

## Резюме: Василевский Александр Александрович



### Адрес

Федеральное государственное  
бюджетное учреждение науки  
Институт биоорганической химии им.  
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### Образование

1999– 2004	Россия, Москва	МГУ им. М.В. Ломоносова, биологический факультет, кафедра биоорганической химии	Диплом по специальности «биохимия» с отличием
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### Преподавание

2005– наст.вр.	Россия, Москва	МГУ им. М.В. Ломоносова, биологический факультет, кафедра биоорганической химии	Молекулярные механизмы мембранного транспорта
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### Работа в ИБХ

2017–наст.вр.	Главный научный сотрудник
	Старший научный сотрудник

### Членство в советах и комиссиях ИБХ

Ученый совет

### Владение языками

русский, английский

### Награды

2016	Премия Правительства Москвы молодым ученым	За изучение разнообразия природных блокаторов калиевых каналов и создание молекулярных инструментов для фундаментальных исследований и скрининговых систем на их основе
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### Степени и звания

Кандидат наук (Химические науки, 02.00.10 — Биоорганическая химия)

### Гранты и проекты

2014–  
2016 [Молекулярные основы действия животных ядов](#)

2022–  
2024 [Модуляторы мутантных натриевых каналов](#)

2020–  
2022 [Получение селективных блокаторов калиевого канала человека Kv1.3](#)

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2020– [Лиганды ионных каналов с уникальной селективностью](#)  
2022

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2019– [Токсины из природных ядов модулируют болевую сенситизацию в чувствительных нейронах](#)  
2022 [посредством механизмов, не зависящих от деполяризации](#)

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## Публикации

1. Tikhonova TB, Sharkov AA, Zhorov BS, **Vassilevski AA** (2024). Diverse biophysical mechanisms in voltage-gated sodium channel Nav1.4 variants associated with myotonia. *FASEB J* 38 (16), e23883, [10.1096/fj.202400867R](#)
2. 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](#)
3. 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](#)
4. Ojomoko LO, Kryukova EV, Egorova NS, Salikhov AI, Epifanova LA, Denisova DA, Khomutov AR, Sukhov DA, **Vassilevski AA**, Khomutov MA, Tsetlin VI, Shelukhina IV (2023). Inhibition of nicotinic acetylcholine receptors by oligoarginine peptides and polyamine-related compounds. *Front Pharmacol* 14 (14), 1327603, [10.3389/fphar.2023.1327603](#)
5. Oparin PB, Nikodimov SS, **Vassilevski AA** (2023). Venoms with oral toxicity towards insects. *Toxicon* 235, 107308, [10.1016/j.toxicon.2023.107308](#)
6. Krylov NA, Tabakmakher VM, Yureva DA, **Vassilevski AA**, Kuzmenkov AI (2023). Kalium 3.0 is a comprehensive depository of natural, artificial, and labeled polypeptides acting on potassium channels. *Protein Sci* 32 (11), e4776, [10.1002/pro.4776](#)
7. Kuzmenkov AI, Gigolaev AM, Pinheiro-Junior EL, Peigneur S, Tytgat J, **Vassilevski AA** (2023). Methionine-isoleucine dichotomy at a key position in scorpion toxins inhibiting voltage-gated potassium channels. *Toxicon* 231, 107181, [10.1016/j.toxicon.2023.107181](#)
8. Mineev KS, Chernykh MA, Motov VV, Prudnikova DA, Pavlenko DM, Kuzmenkov AI, Peigneur S, Tytgat J, **Vassilevski AA** (2023). A scorpion toxin affecting sodium channels shows double cis–trans isomerism. *FEBS Lett* 597 (18), 2358–2368, [10.1002/1873-3468.14705](#)
9. Gigolaev AM, Tabakmakher VM, Peigneur S, Tytgat J, **Vassilevski AA** (2023). Structural Optimization of an  $\alpha$ -Hairpinin Blocking Potassium Channels KV1.3. *J Evol Biochem Physiol* 59 (1), 192–199, [10.1134/S0022093023010167](#)
10. Gigolaev AM, Pinheiro-Junior EL, Peigneur S, Tytgat J, **Vassilevski AA** (2022). KV1.2-Selective Peptide with High Affinity. *J Evol Biochem Physiol* 58 (12), 2048–2057, [10.1134/S002209302206031X](#)
11. Kuzmenkov AI, Peigneur S, Nasburg JA, Mineev KS, Nikolaev MV, Pinheiro-Junior EL, Arseniev AS, Wulff H, Tytgat J, **Vassilevski AA** (2022). Apamin structure and pharmacology revisited. *Front Pharmacol* 13, 977440, [10.3389/fphar.2022.977440](#)
12. Gigolaev AM, Lushpa VA, Pinheiro-Junior EL, Tabakmakher VM, Peigneur S, Ignatova AA, Feofanov AV, Efremov RG, Mineev KS, Tytgat J, **Vassilevski AA** (2022). Artificial pore blocker acts specifically on voltage-gated potassium channel isoform KV1.6. *J Biol Chem* 298 (11), 102467, [10.1016/j.jbc.2022.102467](#)
13. Kasheverov IE, Kuzmenkov AI, Kudryavtsev DS, Chudetskiy IS, Shelukhina IV, Barykin EP, Иванов Ivanov IA, Siniavin AE, Ziganshin RH, Baranov MS, Tsetlin VI, **Vassilevski AA**, Utkin YN (2021). Snake Toxins Labeled by Green Fluorescent Protein or Its Synthetic Chromophore are New Probes for Nicotinic acetylcholine Receptors. *Front Mol Biosci* 8 (8), 753283, [10.3389/fmolb.2021.753283](#)
14. 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](#)
15. 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–

