

Сведения о научных руководителях
диссертации Лукьянова Дмитрия Александровича
«Поиск новых антибиотиков. Изучение механизма действия репомидина,
тетраценомицина X и аурапланина»

Научный руководитель: Остерман Илья Андреевич

Ученая степень: доктор химических наук

Ученое звание: -

Должность: с.н.с., Химический факультет, Кафедра химии природных соединений

Место работы: Химический факультет, МГУ имени М.В. Ломоносова

Адрес места работы: 119992, Москва, Ленинские горы, дом 1, стр 40

Тел.: +74959395418

E-mail: osterman@yandex.ru

Список основных научных публикаций по специальностям 1.4.9 - Биоорганическая химия, 1.5.3 — «молекулярная биология» за последние 5 лет:

- 1. Osterman IA**, Wieland M, Maviza TP, Lashkevich KA, Lukianov DA, Komarova ES, Zakalyukina YV, Buschauer R, Shiriaev DI, Leyn SA, Zlamal JE, Biryukov MV, Skvortsov DA, Tashlitsky VN, Polshakov VI, Cheng J, Polikanov YS, Bogdanov AA, Osterman AL, Dmitriev SE, Beckmann R, Dontsova OA, Wilson DN, Sergiev PV. Tetracenomycin X inhibits translation by binding within the ribosomal exit tunnel. **Nature Chemical Biology**. 2020
2. Alferova VA, Maviza TP, Biryukov MV, Zakalyukina YV, Lukianov DA, Skvortsov DA, Vasilyeva LA, Tashlitsky VN, Polshakov VI, Sergiev PV, Korshun VA, **Osterman IA**. Biological evaluation and spectral characterization of a novel tetracenomycin X congener. **Biochimie**. 2022 Jan;192:63-71
3. Shiriaev DI, Sofronova AA, Berdnikovich EA, Lukianov DA, Komarova ES, Marina VI, Zakalyukina YV, Biryukov MV, Maviza TP, Ivanenkov YA, Sergiev PV, **Osterman IA**, Dontsova OA. Nybomycin inhibits both types of E. coli DNA gyrase - fluoroquinolone-sensitive and fluoroquinolone-resistant. **Antimicrob Agents Chemother**. 2021
4. Zakalyukina YV, Biryukov MV, Lukianov DA, Shiriaev DI, Komarova ES, Skvortsov DA, Kostyukevich Y, Tashlitsky VN, Polshakov VI, Nikolaev E, Sergiev PV, **Osterman IA**. Nybomycin-producing Streptomyces isolated from carpenter ant Camponotus vagus. **Biochimie**. 2019
5. **Osterman IA**, Chervontseva ZS, Evfratov SA, Sorokina AV, Rodin VA, Rubtsova MP, Komarova ES, Zatsepin TS, Kabilov MR, Bogdanov AA, Gelfand MS, Dontsova OA, Sergiev PV. Translation at first sight: the influence of leading codons. **Nucleic Acids Res**. 2020 9;48(12):6931-6942
6. **Osterman IA**, Khabibullina NF, Komarova ES, Kasatsky P, Kartsev VG, Bogdanov AA, Dontsova OA, Konevega AL, Sergiev PV, Polikanov YS. Madumycin II inhibits peptide bond formation by forcing the peptidyl transferase center into an inactive state (2017). **Nucleic Acids Res**
7. **Osterman, I.A.**, Evfratov, S.A., Sergiev, P.V., Dontsova, O.A. Comparison of mRNA features affecting translation initiation and reinitiation (2013) **Nucleic Acids Research**, 41 (1), pp. 474-486

Научный руководитель: Сергиев Пётр Владимирович
Ученая степень: доктор химических наук
Ученое звание: член-корреспондент РАН
Должность: профессор кафедры химии природных соединений Химического факультета МГУ имени М.В. Ломоносова

Место работы: ФГБОУ высшего образования «Московский государственный университет имени М.В. Ломоносова», Химический факультет
Адрес места работы: 119992, Москва, Ленинские горы, дом 1, стр 40
Тел.: +7 495 939 54 18

