

Сведения об официальном оппоненте

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Список основных публикаций по теме диссертации за последние 5 лет:

1. Korolev SP, Shulepova AA, Anisenko AN, Galkin SO, Alexandrova LA, Jasko MV, Matyugina ES, Novikov MS, Khandazhinskaya AL, Kochetkov SN, Gottikh MB. Dual-Reporter SARS-CoV-2 Replicon for Screening Viral Polymerase Inhibitors. *Biochemistry (Mosc)*. 2024 Nov;89(11):2037-2050. doi: 10.1134/S0006297924110166.
2. Anisenko AN, Nefedova AA, Kireev II, Gottikh MB. Post-Integrational DNA Repair of HIV-1 Is Associated with Activation of the DNA-PK and ATM Cellular Protein Kinases and Phosphorylation of Their Targets. *Biochemistry (Mosc)*. 2024 Jun;89(6):1122-1132. doi: 10.1134/S0006297924060117.
3. Kikhai TF, Agapkina YY, Prikazchikova TA, Vdovina MV, Shekhtman SP, Fomicheva SV, Korolev SP, Gottikh MB. Role of I182, R187, and K188 Amino Acid Residues in the Catalytic Domain of HIV-1 Integrase in the Processes of Reverse Transcription and Integration. *Biochemistry (Mosc)*. 2024 Mar;89(3):462-473. doi: 10.1134/S0006297924030076.
4. Kikhai T, Agapkina Y, Silkina M, Prikazchikova T, Gottikh M. The cellular SFPQ protein as a positive factor in the HIV-1 integration. *Biochimie*. 2024 Jul;222:9-17. doi: 10.1016/j.biochi.2024.02.002. Epub 2024 Feb 17.
5. Anisenko A, Galkin S, Mikhaylov AA, Khrenova MG, Agapkina Y, Korolev S, Garkul L, Shirokova V, Ikonnikova VA, Korlyukov A, Dorovatovskii P, Baranov M, Gottikh M. KuINins as a New Class of HIV-1 Inhibitors That Block Post-Integration DNA Repair. *Int J Mol Sci*. 2023 Dec 11;24(24):17354. doi: 10.3390/ijms242417354.
6. Khomutov MA, Salikhov AI, Mitkevich VA, Tunitskaya VL, Smirnova OA, Korolev SP, Chizhov AO, Gottikh MB, Kochetkov SN, Khomutov AR. *C*-Methylated Spermidine Derivatives: Convenient Syntheses and Antizyme-Related Effects.

- Biomolecules. 2023 May 31;13(6):916. doi: 10.3390/biom13060916.
7. Arutyunyan AF, Kostyukov AA, Korolev SP, Gottikh MB, Kaluzhny DN, Susova OY, Zhuze AL. [DNA Sequence-Specific Ligands. 19. Synthesis, Spectral Properties, Virological and Biochemical Studies of DB3(n) Fluorescent Dimeric Trisbenzimidazoles]. *Mol Biol (Mosk)*. 2023 May-Jun;57(3):517-527.
 8. Anisenko A, Nefedova A, Agapkina Y, Gottikh M. Both ATM and DNA-PK Are the Main Regulators of HIV-1 Post-Integrational DNA Repair. *Int J Mol Sci*. 2023 Feb 1;24(3):2797. doi: 10.3390/ijms24032797.
 9. Rozina A, Anisenko A, Kikhai T, Silkina M, Gottikh M. Complex Relationships between HIV-1 Integrase and Its Cellular Partners. *Int J Mol Sci*. 2022 Oct 15;23(20):12341. doi: 10.3390/ijms232012341.
 10. Hyvönen MT, Smirnova OA, Mitkevich VA, Tunitskaya VL, Khomutov M, Karpov DS, Korolev SP, Häkkinen MR, Pietilä M, Gottikh MB, Vepsäläinen J, Alhonen L, Makarov AA, Kochetkov SN, Wallace HM, Keinänen TA, Khomutov AR. Role of Polyamine-Induced Dimerization of Antizyme in Its Cellular Functions. *Int J Mol Sci*. 2022 Apr 21;23(9):4614. doi: 10.3390/ijms23094614
 11. Shadrina O, Garanina I, Anisenko A, Kireev I, Gottikh M. Transcriptome analysis of HEK 293T cells revealed different significance of the depletion of DNA-dependent protein kinase subunits, Ku70, Ku80, and DNA-PKcs. *Biochimie*. 2022 Aug; 199:139-149. doi: 10.1016/j.biochi.2022.04.004. Epub 2022 Apr 14.
 12. Shadrina OA, Kikhay TF, Agapkina YY, Gottikh MB. [SFPQ and NONO Proteins and Long Non-Coding NEAT1 RNA: Cellular Functions and Role in the HIV-1 Life Cycle]. *Mol Biol (Mosk)*. 2022 Mar-Apr;56(2):259-274. Russian. doi: 10.31857/S0026898422020161
 13. Ilgova E, Galkin S, Khrenova M, Serebryakova M, Gottikh M, Anisenko A. Complex of HIV-1 Integrase with Cellular Ku Protein: Interaction Interface and Search for Inhibitors. *Int J Mol Sci*. 2022 Mar 8;23(6):2908. doi: 10.3390/ijms23062908.
 14. Galkin SO, Anisenko AN, Shadrina OA, Gottikh MB. Genetic Engineering Systems to Study Human Viral Pathogens from the Coronaviridae Family. *Mol Biol*. 2022;56(1):72-89. doi: 10.1134/S0026893322010022. Epub 2022 Feb 12.
 15. Galkin SO, Anisenko AN, Shadrina OA, Gottikh MB. [Genetic Engineering Systems to

- Study Human Viral Pathogens from the Coronaviridae Family]. *Mol Biol (Mosk)*. 2022 Jan-Feb;56(1):83-102. Russian. doi: 10.31857/S0026898422010025.
16. Anisenko A, Shadrina O, Garanina I, Gottikh M. Transcriptome dataset of HEK293T cells depleted of one of the subunits of the DNA-PK complex: Ku70, Ku80 or DNA-PKcs. *Data Brief*. 2021 Nov 19; 39:107596. doi: 10.1016/j.dib.2021.107596
 17. Kapitonova MA, Shadrina OA, Korolev SP, Gottikh MB. [Main Approaches to Controlled Protein Degradation in the Cell]. *Mol Biol (Mosk)*. 2021 Jul-Aug;55(4):543-561. Russian. doi: 10.31857/S0026898421040066
 18. Galkin S, Rozina A, Zalevsky A, Gottikh M, Anisenko A. A Fluorescent Assay to Search for Inhibitors of HIV-1 Integrase Interactions with Human Ku70 Protein, and Its Application for Characterization of Oligonucleotide Inhibitors. *Biomolecules*. 2020 Aug 25;10(9):1236. doi: 10.3390/biom10091236.
 19. Anisenko A, Kan M, Shadrina O, Brattseva A, Gottikh M. Phosphorylation Targets of DNA-PK and Their Role in HIV-1 Replication. *Cells*. 2020 Aug 16;9(8):1907. doi: 10.3390/cells9081907.
 20. Shadrina O, Garanina I, Korolev S, Zatsepin T, Van Assche J, Daouad F, Wallet C, Rohr O, Gottikh M. Analysis of RNA binding properties of human Ku protein reveals its interactions with 7SK snRNA and protein components of 7SK snRNP complex. *Biochimie*. 2020 Apr-May;171-172:110-123. doi: 10.1016/j.biochi.2020.02.016. Epub 2020 Feb 24.