

## Сведения об официальном оппоненте

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### Основные публикации по теме диссертации за последние 5 лет:

1. *Zhdanov G., Nyhrikova E., Meshcheryakova N., Kristavchuk O., Akhmetova A., Andreev E., Rudakova E., Gambaryan A., Yaminsky I., Aralov A., [et al.]*. A Combination of Membrane Filtration and Raman-Active DNA Ligand Greatly Enhances Sensitivity of SERS-Based Aptasensors for Influenza A Virus. // *Frontiers in chemistry*. — 2022. — Vol. 10. — P. 937180—937180.
2. *Poimanova E. Y., Shaposhnik P. A., Anisimov D. S., Zavyalova E. G., Trul A. A., Skorotetcky M. S., Borshchev O. V., Vinnitskiy D. Z., Polinskaya M. S., Krylov V. B., [et al.]*. Biorecognition Layer Based On Biotin-Containing [1] Benzothieno [3, 2-b][1] benzothiophene Derivative for Biosensing by Electrolyte-Gated Organic Field-Effect Transistors // *ACS Applied Materials & Interfaces*. — 2022. — Vol. 14. — P. 16462—16476.
3. *Grabovenko F., Nikiforova L., Yanenko B., Ulitin A., Loktyushov E., Zatsypin T., Zavyalova E., Zvereva M.* Glycosylation of receptor binding domain of SARS-CoV-2 S-protein influences on binding to immobilized DNA Aptamers // *International journal of molecular sciences*. — 2022. — Vol. 23. — P. 557.
4. *Samodelova M. V., Kapitanova O. O., Meshcheryakova N. F., Novikov S. M., Yarenkov N. R., Streletskii O. A., Yakubovsky D. I., Grabovenko F. I., Zhdanov G. A., Arsenin A. V., [et al.]*. Model of the SARS-CoV-2 Virus for Development of a DNA-Modified, Surface-Enhanced Raman Spectroscopy Sensor with a Novel Hybrid Plasmonic Platform in Sandwich Mode // *Biosensors*. — 2022. — Vol. 12. — P. 768.

5. *Zavyalova E., Tikhonova D., Zhdanov G., Rudakova E., Alferova V., Moiseenko A., Kamzeeva P., Khrulev A., Zalevsky A., Arutyunyan A., [et al.].* SERS-based biosensor with Raman-active external responsive element for rapid determination of adenosine monophosphate // *Analytica Chimica Acta*. — 2022. — Vol. 1221. — P. 340140.
6. *Zavyalova E., Ambartsumyan O., Zhdanov G., Gribanyov D., Gushchin V., Tkachuk A., Rudakova E., Nikiforova M., Kuznetsova N., Popova L., [et al.].* SERS-based aptasensor for rapid quantitative detection of SARS-CoV-2 // *Nanomaterials*. — 2021. — Vol. 11. — P. 1394.
7. *Gribanyov D., Zhdanov G., Olenin A., Lisichkin G., Gambaryan A., Kukushkin V., Zavyalova E.* SERS-based colloidal aptasensors for quantitative determination of influenza virus // *International journal of molecular sciences*. — 2021. — Vol. 22. — P. 1842.
8. *Bizyaeva A. A., Bunin D. A., Moiseenko V. L., Gambaryan A. S., Balk S., Tashlitsky V. N., Arutyunyan A. M., Kopylov A. M., Zavyalova E. G.* The functional role of loops and flanking sequences of G-quadruplex aptamer to the hemagglutinin of influenza a virus // *International journal of molecular sciences*. — 2021. — Vol. 22. — P. 2409.
9. *Zavyalova E. G., Ustinov N. B., Kopylov A. M.* Exploring the efficiency of thrombin inhibitors with a quantitative model of the coagulation cascade // *FEBS letters*. — 2020. — Vol. 594. — P. 995—1004.
10. *Zavyalova E., Turashev A., Novoseltseva A., Legatova V., Antipova O., Savchenko E., Balk S., Golovin A., Pavlova G., Kopylov A.* Pyrene-modified DNA aptamers with high affinity to wild-type EGFR and EGFRvIII // *nucleic acid therapeutics*. — 2020. — Vol. 30. — P. 175—187.
11. *Ambartsumyan O., Gribanyov D., Kukushkin V., Kopylov A., Zavyalova E.* SERS-based biosensors for virus determination with oligonucleotides as recognition elements // *International Journal of Molecular Sciences*. — 2020. — Vol. 21. — P. 3373.
12. *Novoseltseva A. A., Ivanov N. M., Novikov R. A., Tkachev Y. V., Bunin D. A., Gambaryan A. S., Tashlitsky V. N., Arutyunyan A. M., Kopylov A. M., Zavyalova E. G.* Structural and functional aspects of G-quadruplex

- aptamers which bind a broad range of influenza a viruses // *Biomolecules*. — 2020. — Vol. 10. — P. 119.
13. *Kukushkin V. I., Ivanov N. M., Novoseltseva A. A., Gambaryan A. S., Yaminsky I. V., Kopylov A. M., Zavyalova E. G.* Highly sensitive detection of influenza virus with SERS aptasensor // *PLoS One*. — 2019. — Vol. 14. — e0216247.
  14. *Zavyalova E. G., Legatova V. A., Alieva R. S., Zalevsky A. O., Tashlitsky V. N., Arutyunyan A. M., Kopylov A. M.* Putative mechanisms underlying high inhibitory activities of bimodular DNA aptamers to thrombin // *Biomolecules*. — 2019. — Vol. 9. — P. 41.
  15. *Barinov N., Ivanov N., Kopylov A., Klinov D., Zavyalova E.* Direct visualization of the oligomeric state of hemagglutinins of influenza virus by high-resolution atomic force microscopy // *Biochimie*. — 2018. — Vol. 146. — P. 148—155.