E-mail: petya@genebee.msu.ru

Список основных научных публикаций по специальности 1.5.3 — «молекулярная биология» за последние 5 лет:

1. Tereshchenkov A.G., Dobosz-Bartoszek M., Osterman I.A., Marks J., Sergeeva V.A., Kasatsky P., Komarova E.S., Stavrianidi A.A., Rodin I.A., Konevega A.L., Sergiev P.V., Sumbatyan N.V., Mankin A.S., Bogdanov A.A., Polikanov Y.S. (2018) Binding action of amino-acid analogues of chloramphenicol upon the bacterial ribosome. *Journal of Molecular Biology*, 430 (6), 842-852.
2. Jiang Z.K., Tuo L., Huang D.L., Osterman I.A., Tyurin A.P., Liu S.W., Lukyanov D.A., Sergiev P.V., Dontsova O.A., Korshun V.A., Li F.N., Sun C.H. (2018) Diversity, novelty, and antimicrobial activity of endophytic actinobacteria from mangrove plants in Beilun Estuary National Nature Reserve of Guangxi, China. *Frontiers in microbiology*, 9, 868.
3. Wilcox Brendan, Osterman Ilya, Serebryakova Marina, Lukyanov Dmitry, Komarova Ekaterina, Gollan Bridget, Morozova Natalia, Wolf Yuri I., Makarova Kira S., Helaine Sophie, Sergiev Petr, Dubiley Svetlana, Borukhov Sergei, Severinov Konstantin (2018) Escherichia coli Itat is a type II toxin that inhibits translation by acetylating isoleucyl-tRNA^{Ile}. *Nucleic Acids Research*, 46 (15) 7873-7885.
4. Chugunova A., Navalayeu T., Dontsova O., Sergiev P. (2018) Mining for Small Translated ORFs. *Journal of Proteome Research*, 17 (1), 1-11.
5. Mariasina S.S., Petrova O.A., Osterman I.A., Sergeeva O.V., Efimov S.V., Klochkov V.V., Sergiev P.V., Dontsova O.A., T-H Huang, C-F Chang, Polshakov V.I. (2018) NMR assignments of the WBSR27 protein related to Williams-Beuren syndrome. *Biomolecular NMR Assignments*, 12 (2), 303-308.
6. Sergiev Petr V., Aleksashin Nikolay A., Chugunova Anastasia A., Polikanov Yury S., Dontsova Olga A. (2018) Structural and evolutionary insights into ribosomal RNA methylation. *Nature Chemical Biology*, 14 (3), 226-235.
7. Lukyanov D.A., Komarova E.S., Shiriaev D.I., Zakalyukina Y.V., Biryukov M.V., Skvortsov D.A., Rebrikov D.D., Podlesskaia M., Khven I.M., Tashlitsky V.N., Zatsepin T.S., Serebryakova M.V., Polshakov V.I., Bogdanov A.A., Sergiev P.V., Dontsova O.A., Osterman I.A. (2018) Tetracenomycin X novel inhibitor of translation. *FEBS open bio*, 8, (S1), 243- 243.
8. Васильева Е.Н., Лаптев И.Г., Сергиев П.В., Донцова О.А. (2018) Общий партнер нескольких ферментов, метилирующих компоненты эукариотического аппарата трансляции. *Молекулярная биология*, 52 (6), 975-983.
9. Ivanenkov Yan A., Yamidanov Renat S., Osterman Ilya A., Sergiev Petr V., Aladinskiy Vladimir A., Aladinskaya Anastasia V., Terentiev Victor A., Veselov Mark S., Ayginin Andrey A., Skvortsov Dmitry A., Komarova Katerina S., Sadovnikov Sergey V., Rustam Matniyazov, Sofronova Alina A., Malyshev Alexander S., Machulkin Alexey E., Petrov

