Сведения об официальном оппоненте

Лузина Ольга Анатольевна, доктор химических наук, специальность 02.00.03 – органическая химия, ведущий научный сотрудник, Новосибирский институт органической химии им. Н.Н. Ворожцова СО РАН.

Список основных публикаций по теме диссертации за последние 5 лет:

1. O'Flaherty S, Luzina OA, Dyrkheeva NS, Krier Y, Leprince J, Zakharenko AL, Pokrovsky MA, Pokrovsky AG, Lavrik OI, Salakhutdinov NF, Varbanov M, Devocelle M, Volcho KP. Novel Peptide-Drug Conjugates with Dual Anticancer Activity. Int J Mol Sci. 2024 Nov 19;25(22):12411. doi: 10.3390/ijms252212411.
2. Zhanataev AK, Kulakova AV, Luzina OA, Khomenko TM, Volcho KP, Salakhutdinov NF, Durnev AD. Enhancement of the Clastogenic Effects of Topotecan In Vivo by Tyrosyl-DNA Phosphodiesterase 1 InhibitorsBull Exp Biol Med. 2024 May;177(1):30-34. doi: 10.1007/s10517-024-06125-9.
3. Yarovaya OI, Filimonov AS, Baev DS, Borisevich SS, Zaykovskaya AV, Chirkova VY, Marenina MK, Meshkova YV, Belenkaya SV, Shcherbakov DN, Gureev MA, Luzina OA, Pyankov OV, Salakhutdinov NF, Khvostov MV. The Potential of Usnic-Acid-Based Thiazolo-Thiophenes as Inhibitors of the Main Protease of SARS-CoV-2 Viruses. Viruses. 2024 Jan 31;16(2):215. doi: 10.3390/v16020215
4. Kornienko TE, Chepanova AA, Zakharenko AL, Filimonov AS, Luzina OA, Dyrkheeva NS, Nikolin VP, Popova NA, Salakhutdinov NF, Lavrik OI. Enhancement of the Antitumor and Antimetastatic Effect of Topotecan and Normalization of Blood Counts in Mice with Lewis Carcinoma by Tdp1 Inhibitors-New Usnic Acid Derivatives. Int J Mol Sci. 2024 Jan 19;25(2):1210. doi: 10.3390/ijms25021210.
5. Zakharenko AL, Dyrkheeva NS, Luzina OA, Filimonov AS, Mozhaitsev ES, Malakhova AA, Medvedev SP, Zakian SM, Salakhutdinov NF, Lavrik OI. Usnic Acid Derivatives Inhibit DNA Repair Enzymes Tyrosyl-DNA Phosphodiesterases 1 and 2 and Act as Potential Anticancer Agents. Genes (Basel). 2023 Oct 12;14(10):1931. doi: 10.3390/genes14101931.
6. Okhina AA, Kornienko TE, Rogachev AD, Luzina OA, Popova NA, Nikolin VP, Zakharenko AL, Dyrkheeva NS, Pokrovsky AG, Salakhutdinov NF, Lavrik OI. Pharmacokinetic study of Tdp1 inhibitor resulted in a significant increase in antitumor

effect in the treatment of Lewis lung carcinoma in mice by its combination with topotecan. J Pharm Biomed Anal. 2023 Nov 30;236:115731. doi: 10.1016/j.jpba.2023.115731.

