

## Резюме: Водовозова Елена Львовна



### Адрес

Федеральное государственное  
бюджетное учреждение науки  
Институт биоорганической химии им.  
академиков М.М. Шемякина и Ю.А.  
Овчинникова Российской академии  
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## Образование

2008	Россия, Москва	Институт биоорганической химии им. академиков М.М. Шемякина и Ю.А. Овчинникова РАН (ИБХ)	Диплом доктора химических наук "биохимия"
1985	Россия, Москва	Институт биоорганической химии имени М.М. Шемякина АН СССР (ИБХ)	Диплом кандидата химических наук по специальности «биохимия»
1975– 1981	Россия, Москва	Московский государственный университет имени М.В. Ломоносова (МГУ), химический факультет	Диплом химика (с отличием)

## Преподавание

## Работа в ИБХ

2019–наст.вр.	Главный научный сотрудник
2008–2019	Заведующий лабораторией

## Членство в советах и комиссиях ИБХ

Ученый совет
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## Научные интересы

Более 20 лет одним из главных направлений работы Е. Л. Водовозовой являются исследования в области создания систем направленной доставки лекарств на основе липосом, липидных производных противоопухолевых химиотерапевтических средств (липофильных пролекарств) и липофильных гликоконъюгатов (молекулярных адресов). Другое направление исследований, которое развивает Е. Л. Водовозова — это разработка фотоаффинных зондов с новым высокоэффективным фотофором (диазоциклопентадиен-2-илкарбонильной меткой).

## Степени и звания

2007	Доктор наук (Химические науки, 03.00.04 — Биохимия)
1985	Кандидат наук (Химические науки, Биохимия)

## Гранты и проекты

2021–	<a href="#">Разработка средств профилактики и лечения COVID-19 и сопутствующих инфекционных заболеваний с использованием генетических технологий</a>
2023	

2021– [Белковая корона липосом и ее влияние на взаимодействия с клетками кровеносного русла](#)  
2024

2020– [Разработка прототипа вакцинной конструкции для лечения и профилактики новой](#)  
2022 [коронавирусной инфекции COVID-19 на основе липосом с набором Т-клеточных эпитопов](#)

2019– [Взаимодействия противоопухолевых липосом, несущих в бислое липофильные пролекарства, с](#)  
2021 [эндотелиальными клетками и белками плазмы в динамических условиях: биомоделирование в микроканале микрофлюидного устройства](#)