- Rostislav A., Dmitrii Lukianov, Svetlana Iarovenko, Bezrukov Dmitry S., Baymiey Andrey Kh, Dontsova Olga A. (2019) 2-Pyrazol-1-yl-thiazole derivatives as novel highly potent antibacterials. *Journal of Antibiotics*, 72, 827-833
10. Osterman I I., Shiriaev D., Sofronova A., Khven I., Lukianov D., Komarova E., Zakalyukina Y., Maviza T., Birykov M., Ivanenkov Y., Sergiev P., Dontsova O. (2019) DNA replication machinery and topoisomerases – good targets for new antibiotics development. *FEBS open bio*, 9, 149-149.
 11. Qin-Pei Lu, Jing-Jing Ye, Yong-Mei Huang, Liu Di, Li-Fang Liu, Kun Dong, Razumova Elizaveta A., Osterman Ilya A., Sergiev Petr V., Dontsova Olga A., Shu-Han Jia, Da-Lin Huang, Cheng-Hang Sun 2019 Exploitation of Potentially New Antibiotics from Mangrove Actinobacteria in Maowei Sea by Combination of Multiple Discovery Strategies. *Antibiotics*, 8 (4), 236.
 12. Ivanenkov Yan A., Yamidanov Renat S., Osterman Ilya A., Sergiev Petr V., Aladinskiy Vladimir A., Aladinskaya Anastasia V., Terentiev Victor A., Veselov Mark S., Ayginin Andrey A., Skvortsov Dmitry A., Komarova Katerina S., Chemeris Alexey V., Baimiev Alexey Kh, Sofronova Alina A., Malyshev Alexander S., Machulkin Alexey E., Petrov Rostislav A., Bezrukov Dmitry S., Filkov Gleb I., Puchinina Maria M., Zainullina Liana F., Maximova Marina A., Zileeva Zulfiya R., Vakhitova Yulia V., Dontsova Olga A. (2019) Identification of N-Substituted Triazolo-azetidines as Novel Antibacterials using pDualrep2 HTS Platform. *Combinatorial Chemistry and High Throughput Screening*, 22 (5), 346-354.
 13. Ivanenkov Yan A., Zhavoronkov Alex, Yamidanov Renat S., Osterman Ilya A., Sergiev Petr V., Aladinskiy Vladimir A., Aladinskaya Anastasia V., Terentiev Victor A., Veselov Mark S., Ayginin Andrey A., Kartsev Victor G., Skvortsov Dmitry A., Chemeris Alexey V., Baimiev Alexey Kh, Sofronova Alina A., Malyshev Alexander S., Filkov Gleb I., Bezrukov Dmitry S., Zagribelnyy Bogdan A., Putin Evgeny O., Puchinina Maria M., Dontsova Olga A. (2019) Identification of Novel Antibacterials Using Machine Learning Techniques. *Frontiers in pharmacology*, 10, e913.
 14. Chugunova Anastasia, Loseva Elizaveta, Mazin Pavel, Mitina Aleksandra, Navalayeu Tsimafei, Bilan Dmitry, Vishnyakova Polina, Marey Maria, Golovina Anna, Serebryakova Marina, Pletnev Philipp, Rubtsova Maria, Mair Waltraud, Vanyushkina Anna, Khaitovich Philipp, Belousov Vsevolod, Vysokikh Mikhail, Sergiev Petr, Dontsova Olga (2019) LINC00116 codes for a mitochondrial peptide linking respiration and lipid metabolism. *Proceedings of the National Academy of Sciences of the United States of America*, 116 (11), 4940-4945.
 15. Ivanenkov YA, Yamidanov RS, Osterman IA, Sergiev PV, Aladinskiy VA, Aladinskaya AV, Terentiev VA, Veselov MS, Ayginin AA, Skvortsov DA, Komarova ES, Zagribelnyy BA, Baimiev AK, Shvetc KY, Sofronova AA, Machulkin AE, Petrov RA, Zainullina LF, Maximova MA, Zileeva ZR, Vakhitova YV, Bezrukov DS, Puchinina MM, Dontsova OA (2019) Large-scale high-throughput screening revealed 5'-(carbonylamino)-2,3'-bithiophene- 4'-carboxylate as novel template for antibacterial agents. *Current Drug Discovery Technologies*.
 16. Ivan Laptev, Ekaterina Shvetsova, Sergey Levitskii, Marina Serebryakova, Maria Rubtsova, Alexey Bogdanov, Piotr Kamenski, Petr Sergiev, Olga Dontsova (2019) Mouse Trmt2B protein is a dual specific mitochondrial metyltransferase responsible for m5U formation in both tRNA and rRNA. *RNA Biology*, 17 (4), 441-450.
 17. Ivanenkov Ya A., Komarova (Andreyanova) E.S., Osterman I.A., Sergiev P.V., Yamidanov R.S., Deineka E.V., Terent'ev V.A., Fil'kov G.I., Sofronova A.A., Mazhuga A.G., Dontsova O.A. (2019) N-Pyridyl-Substituted Carboxypiperidine Amides: A New Class of Prokaryote Translation Inhibitors. *Pharmaceutical Chemistry Journal*, 53 (3), 225-229.

