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Адрес

Федеральное государственное бюджетное учреждение науки Институт биоорганической химии им. академиков М.М. Шемякина и Ю.А. Овчинникова Российской академии наук, Москва, Россия

Контакты

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Образование

2015–2019	Россия, Москва	Институт биоорганической химии им. академиков М.М. Шемякина и Ю.А. Овчинникова Российской академии наук
2010–2015	Россия, Москва	Московский государственный университет имени М.В.Ломоносова, Биологический факультет

Работа в ИБХ

Младший научный сотрудник

Аспирант

Научные интересы

Таргетная терапия опухолей, рекомбинантные белки для тераностики, направляющие модули неиммуноглобулиновой природы

Степени и звания

Кандидат наук (Биологические науки, 03.00.03 — Молекулярная биология)

Гранты и проекты

2019– наст.вр. [Разработка адресной системы на основе анти-HER2-скаффолдов и молекулярной пары барназа-барстар для ступенчатой доставки цитотоксинов при терапии HER2-положительных злокачественных новообразований.](#)

Публикации

1. **Shilova O**, Shramova E, Proshkina G, Deyev S (2021). Natural and Designed Toxins for Precise Therapy: Modern Approaches in Experimental Oncology. *Int J Mol Sci* 22 (9), , [10.3390/ijms22094975](#)
2. **Shilova ON**, Deyev SM (2019). DARPins: Promising Scaffolds for Theranostics. *Acta Naturae* 11 (4), 42–53, [10.32607/20758251-2019-11-4-42-53](#)
3. Sokolova EA, **Shilova ON**, Kiseleva DV, Schulga AA, Balalaeva IV, Deyev SM (2019). HER2-Specific Targeted Toxin DARPIn-LoPE: Immunogenicity and Antitumor Effect on Intraperitoneal Ovarian Cancer Xenograft Model. *Int J Mol Sci* 20 (10), , [10.3390/ijms20102399](#)
4. Kuzichkina EO, **Shilova ON**, Deyev SM (2018). The Mechanism of Fluorescence Quenching of Protein Photosensitizers Based on miniSOG During Internalization of the HER2 Receptor. *Acta Naturae* 10 (4), 87–94, [10.32607/20758251-2018-10-4-87-94](#)
5. Kuzichkina EO, **Shilova ON**, Deyev SM, Petrov RV (2018). The Application of Recombinant Phototoxins 4D5scFv-miniSOG and DARPIn-miniSOG to Study the HER2 Receptor Internalization. *Dokl Biochem Biophys* 482 (1), 245–248, [10.1134/S1607672918050046](#)
6. Proshkina GM, Shramova EI, **Shilova ON**, Ryabova AV, Deyev SM (2018). Phototoxicity of flavoprotein

miniSOG induced by bioluminescence resonance energy transfer in genetically encoded system NanoLuc-miniSOG is comparable with its LED-excited phototoxicity. *J Photochem Photobiol B* 188, 107–115, [10.1016/j.jphotobiol.2018.09.006](https://doi.org/10.1016/j.jphotobiol.2018.09.006)