## Публикации

1. Ryabukhina E, Kobanenko M, Tretiakova D, Shchegravina E, Khaidukov S, Alekseeva A, Boldyrev I, Zgoda V, Tikhonova O, Fedorov AY, Onishchenko N, **Vodovozova E** (2025). Plasma protein corona of liposomes loaded with a phospholipid-allocolchicinoid conjugate enhances their anti-inflammatory potential. *Colloids Surf B Biointerfaces* 253, 114746, [10.1016/j.colsurfb.2025.114746](#)
2. Shirokov A, Zlatogorskaya D, Adushkina V, **Vodovozova E**, Kardashevskaya K, Sultanov R, Kasyanov S, Blokhina I, Terskov A, Tzoy M, Evsyukova A, Dubrovsky A, Tuzhilkin M, Elezarova I, Dmitrenko A, Manzhayeva M, Krupnova V, Semiachkina-Glushkovskaya A, Ilyukov E, Myagkov D, Tuktarov D, Popov S, Inozemzev T, Navolokin N, Fedosov I, Semyachkina-Glushkovskaya O (2024). Plasmalogens Improve Lymphatic Clearance of Amyloid Beta from Mouse Brain and Cognitive Functions. *Int J Mol Sci* 25 (23), [10.3390/ijms252312552](#)
3. Tretiakova DS, Volynsky PE, Kobanenko MK, Alekseeva AS, Le-Deygen IM, **Vodovozova EL**, Boldyrev IA (2024). Phosphatidylglycerol in lipid bilayer. Molecular recognition, conformational transitions, hydrogen bonding and microviscosity. *J Mol Liq* 411, [10.1016/j.molliq.2024.125688](#)
4. Navolokin N, Adushkina V, Zlatogorskaya D, Telnova V, Evsiukova A, **Vodovozova E**, Eroshova A, Dosadina E, Diduk S, Semyachkina-Glushkovskaya O (2024). Promising Strategies to Reduce the SARS-CoV-2 Amyloid Deposition in the Brain and Prevent COVID-19-Exacerbated Dementia and Alzheimer's Disease. *Pharmaceuticals (Basel)* 17 (6), 788, [10.3390/ph17060788](#)
5. **Vodovozova EL** (2024). Editorial for Special Issue: Liposomal and Lipid-Based Drug Delivery Systems and Vaccines. *Pharmaceutics* 16 (2), [10.3390/pharmaceutics16020238](#)
6. Kobanenko M, Samofalov P, Kapitonova I, Alekseeva A, Kapkaeva M, Scheglovitova O, Tuzikov A, Tretiakova D, **Vodovozova E** (2024). Plasma Protein Adsorption on Melphalan Prodrug Bearing Liposomes - Bare, Stealth, and Targeted. *Drug Deliv Lett* 14 (4), 320–328, [10.2174/0122103031297263240612110749](#)
7. Shchegravina ES, Tretiakova DS, Sitdikova AR, Usova SD, Boldyrev IA, Alekseeva AS, Svirshchevskaya EV, **Vodovozova EL**, Fedorov AY (2023). Design and preparation of pH-sensitive cytotoxic liposomal formulations containing antitumor colchicine analogues for target release. *J Liposome Res* 34 (3), 1–17, [10.1080/08982104.2023.2274428](#)
8. Tretiakova DS, Azhikina TL, Boldyrev IA, Svirshchevskaya EV, **Vodovozova EL** (2023). Synthesis of Liposomes Conjugated with CpG-Oligonucleotide and Loaded with a Set of T-Cell Epitopes of the SARS-CoV-2 Virus. *Russ. J. Bioorganic Chem.* 49 (4), 905–911, [10.1134/S1068162023040210](#)
9. Tretiakova D, Kobanenko M, Alekseeva A, Boldyrev I, Khaidukov S, Zgoda V, Tikhonova O, **Vodovozova E**, Onishchenko N (2023). Protein Corona of Anionic Fluid-Phase Liposomes Compromises Their Integrity Rather than Uptake by Cells. *Membranes (Basel)* 13 (7), 681, [10.3390/membranes13070681](#)
10. Onishchenko NR, Moskvitsev AA, Kobanenko MK, Tretiakova DS, Alekseeva AS, Kolesov DV, Mikryukova AA, Boldyrev IA, Kapkaeva MR, Shcheglovitova ON, Bovin NV, Kubatiev AA, Tikhonova OV, **Vodovozova EL** (2023). Protein Corona Attenuates the Targeting of Antitumor Sialyl Lewis X-Decorated Liposomes to Vascular Endothelial Cells under Flow Conditions. *Pharmaceutics* 15 (6), 1754, [10.3390/pharmaceutics15061754](#)
11. Boldyrev IA, Shendrikov VP, Vostrova AG, **Vodovozova EL** (2023). A Route to Synthesize Ionizable Lipid ALC-0315, a Key Component of the mRNA Vaccine Lipid Matrix. *Russ. J. Bioorganic Chem.* 49 (2), 412–415, [10.1134/S1068162023020061](#)
12. Gretskeya N, Akimov M, Andreev D, Zalygin A, Belitskaya E, Zinchenko G, Fomina-Ageeva E, Mikhalyov I,

- Vodovozova E**, Bezuglov V (2023). Multicomponent Lipid Nanoparticles for RNA Transfection. *Pharmaceutics* 15 (4), , [10.3390/pharmaceutics15041289](https://doi.org/10.3390/pharmaceutics15041289)
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  23. (конференция) Tretiakova DS, Le-Deygen I, Kudryashova E, **Vodovozova EL** (2021). Serum albumin penetration in the fluid lipid bilayer of liposomes loaded with a melphalan lipophilic prodrug can be prevented by inclusion of phosphatidylinositol or ganglioside GM1. *FEBS Open Bio* 11 (Suppl. 1) 2021, 256 11, 256, [10.1002/2211-5463.13205](https://doi.org/10.1002/2211-5463.13205)
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- Uptake by Human Blood Phagocytes. *Acta Naturae* 12 (1), 99–109, [10.32607/actanaturae.10946](https://doi.org/10.32607/actanaturae.10946)
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  32. Alekseeva AS, Chugunov AO, Volynsky PE, Onishchenko NR, Molotkovsky JG, Efremov RG, Boldyrev IA, **Vodovozova EL** (2018). Behavior of Doxorubicin Lipophilic Conjugates in Liposomal Lipid Bilayers. *Russ. J. Bioorganic Chem.* 44 (6), 732–739, [10.1134/S1068162019010023](https://doi.org/10.1134/S1068162019010023)
  33. Zhang C, Feng WEI, **Vodovozova E**, Tretiakova D, Boldyrev I, Li Y, Kürths J, Yu T, Semyachkina-Glushkovskaya O, Zhu DAN (2018). Photodynamic opening of the blood-brain barrier to high weight molecules and liposomes through an optical clearing skull window. *Biomed Opt Express* 9 (10), 4850, [10.1364/BOE.9.004850](https://doi.org/10.1364/BOE.9.004850)
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