18. Zakalyukina Yuliya V., Birykov Mikhail V., Lukianov Dmitrii A., Shiriaev Dmitrii I., Komarova Ekaterina S., Skvortsov Dmitry A., Yury Kostyukevich, Tashlitsky Vadim N., Polshakov Vladimir I., Sergiev Petr V., Osterman Ilya A. (2019) Nybomycin-producing *Streptomyces* isolated from carpenter ant *Camponotus vagus*. *Biochimie*, 160, 93-99.
19. Pletnev P.I., Nesterchuk M.V., Rubtsova M.P., Serebryakova M.V., Dmitrieva K., Osterman I.A., Bogdanov A.A., Sergiev P.V. (2019) Oligoglutamylation of *E. coli* ribosomal protein S6 is under growth phase control. *Biochimie*, 167, 61-67.
20. Khabibullina Nelli F., Tereshchenkov Andrey G., Komarova Ekaterina S., Syroegin Egor A., Shiriaev Dmitrii I., Paleskava Alena, Kartsev Victor G., Bogdanov Alexey A., Konevega Andrey L., Dontsova Olga A., Sergiev Petr V., Osterman Ilya A., Polikanov Yury S. (2019) Structure of Dirithromycin Bound to the Bacterial Ribosome Suggests New Ways for Rational Improvement of Macrolides. *Antimicrobial Agents and Chemotherapy*, 63 (6), e02266-18.
21. Feina Li, Liu Shaowei, Qinpei Lu, Zheng Hongyun, Osterman Ilya A., Lukyanov Dmitry A., Sergiev Petr V., Dontsova Olga A., Liu Shuangshuang, Jingjing Ye, Huang Dalin, Sun Chenghang (2019) Studies on Antibacterial Activity and Diversity of Cultivable Actinobacteria Isolated from Mangrove Soil in Futian and Maowei Hai of China. *Evidence-based Complementary and Alternative Medicine*, 2019, c. 1-11.
22. Ivanenkov Yan A., Yamidanov Renat S., Osterman Ilya A., Sergiev Petr V., Ayginin Andrey A., Aladinskiy Vladimir A., Aladinskaya Anastasia V., Terentiev Victor A., Veselov Mark S., Skvortsov Dmitry A., Komarova Katerina S., Chemeris Alexey V., Zainullina Liana F., Maximova Marina A., Zileeva Zulfiya R., Vakhitova Yulia V., Baimiev Alexey Kh, Sofronova Alina A., Machulkin Alexey E., Petrov Rostislav A., Bezrukov Dmitry S., Puchinina Maria M., Dmitrii Lukianov A., Dontsova Olga A. (2019) Substituted Furanocoumarins as Novel Class of Antibacterial Translation Inhibitors. *Combinatorial Chemistry and High Throughput Screening*, 22 (6), 400-410.