7. Pon'kina DA, Kuranov SO, Marenina MK, Meshkova YV, Zhukova NA, Khvostov MV, Luzina OA, Tolstikova TG, Salakhutdinov NF. Bornyl-Containing Derivatives of Benzyloxyphenylpropanoic Acid as FFAR1 Agonists: In Vitro and In Vivo Studies. Pharmaceutics. 2023 Jun 7;15(6):1670. doi: 10.3390/pharmaceutics15061670.
8. Kuranov SO, Pon Kina DA, Meshkova YV, Marenina MK, Khvostov MV, Luzina OA, Tolstikova TG, Salakhutdinov NF. Synthesis and Evaluation of Hypoglycemic Activity of Structural Isomers of ((Benzyloxy)phenyl)propanoic Acid Bearing an Aminobornyl Moiety. Int J Mol Sci. 2023 Apr 28;24(9):8022. doi: 10.3390/ijms24098022.
9. Kornienko TE, Zakharenko AL, Ilina ES, Chepanova AA, Zakharova OD, Dyrkheeva NS, Popova NA, Nikolin VP, Filimonov AS, Luzina OA, Salakhutdinov NF, Lavrik OI. Effect of Usnic Acid-Derived Tyrosyl-DNA Phosphodiesterase 1 Inhibitor Used as Monotherapy or in Combination with Olaparib on Transplanted Tumors In Vivo. Mol Biol (Mosk). 2023 Mar-Apr;57(2):220-231.
10. Zakharenko AL, Luzina OA, Chepanova AA, Dyrkheeva NS, Salakhutdinov NF, Lavrik OI. Natural Products and Their Derivatives as Inhibitors of the DNA Repair Enzyme Tyrosyl-DNA Phosphodiesterase 1. Int J Mol Sci. 2023 Mar 17;24(6):5781. doi: 10.3390/ijms24065781.
11. Dyrkheeva NS, Malakhova AA, Zakharenko AL, Okorokova LS, Shtokalo DN, Pavlova SV, Medvedev SP, Zakian SM, Nushtaeva AA, Tupikin AE, Kabilov MR, Khodyreva SN, Luzina OA, Salakhutdinov NF, Lavrik OI. Transcriptomic Analysis of CRISPR/Cas9-Mediated PARP1-Knockout Cells under the Influence of Topotecan and TDP1 Inhibitor. Int J Mol Sci. 2023 Mar 7;24(6):5148. doi: 10.3390/ijms24065148.
12. Blokhin ME, Kuranov SO, Khvostov MV, Fomenko VV, Luzina OA, Zhukova NA, Elhajjar C, Tolstikova TG, Salakhutdinov NF. Terpene-Containing Analogues of Glitazars as Potential Therapeutic Agents for Metabolic Syndrome. Curr Issues Mol Biol. 2023 Mar 8;45(3):2230-2247. doi: 10.3390/cimb45030144.
13. Ivankin DI, Kornienko TE, Mikhailova MA, Dyrkheeva NS, Zakharenko AL, Achara C, Reynisson J, Golyshev VM, Luzina OA, Volcho KP, Salakhutdinov NF, Lavrik OI Novel TDP1 Inhibitors: Disubstituted Thiazolidine-2,4-Diones Containing Monoterpene Moieties. . Int J Mol Sci. 2023 Feb 14;24(4):3834. doi: 10.3390/ijms24043834
14. Khvostov MV, Gladkova ED, Borisov SA, Fedotova MS, Zhukova NA, Marenina MK, Meshkova YV, Valutsa N, Luzina OA, Tolstikova TG, Salakhutdinov NF. 9-N-n-alkyl

Berberine Derivatives: Hypoglycemic Activity Evaluation. Pharmaceutics. 2022 Dec 22;15(1):44. doi: 10.3390/pharmaceutics15010044.

15. Chepanova AA, Zakharenko AL, Dyrkheeva NS, Chernyshova IA, Zakharova OD, Ilina ES, Luzina OA, Salakhutdinov NF, Lavrik OI. Influence of Tyrosyl-DNA Phosphodiesterase 1 Inhibitor on the Proapoptotic and Genotoxic Effects of Anticancer Agent Topotecan. Dokl Biochem Biophys. 2023 Feb;508(1):25-30. doi: 10.1134/S1607672922700077
16. Baev DS, Blokhin ME, Chirkova VY, Belenkaya SV, Luzina OA, Yarovaya OI, Salakhutdinov NF, Shcherbakov DN. Triterpenic Acid Amides as Potential Inhibitors of the SARS-CoV-2 Main Protease. Molecules. 2022 Dec 30;28(1):303. doi: 10.3390/molecules28010303.
17. Wang S, Zonov YV, Karpov VM, Luzina OA, Mezhenkova TV. Carbonylation of Polyfluorinated 1-Arylalkan-1-ols and Diols in Superacids. Molecules. 2022 Dec 10;27(24):8757. doi: 10.3390/molecules27248757.
18. Khvostov MV, Gladkova ED, Borisov SA, Fedotova MS, Zhukova NA, Marenina MK, Meshkova YV, Luzina OA, Tolstikova TG, Salakhutdinov NF. Study of Hypoglycemic Activity of Novel 9-N-alkyltetrahydroberberine Derivatives. Int J Mol Sci. 2022 Nov 16;23(22):14186. doi: 10.3390/ijms232214186.
19. Filimonov AS, Yarovaya OI, Zaykovskaya AV, Rudometova NB, Shcherbakov DN, Chirkova VY, Baev DS, Borisevich SS, Luzina OA, Pyankov OV, Maksyutov RA, Salakhutdinov NF. (+)-Usnic Acid and Its Derivatives as Inhibitors of a Wide Spectrum of SARS-CoV-2 Viruses. Viruses. 2022 Sep 29;14(10):2154. doi: 10.3390/v14102154.
20. Ivankin DI, Dyrkheeva NS, Zakharenko AL, Ilina ES, Zarkov TO, Reynisson J, Luzina OA, Volcho KP, Salakhutdinov NF, Lavrik OI. Monoterpene substituted thiazolidin-4-ones as novel TDP1 inhibitors: Synthesis, biological evaluation and docking. Bioorg Med Chem Lett. 2022 Oct 1;73:128909. doi: 10.1016/j.bmcl.2022.128909
21. Khvostov MV, Gladkova ED, Borisov SA, Zhukova NA, Marenina MK, Meshkova YV, Luzina OA, Tolstikova TG, Salakhutdinov NF. Discovery of the First in Class 9-N-Berberine Derivative as Hypoglycemic Agent with Extra-Strong Action. Pharmaceutics. 2021 Dec 12;13(12):2138. doi: 10.3390/pharmaceutics13122138.
22. Dyrkheeva NS, Filimonov AS, Luzina OA, Orlova KA, Chernyshova IA, Kornienko TE, Malakhova AA, Medvedev SP, Zakharenko AL, Ilina ES, Anarbaev RO, Naumenko KN, Klabenkova KV, Burakova EA, Stetsenko DA, Zakian SM, Salakhutdinov NF, Lavrik OI. New Hybrid Compounds Combining Fragments of Usnic Acid and Thioether Are