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  17. van Cann M, Kuzmenkov A, Isensee J, Andreev-Andrievskiy A, Peigneur S, Khusainov G, Berkut A, Tytgat J, **Vassilevski A**, Hucho T (2021). Scorpion toxin MeuNaTx $\alpha$ -1 sensitizes primary nociceptors by selective modulation of voltage-gated sodium channels. *FEBS J* 288 (7), 2418–2435, [10.1111/febs.15593](https://doi.org/10.1111/febs.15593)
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  20. Føns S, Ledsgaard L, Nikolaev MV, **Vassilevski AA**, Sørensen CV, Chevalier MK, Fiebig M, Laustsen AH (2020). Discovery of a Recombinant Human Monoclonal Immunoglobulin G Antibody Against  $\alpha$ -Latrotoxin From the Mediterranean Black Widow Spider (*Latrodectus tredecimguttatus*). *Front Immunol* 11, 587825, [10.3389/fimmu.2020.587825](https://doi.org/10.3389/fimmu.2020.587825)
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37. Kuzmenkov AI, **Vassilevski AA** (2017). Labelled animal toxins as selective molecular markers of ion channels: Applications in neurobiology and beyond. *Neurosci Lett* 679, 15–23, [10.1016/j.neulet.2017.10.050](https://doi.org/10.1016/j.neulet.2017.10.050)
38. Kuldyushev NA, Berkut AA, Peigneur S, Tytgat J, Grishin EV, **Vassilevski AA** (2017). Design of sodium channel ligands with defined selectivity – a case study in scorpion alpha-toxins. *FEBS Lett* 591 (20), 3414–3420, [10.1002/1873-3468.12839](https://doi.org/10.1002/1873-3468.12839)
39. Kuzmenkov AI, Peigneur S, Chugunov AO, Tabakmakher VM, Efremov RG, Tytgat J, Grishin EV, **Vassilevski AA** (2017). C-Terminal residues in small potassium channel blockers OdK1 and OSK3 from scorpion venom fine-tune the selectivity. *BIOCHIM BIOPHYS ACTA* 1865 (5), 465–472, [10.1016/j.bbapap.2017.02.001](https://doi.org/10.1016/j.bbapap.2017.02.001)
40. Nadezhdin KD, Romanovskaia DD, Sachkova MY, Oparin PB, Kovalchuk SI, Grishin EV, Arseniev AS, **Vassilevski AA** (2017). Modular toxin from the lynx spider *Oxyopes takobius*: Structure of spiderine domains in solution and membrane-mimicking environment. *Protein Sci* 26 (3), 611–616, [10.1002/pro.3101](https://doi.org/10.1002/pro.3101)
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