23. Кузнецова С.А., Петрюков К.С., Плетнев Ф.И., Сергиев П.В., Донцова О.А. (2019) РНК-(цитозин С5)-метилтрансферазы. *Биохимия*, 84 (8), 1076-1098.
24. Imyanitov E., Panchenko A., Permyakov O., Maydin M., Yurova M., Aleksakhina S., Averina O., Sergiev P. (2020) 21P Urethane-induced lung carcinogenesis in genetically edited C57Bl/6 mice with CHEK2 and GPRC5A heterozygous inactivating mutations. *Annals of Oncology*, 31, S251-S251.
25. Zhong-Ke Jiang, Hu Xin-Xin, Xiao Lan-Lin, Ren Yi-Ru, Shakhtina Anna N., Lukianov Dmitrii A., Osterman Ilya A., Sergiev Petr V., Dontsova Olga A., Wang Hao, Wu Gang, You Xue-Fu, Sun Cheng-Hang (2020) Beilunmycin, a new virginiamycin antibiotic from mangrove-derived *Streptomyces* sp. 2BBP-J2 and the antibacterial activity by inhibiting protein translation. *Journal of Asian Natural Products Research*, 23 (10), 992-1000.
26. Pletnev Philipp, Guseva E., Zanina Anna, Evfratov Sergey, Dzama Margarita, Treshin Vsevolod, Pogorel'skaya Alexandra, Osterman Ilya, Golovina Anna, Rubtsova Maria, Serebryakova Marina, Pobeguts Olga V., Govorun Vadim M., Bogdanov Alexey A., Dontsova Olga A., Sergiev Petr V (2020) Comprehensive Functional Analysis of *Escherichia coli* Ribosomal RNA Methyltransferases *Frontiers in genetics*, том 11, 97.
27. Laptev I., Dontsova O., Sergiev P. (2020) Epitranscriptomics of Mammalian Mitochondrial Ribosomal RNA. *Cells*, 9 (10).
28. Wang T., Lu Q., Sun C., Lukianov D., Osterman IA, Sergiev PV, Dontsova OA, Hu X., You X., Liu S., Wu G. (2020) Hetiamacin E and F, New Amicoumacin Antibiotics from *Bacillus subtilis* PJS Using MS/MS-Based Molecular Networking. *Molecules*, 25 (19).
29. Veselov Mark S., Ivanenkov Yan A., Yamidanov Renat S., Osterman Ilya A., Sergiev Petr V., Aladinskiy Vladimir A., Aladinskaya Anastasia V., Terentiev Victor A., Ayginin Andrey A., Skvortsov Dmitry A., Komarova Katerina S., Chemeris Alexey V., Baimiev Alexey Kh, Sofronova Alina A., Machulkin Alexey E., Petrov Rostislav A., Maklakova

