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### Адрес

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Институт биорганической 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-белоксопряжённые 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

1. Panina I, Taldaev A, Efremov R, **Chugunov A** (2021). Molecular dynamics insight into the lipid II recognition by type A lantibiotics: Nisin, epidermin, and gallidermin. *Micromachines (Basel)* 12 (10), [10.3390/mi12101169](https://doi.org/10.3390/mi12101169)
2. **Chugunov AO**, Potapova NA, Klimenko NS, Tatarskiy VV, Georgieva SG, Soshnikova NV (2021). Conserved structure and evolution of dpf domain of phf10—the specific subunit of pbaF chromatin remodeling complex. *Int J Mol Sci* 22 (20), [10.3390/ijms222011134](https://doi.org/10.3390/ijms222011134)
3. 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](https://doi.org/10.3389/fcell.2021.662227)
4. Chernykh MA, Kuldyshev NA, Peigneur S, Berkut AA, Tytgat J, Efremov RG, Vassilevski AA, **Chugunov AO** (2021). Derivative of Scorpion Neurotoxin BeM9 Is Selective for Insect Voltage-Gated Sodium Channels. *Russ. J. Bioorganic Chem.* 47 (4), 854–863, [10.1134/S1068162021040063](https://doi.org/10.1134/S1068162021040063)
5. Tabakmakher VM, Gigolaev AM, Peigneur S, Krylov NA, Tytgat J, **Chugunov AO**, Vassilevski AA, Efremov RG (2021). Potassium channel blocker crafted by  $\alpha$ -hairpinin scaffold engineering. *Biophys J* 120 (12), 2471–2481, [10.1016/j.bpj.2021.04.020](https://doi.org/10.1016/j.bpj.2021.04.020)
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7. Belozerova OA, Osmakov DI, Vladimirov A, Koshelev SG, **Chugunov AO**, Andreev YA, Palikov VA, Palikova YA, Shaykhtudinova ER, Gvozd AN, Dyachenko IA, Efremov RG, Kublitski VS, Kozlov SA (2020). Sevanol and Its Analogues: Chemical Synthesis, Biological Effects and Molecular Docking. *Pharmaceuticals (Basel)* 13 (8), 1–21, [10.3390/ph13080163](https://doi.org/10.3390/ph13080163)
8. Gigolaev AM, Kuzmenkov AI, Peigneur S, Tabakmakher VM, Pinheiro-Junior EL, **Chugunov AO**, Efremov RG, Tytgat J, Vassilevski AA (2020). Tuning Scorpion Toxin Selectivity: Switching From KV1.1 to KV1.3. *Front Pharmacol* 11, 1010, [10.3389/fphar.2020.01010](https://doi.org/10.3389/fphar.2020.01010)
9. Panina I, Krylov N, Nolde D, Efremov R, **Chugunov A** (2020). Environmental and dynamic effects explain how nisin captures membrane-bound lipid II. *Sci Rep* 10 (1), 8821, [10.1038/s41598-020-65522-y](https://doi.org/10.1038/s41598-020-65522-y)
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11. Pakhomov AA, Frolova AY, Tabakmakher VM, **Chugunov AO**, Efremov RG, Martynov VI (2020). Impact of external amino acids on fluorescent protein chromophore biosynthesis revealed by molecular dynamics and mutagenesis studies. *J Photochem Photobiol B* 206, 111853, [10.1016/j.jphotobiol.2020.111853](https://doi.org/10.1016/j.jphotobiol.2020.111853)
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  20. (конференция) Панина ИС, Нольде ДЕ, **Чугунов АО**, Ефремов РГ (2016). Структурно-динамическая модель комплекса лантибиотика низин с липидом-II в биомембране. 1, 263–267.
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