Inhibitors of Human Enzymes TDP1, TDP2 and PARP1. Int J Mol Sci. 2021 Oct 20;22(21):11336. doi: 10.3390/ijms222111336.

23. Nikolin VP, Popova NA, Kaledin VI, Luzina OA, Zakharenko AL, Salakhutdinov NF, Lavrik OI. The influence of an enamine usnic acid derivative (a tyrosyl-DNA phosphodiesterase 1 inhibitor) on the therapeutic effect of topotecan against transplanted tumors in vivo. Clin Exp Metastasis. 2021 Oct;38(5):431-440. doi: 10.1007/s10585-021-10113-y.
24. Dyrkheeva NS, Filimonov AS, Luzina OA, Zakharenko AL, Ilina ES, Malakhova AA, Medvedev SP, Reynisson J, Volcho KP, Zakian SM, Salakhutdinov NF, Lavrik OI. New Hybrid Compounds Combining Fragments of Usnic Acid and Monoterpenoids for Effective Tyrosyl-DNA Phosphodiesterase 1 Inhibition. Biomolecules. 2021 Jul 1;11(7):973. doi: 10.3390/biom11070973.
25. [Antitumor Activity of the Combination of Topotecan and Tyrosyl-DNA-Phosphodiesterase 1 Inhibitor on Model Krebs-2 Mouse Ascite Carcinoma].
26. Dyrkheeva NS, Zakharenko AL, Novoselova ES, Chepanova AA, Popova NA, Nikolin VP, Luzina OA, Salakhutdinov NF, Ryabchikova EI, Lavrik OI. Mol Biol (Mosk). 2021 Mar-Apr;55(2):312-317. doi: 10.31857/S0026898421020051. PMID: 33871444 Free article. Russian.
27. 26
28. Gladkova ED, Chepanova AA, Ilina ES, Zakharenko AL, Reynisson J, Luzina OA, Volcho KP, Lavrik OI, Salakhutdinov NF. Discovery of Novel Sultone Fused Berberine Derivatives as Promising Tdp1 Inhibitors. Molecules. 2021 Mar 30;26(7):1945. doi: 10.3390/molecules26071945.
29. Gladkova ED, Nechepurenko IV, Bredikhin RA, Chepanova AA, Zakharenko AL, Luzina OA, Ilina ES, Dyrkheeva NS, Mamontova EM, Anarbaev RO, Reynisson J, Volcho KP, Salakhutdinov NF, Lavrik OI. The First Berberine-Based Inhibitors of Tyrosyl-DNA Phosphodiesterase 1 (Tdp1), an Important DNA Repair Enzyme. Int J Mol Sci. 2020 Sep 28;21(19):7162. doi: 10.3390/ijms21197162.
30. Kuranov SO, Luzina OA, Onopchenko O, Pishel I, Zozulya S, Gureev M, Salakhutdinov NF, Krasavin M. Exploring bulky natural and natural-like periphery in the design of p-(benzyloxy)phenylpropionic acid agonists of free fatty acid receptor 1 (GPR40). Bioorg Chem. 2020 Jun;99:103830. doi: 10.1016/j.bioorg.2020.103830.