- Svetlana Yu, Bezrukov Dmitry S., Filkov Gleb I., Zainullina Liana F., Maximova Marina A., Zileeva Zulfiya R., Kartsev Victor G., Vakhitova Yulia V., Dontsova Olga A. (2020) Identification of pyrrolo-pyridine derivatives as novel class of antibacterials. *Molecular Diversity*, 24 (1), 233-239.
30. Komarova Ekaterina S., Chervontseva Zoya S., Osterman Ilya A., Evfratov Sergey A., Rubtsova Maria P., Zatsepin Timofei S., Semashko Tatiana A., Kostryukova Elena S., Bogdanov Alexey A., Gelfand Mikhail S., Dontsova Olga A., Sergiev Petr V. (2020) Influence of the spacer region between the Shine-Dalgarno box and the start codon for fine-tuning of the translation efficiency in *Escherichia coli*. *Microbial Biotechnology*, 13 (4), 1254-1261.
 31. Pichkur Evgeny B., Paleskava Alena, Tereshchenkov Andrey G., Kasatsky Pavel, Komarova Ekaterina, Shiriaev Dmitrii, Bogdanov Alexey, Dontsova Olga A., Osterman Ilya, Sergiev Petr V., Polikanov Yury S., Myasnikov Alexander G., Konevega Andrey L. (2020) Insights into the improved macrolide inhibitory activity from the high-resolution cryo-EM structure of dirithromycin bound to the *E. coli* 70S ribosome. *RNA*, 26 (6), 715-723.
 32. Ivan Laptev, Ekaterina Shvetsova, Sergey Levitskii, Marina Serebryakova, Maria Rubtsova, Victor Zgoda, Alexey Bogdanov, Piotr Kamenski, Petr Sergiev, Olga Dontsova (2020) METTL15 interacts with the assembly intermediate of murine mitochondrial small ribosomal subunit to form m4C840 12S rRNA residue. *Nucleic Acids Research*, 48 (14), 8022-8034.
 33. Ovchinnikov Stepan V., Bikmetov Dmitry, Livenskiy Alexei, Serebryakova Marina, Wilcox Brendan, Mangano Kyle, Shiriaev Dmitrii I., Osterman Ilya A., Sergiev Petr V., Borukhov Sergei, Vazquez-Laslop Nora, Mankin Alexander S., Severinov Konstantin, Dubiley Svetlana (2020) Mechanism of translation inhibition by type II GNAT toxin AtaT2. *Nucleic Acids Research*, 48 (15), 8617-8625.
 34. Pletnev Philipp, Pupov Danil, Pshanichnaya Lizaveta, Esyunina Daria, Petushkov Ivan, Nesterchuk Mikhail, Osterman Ilya, Rubtsova Maria, Mardanov Andrey, Ravin Nikolai, Sergiev Petr, Kulbachinskiy Andrey, Dontsova Olga (2020) Rewiring of growth-dependent transcription regulation by a point mutation in region 1.1 of the housekeeping σ factor. *Nucleic Acids Research*, 48 (19), 10802-10819.
 35. Osterman Ilya A., Wieland Maximiliane, Maviza Tinashe P., Lashkevich Kseniya A., Lukianov Dmitrii A., Komarova Ekaterina S., Zakalyukina Yuliya V., Buschauer Robert, Shiriaev Dmitrii I., Leyn Semen A., Zlamal Jaime E., Biryukov Mikhail V., Skvortsov Dmitry A., Tashlitsky Vadim N., Polshakov Vladimir I., Cheng Jingdong, Polikanov Yury S., Bogdanov Alexey A., Osterman Andrei L., Dmitriev Sergey E., Beckmann Roland, Dontsova Olga A., Wilson Daniel N., Sergiev Petr V. (2020) Tetracenomycin X inhibits translation by binding within the ribosomal exit tunnel. *Nature Chemical Biology*, 16, 1071-1077.
 36. Ivanenkov Yan A., Osterman Ilya A., Komarova Ekaterina S., Bogdanov Alexey A., Sergiev Petr V., Dontsova Olga A., Sofronova Alina A., Terentiev Victor A., Filkov Gleb I., Yamidanov Renat S., Majouga Alexander G., Bezrukov Dmitry S., Deyneka Ekaterina V., Skvortsov Dmitry A. (2020) Tetrahydrocarbazoles as Novel Class of DNA Biosynthesis Inhibitors in Bacteria. *Anti-Infective Agents in Medicinal Chemistry*, 18 (2), 121-127.
 37. Osterman Ilya A., Chervontseva Zoe S., Evfratov Sergey A., Sorokina Alena V., Rodin Vladimir A., Rubtsova Maria P., Komarova Ekaterina S., Zatsepin Timofei S., Kabilov Marsel R., Bogdanov Alexey A., Gelfand Mikhail S., Dontsova Olga A., Sergiev Petr V. (2020) Translation at first sight: the influence of leading codons. *Nucleic Acids Research*, 48 (12), 6931-6942.
 38. Mariasina S.S., Chang C.F., Petrova O.A., Efimov S.V., Klochkov V.V., Kechko O.I., Mitkevich V.A., Sergiev P.V., Dontsova O.A., Polshakov V.I. (2020) Williams–Beuren