7. **Shilova ON**, Shilov ES, Lieber A, Deyev SM (2018). Disassembling a cancer puzzle: Cell junctions and plasma membrane as targets for anticancer therapy. *J Control Release* 286, 125–136, [10.1016/j.jconrel.2018.07.030](https://doi.org/10.1016/j.jconrel.2018.07.030)
8. Shipunova VO, **Shilova ON**, Shramova EI, Deyev SM, Proshkina GM (2018). A Highly Specific Substrate for NanoLUC Luciferase Furimazine Is Toxic in vitro and in vivo. *Russ. J. Bioorganic Chem.* 44 (2), 225–228, [10.1134/S1068162018020085](https://doi.org/10.1134/S1068162018020085)
9. Proshkina GM, Kiseleva DV, **Shilova ON**, Ryabova AV, Shramova EI, Stremovskiy OA, Deyev SM (2017). Bifunctional Toxin DARP-LoPE Based on the Her2-Specific Innovative Module of a Non-Immunoglobulin Scaffold as a Promising Agent for Theranostics. *Mol Biol* 51 (6), 865–873, [10.1134/S0026893317060140](https://doi.org/10.1134/S0026893317060140)
10. Proshkina GM, Kiseleva DV, **Shilova ON**, Ryabova AV, Shramova EI, Stremovskiy OA, Deyev SM (2017). Bifunctional Toxin DARP-LoPE Based on the HER2-Specific Innovative Module of a Non-Immunoglobulin Scaffold as a Promising Agent for Theranostics. *Mol Biol (Mosk)* 51 (6), 997–1007, [10.7868/S0026898417060118](https://doi.org/10.7868/S0026898417060118)
11. **Shilova ON**, Shilov ES, Deyev SM (2017). The effect of trypan blue treatment on autofluorescence of fixed cells. *Cytometry A* 91 (9), 917–925, [10.1002/cyto.a.23199](https://doi.org/10.1002/cyto.a.23199)
12. **Shilova ON**, Proshkina GM, Ryabova AV, Deyev SM, Petrov RV (2017). Cytotoxicity of targeted HER2-specific phototoxins based on flavoprotein miniSOG is determined by the rate of their internalization. *Dokl Biochem Biophys* 475 (1), 256–258, [10.1134/S1607672917040044](https://doi.org/10.1134/S1607672917040044)
13. **Shilova ON**, Souslova EA, Pilunov AM, Deyev SM, Petrov RV (2016). Development and investigation of recombinant immunotoxin protein 4D5scFv-mCherry-PE(40). *Dokl Biochem Biophys* 471 (1), 450–453, [10.1134/S160767291606020X](https://doi.org/10.1134/S160767291606020X)
14. Sokolova E, Proshkina G, Kutova O, **Shilova O**, Ryabova A, Schulga A, Stremovskiy O, Zdobnova T, Balalaeva I, Deyev S (2016). Recombinant targeted toxin based on HER2-specific DARPIn possesses a strong selective cytotoxic effect in vitro and a potent antitumor activity in vivo. *J Control Release* 233, 48–56, [10.1016/j.jconrel.2016.05.020](https://doi.org/10.1016/j.jconrel.2016.05.020)
15. **Shilova ON**, Proshkina GM, Ryabova AV, Deyev SM (2016). Anti-HER2 phototoxin based on flavoprotein miniSOG causes the oxidative stress and necrosis of HER2-positive cancer cells. *Moscow Univ Biol Sci Bull* 71 (1), 14–18, [10.3103/S0096392516010107](https://doi.org/10.3103/S0096392516010107)
16. Proshkina GM, **Shilova ON**, Ryabova AV, Stremovskiy OA, Deyev SM (2015). A new anticancer toxin based on HER2/neu-specific DARPIn and photoactive flavoprotein miniSOG. *Biochimie* 118, 116–122, [10.1016/j.biochi.2015.08.013](https://doi.org/10.1016/j.biochi.2015.08.013)
17. **Shilova ON**, Proshkina GM, Lebedenko EN, Deyev SM (2015). Internalization and Recycling of the HER2 Receptor on Human Breast Adenocarcinoma Cells Treated with Targeted Phototoxic Protein DARPInminiSOG. *Acta Naturae* 7 (3), 126–32.
18. **Shilova ON**, Proshkina GM, Lebedenko EN, Deyev SM (2015). Internalization and Recycling of the HER2 Receptor on Human Breast Adenocarcinoma Cells Treated with Targeted Phototoxic Protein DARPInminiSOG. *Acta Naturae* 7 (3), 126–132, [10.32607/20758251-2015-7-3-126-132](https://doi.org/10.32607/20758251-2015-7-3-126-132)