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Адрес

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Контакты

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Образование

1970– 2007	Россия, Москва	Московский государственный университет имени М.В. Ломоносова (МГУ), Биологический факультет	Присвоено ученое звание профессора по специальности «биофизика».
1970– 1999	Россия, Москва	Московский государственный университет имени М.В. Ломоносова (МГУ), Биологический факультет	Диплом доктора физико-математических наук (тема диссертации: «Молекулярное моделирование мембрано- связанных участков белков и пептидов»)
1970– 1986	Россия, Москва	Московский государственный университет имени М.В. Ломоносова (МГУ), Биологический факультет	Диплом кандидата физико-математических наук (тема диссертации: «Топография и микроокружение хромофоров в бактериальном и зрительном родопсинах (спектроскопия комбинационного рассеяния света и квантовохимические расчеты)»)
1977– 1983	Россия, Москва	Московский инженерно- физический институт (МИФИ), Факультет экспериментальной и теоретической физики	Диплом с отличием (тема: «Математические методы определения вторичной структуры белков и полипептидов на основании спектров КР и полуэмпирических расчетов»)

Работа в ИБХ

2018–наст.вр.	Главный научный сотрудник
2018–наст.вр.	Ведущий научный сотрудник
2021–наст.вр.	Заместитель директора по науке

Членство в советах и комиссиях ИБХ

Методическая комиссия
Диссертационный совет
Ученый совет
Аттестационная комиссия

Членство в сообществах

Член редколлегии журналов «Биоорганическая химия», Москва; «The Open Structural Biology Journal», «The Open Bioinformatics Journal».

Член Ученого Совета ИБХ РАН.

Член специализированных диссертационных советов (МГУ, ГУ НИИ БМХ РАН).

Степени и звания

Профессор

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

Гранты и проекты

- 2023– наст.вр. [Молекулярно-биофизическая платформа для изучения мембранных белков: роль олигомеризации и белок-липидных взаимодействий](#)
- 2018– 2022 [Молекулярно-биофизические аспекты олигомеризации мембранных доменов рецепторов, определяющие клеточную сигнализацию в норме и онкогенезе](#)
- 2018– 2021 [Управление димеризацией сиалидазы NEU1 как перспективный подход к лечению атеросклероза](#)
- 2019– 2021 [Динамический «молекулярный портрет» клеточной мембраны и его биологическая роль](#)
- 2019– 2022 [Структурная биология мембранных белков для создания новых лекарственных и диагностических средств](#)

Публикации

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2. Mikhnovets IE, Holoubek J, Panina IS, Kotouček J, Gvozdev DA, Chumakov SP, Krasilnikov MS, Zhitlov MY, Gulyak EL, Chistov AA, Nikitin TD, Korshun VA, **Efremov RG**, Alferova VA, Růžek D, Eyer L, Ustinov AV (2023). Alkyl Derivatives of Perylene Photosensitizing Antivirals: Towards Understanding the Influence of Lipophilicity. *Int J Mol Sci* 24 (22), 16483, [10.3390/ijms242216483](#)
3. Aliper ET, **Efremov RG** (2023). Inconspicuous Yet Indispensable: The Coronavirus Spike Transmembrane Domain. *Int J Mol Sci* 24 (22), 16421, [10.3390/ijms242216421](#)
4. Neuberger A, Trofimov YA, Yelshanskaya MV, Khau J, Nadezhdin KD, Khosrof LS, Krylov NA, **Efremov RG**, Sobolevsky AI (2023). Molecular pathway and structural mechanism of human oncochannel TRPV6 inhibition by the phytocannabinoid tetrahydrocannabivarin. *Nat Commun* 14 (1), 4630, [10.1038/s41467-023-40362-2](#)
5. 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), , [10.3390/ijms241512369](#)
6. Polyansky AA, Gallego LD, **Efremov RG**, Köhler A, Zagrovic B (2023). Protein compactness and interaction valency define the architecture of a biomolecular condensate across scales. *Elife* 12, , [10.7554/eLife.80038](#)
7. Neuberger A, Trofimov YA, Yelshanskaya MV, Nadezhdin KD, Krylov NA, **Efremov RG**, Sobolevsky AI (2023). Structural mechanism of human oncochannel TRPV6 inhibition by the natural phytoestrogen genistein. *Nat Commun* 14 (1), 2659, [10.1038/s41467-023-38352-5](#)
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- Lifetime; Electric and Dynamic Properties. *Int J Mol Sci* 24 (7), 6403, [10.3390/ijms24076403](https://doi.org/10.3390/ijms24076403)
9. Bershatsky YV, Kuznetsov AS, Idiatullina AR, Bocharova OV, Dolotova SM, Gavrilenkova AA, Serova OV, Deyev IE, Rakitina TV, Zangieva OT, Pavlov KV, Batishchev OV, Britikov VV, Usanov SA, Arseniev AS, **Efremov RG**, Bocharov EV (2023). Diversity of Structural, Dynamic, and Environmental Effects Explain a Distinctive Functional Role of Transmembrane Domains in the Insulin Receptor Subfamily. *Int J Mol Sci* 24 (4), , [10.3390/ijms24043906](https://doi.org/10.3390/ijms24043906)
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 13. Lohan S, Konshina AG, **Efremov RG**, Maslennikov I, Parang K (2022). Structure-Based Rational Design of Small α -Helical Peptides with Broad-Spectrum Activity against Multidrug-Resistant Pathogens. *J Med Chem* 66 (1), 855–874, [10.1021/acs.jmedchem.2c01708](https://doi.org/10.1021/acs.jmedchem.2c01708)
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 15. Panina IS, Krylov NA, Chugunov AO, **Efremov RG**, Kordyukova LV (2022). The Mechanism of Selective Recognition of Lipid Substrate by hDHC20 Enzyme. *Int J Mol Sci* 23 (23), 14791, [10.3390/ijms232314791](https://doi.org/10.3390/ijms232314791)
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