- syndrome-related methyltransferase WBSR27: cofactor binding and cleavage. *FEBS Journal*, 287 (24), 5375-5393.
39. Osterman I.A., Dontsova O.A., Sergiev P.V. (2020) rRNA Methylation and Antibiotic Resistance *Biochemistry (Moscow)*, 85 (11), 1335-1349.
 40. Аверина О.А., Высоких М.Ю., Пермяков О.А., Сергиев П.В. (2020) Простые советы как повысить эффективность создания мышей с отредактированным геномом. *Acta Naturae (русскоязычная версия)*, 12 (1 (44)), 42-50.
 41. Alferova Vera A., Maviza Tinashe P., Biryukov Mikhail V., Zakalyukina Yuliya V., Lukianov Dmitrii A., Skvortsov Dmitry A., Vasilyeva Lilia A., Tashlitsky Vadim N., Polshakov Vladimir I., Sergiev Petr V., Korshun Vladimir A., Osterman Ilya A. (2021) Biological evaluation and spectral characterization of a novel tetracenomycin X congener. *Biochimie*, 192, 63-71.
 42. Liu Shaowei, Wang Ting, Lu Qinpei, Li Feina, Wu Gang, Jiang Zhongke, Habden Xugela, Liu Lin, Zhang Xiaolin, Lukianov Dmitry A., Osterman Ilya A., Sergiev Petr V., Dontsova Olga A., Sun Chenghang (2021) Bioprospecting of Soil-Derived Actinobacteria Along the Alar-Hotan Desert Highway in the Taklamakan Desert. *Frontiers in microbiology*, 12, 604999.
 43. Averina Olga A., Permyakov Oleg A., Grigorieva Olga O., Starshin Alexey S., Mazur Alexander M., Prokhortchouk Egor B., Dontsova Olga A., Sergiev Petr V. (2021) Comparative Analysis of Genome Editors Efficiency on a Model of Mice Zygotes Microinjection. *International Journal of Molecular Sciences*, 22 (19), 10221-10221.
 44. Wang Ting, Li Feina, Lu Qinpei, Wu Gang, Jiang Zhongke, Liu Shaowei, Habden Xugela, Razumova Elizaveta A., Osterman Ilya A., Sergiev Petr V., Dontsova Olga A., Hu Xinxin, You Xuefu, Sun Chenghang (2021) Diversity, novelty, antimicrobial activity, and new antibiotics of cultivable endophytic actinobacteria isolated from psammophytes collected from Taklamakan Desert. *Journal of Pharmaceutical Analysis*, 11 (2), 241-250.
 45. Skvortsov D.A., Kalinina M.A., Zhirkina I.V., Vasilyeva L.A., Ivanenkov Y.A., Sergiev P.V., Dontsova O.A. (2021) From Toxicity to Selectivity: Coculture of the Fluorescent Tumor and Non-Tumor Lung Cells and High-Throughput Screening of Anticancer Compounds. *Frontiers in pharmacology*, 12.
 46. Chicherin I.V., Dukhalin S.V., Khannanov R.A., Baleva M.V., Levitskii S.A., Patrushev M.V., Sergiev P.V., Kamenski P. (2021) Functional Diversity of Mitochondrial Peptidyl-tRNA Hydrolase ICT1 in Human Cells. *Frontiers in Molecular Biosciences*, 8, 675.
 47. Maksimova Elena M., Vinogradova Daria S., Osterman Ilya A., Kasatsky Pavel S., Nikonov Oleg S., Milón Pohl, Dontsova Olga A., Sergiev Petr V., Paleskava Alena, Konevega Andrey L. (2021) Multifaceted Mechanism of Amicoumacin A Inhibition of Bacterial Translation. *Frontiers in microbiology*, 12, 172.
 48. Bruter Alexandra V., Korshunova Diana S., Kubekina Marina V., Sergiev Petr V., Kalinina Anastasiia A., Ilchuk Leonid A., Silaeva Yuliya Yu, Korshunov Eugenii N., Soldatov Vladislav O., Deykin Alexey V. (2021) Novel transgenic mice with Cre-dependent co-expression of GFP and human ACE2: a safe tool for study of COVID-19 pathogenesis. *Transgenic Research*, 30 (3), 289-301.
 49. Shiriaev Dmitrii I., Sofronova Alina A., Berdnikov Ekaterina A., Lukianov Dmitrii A., Komarova Ekaterina S., Marina Valeria I., Zakalyukina Yuliya V., Biryukov Mikhail V., Maviza Tinashe P., Ivanenkov Yan A., Sergiev Petr V., Osterman Ilya A., Dontsova Olga A. (2021) Nybomycin inhibits both types of E. coli DNA gyrase – fluoroquinolone-sensitive and fluoroquinolone-resistant. *Antimicrobial Agents and Chemotherapy*.
 50. Singina G.N., Sergiev P.V., Lopukhov A.V., Rubtsova M.P., Taradajnic N.P., Ravin N.V., Shedova E.N., Taradajnic T.E., Polejaeva I.A., Dozev A.V., Brem G., Dontsova O.A., Zinovieva N.A. (2021) Production of a Cloned Offspring and CRISPR/Cas9 Genome Editing of Embryonic Fibroblasts in Cattle. *Doklady Biochemistry and Biophysics*, 496(1), 48-51.

