3390/ijms24010011)
10. 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](https://doi.org/10.1038/s42003-022-04308-6)
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12. Panina I, Krylov N, Gadalla MR, Aliper E, Kordyukova L, Veit M, **Chugunov A**, Efremov R (2022). Molecular Dynamics of DHHC20 Acyltransferase Suggests Principles of Lipid and Protein Substrate Selectivity. *Int J Mol Sci* 23 (9), [10.3390/ijms23095091](https://doi.org/10.3390/ijms23095091)
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