51. Сергиев П.В., Рубцова М.П. 2021 Мал, да удал. Разнообразие функций малых белков и пептидов – продуктов трансляции коротких рамок считывания. *Biochemistry (Moscow)*, 86 (9), 1366-1379.
52. Зареченская А.С., Сергиев П.В., Остерман И.А. 2021 Механизмы контроля качества бактериальной трансляции. *Acta Naturae (русскаяязычная версия)*, 13 (2), 32-44.
53. Lukianov Dmitrii A., Buev Vitaly S., Ivanenkov Yan A., Kartsev Victor G., Skvortsov Dmitry A., Osterman Ilya A., Sergiev Petr V. 2022 Imidazole Derivative As a Novel Translation Inhibitor. *Acta Naturae (англоязычная версия)*, 14 (2), 71-77.
54. Itoh Yuzuru, Khawaja Anas, Laptev Ivan, Cipullo Miriam, Atanassov Ilian, Sergiev Petr, Rorbach Joanna, Amunts Alexey 2022 Mechanism of mitoribosomal small subunit biogenesis and preinitiation *Nature*, 606 (7914), 603-608.
55. Averina Olga A., Laptev Ivan G., Emelianova Mariia A., Permyakov Oleg A., Mariasina Sofia S., Nikiforova Alyona I., Manskikh Vasily N., Grigorieva Olga O., Bolikhova Anastasia K., Kalabin Gennady A., Dontsova Olga A., Sergiev Petr V. 2022 Mitochondrial rRNA Methylation by Mett15 Contributes to the Exercise and Learning Capability in Mice. *International Journal of Molecular Sciences*, 23 (11), 6056.
56. Pletnev Philipp I., Shulenina Olga, Evfratov Sergey, Treshin Vsevolod, Subach Maksim F., Serebryakova Marina V., Osterman Ilya A., Paleskava Alena, Bogdanov Alexey A., Dontsova Olga A., Konevega Andrey L., Sergiev Petr V (2022) Ribosomal protein S18 acetyltransferase RimI is responsible for the acetylation of elongation factor Tu *Journal of Biological Chemistry*, 298 (5), 101914.
57. Maviza Tinashe P., Zarechenskaia Anastasiia S., Burmistrova Nadezhda R., Tchoub Andrey S., Dontsova Olga A., Sergiev Petr V., Osterman Ilya A (2022) RtcB2-PrfH Operon Protects E. coli ATCC25922 Strain from Colicin E3 Toxin *International Journal of Molecular Sciences*, 23 (12), 6453.
58. Alferova VA, Maviza TP, Biryukov MV, Zakalyukina YV, Lukianov DA, Skvortsov DA, Vasilyeva LA, Tashlitsky VN, Polshakov VI, Sergiev PV, Osterman IA, Korshun VA (2022) Structure-activity relationship for natural tetracenomycin X congeners. *MDPI Proceedings*.
59. Mariasina S.S., Chang C.F., Navalayev T.I., Chugunova A.A., Efimov S.V., Zgoda V.G., Ivlev V.A., Dontsova O.A., Sergiev P.V., Polshakov V.I. (2022) Williams-Beuren syndrome related methyltransferase WBSCR27: from structure to possible function. *Frontiers in Molecular Biosciences*, 9 (865743), 1-15.
60. Руденко А.Ю., Марьясина С.С., Сергиев П.В., Польшаков В.И. 2022 Аналоги S-аденозил-L-метионина в изучении метилтрансфераз. *Молекулярная биология*, 56 (2), 296-319.

Ученый секретарь
диссертационного совета МГУ.014.2,
кандидат химических наук
Ю.Ю. Агапкина

Подпись, печать