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Адрес

Федеральное государственное
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Институт биоорганической химии им.
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Контакты

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Образование

2005– 2008	Российская Федерация	Московский Государственный Университет им. М.В. Ломоносова, химический факультет	аспирантура
2000– 2005	Российская Федерация	Московский Государственный Университет им. М.В. Ломоносова, химический факультет	специалист, диплом с отличием

Работа в ИБХ

2020–наст.вр.	Ведущий научный сотрудник
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Владение языками

русский, английский

Научные интересы

- Молекулярные механизмы метастазирования опухолей;
- Роль внеклеточного матрикса в развитии опухолевых заболеваний;
- Роль внеклеточного матрикса в процессе метастазирования;
- Молекулы клеточной адгезии;
- Роль молекул клеточной адгезии в процессе метастазирования;
- Микрофлюидные системы типа «орган-на-чипе»;
- In vitro модель кишечника человека;
- Эпигенетические механизмы регуляции экспрессии генов, микро-РНК, метилирование ДНК.

Степени и звания

Кандидат наук (Химические науки, 02.00.10 — Биоорганическая химия)

Гранты и проекты

- 2019– [Микрофлюидные технологии для поиска физиологически активных метаболитов.](#)
2023 [микробиотических средств, диагностики аутоиммунных и онкологических заболеваний](#)

Публикации

1. Yanova M, Stepanova E, **Maltseva D**, Tonevitsky A (2025). CD44 variant exons induce chemoresistance by modulating cell death pathways. *Front Cell Dev Biol* 13, 1508577, [10.3389/fcell.2025.1508577](#)
2. **Maltseva D**, Kirillov I, Zhiyanov A, Averinskaya D, Suvorov R, Gubani D, Kudriaeva A, Belogurov A, Tonevitsky A (2024). Incautious design of shRNAs for stable overexpression of miRNAs could result in generation of undesired isomiRs. *BIOCHIM BIOPHYS ACTA* 1867 (3), 195046, [10.1016/j.bbagrm.2024.195046](#)
3. Makarova J, **Maltseva D**, Tonevitsky A (2023). Challenges in characterization of transcriptomes of

extracellular vesicles and non-vesicular extracellular RNA carriers. *Front Mol Biosci* 10, 1327985, [10.3389/fmolb.2023.1327985](https://doi.org/10.3389/fmolb.2023.1327985)

4. **Maltseva DV**, Tonevitsky AG (2023). RNA-binding proteins regulating the CD44 alternative splicing. *Front Mol Biosci* 10, 1326148, [10.3389/fmolb.2023.1326148](https://doi.org/10.3389/fmolb.2023.1326148)
5. Everest-Dass A, Nersisyan S, Maar H, Novosad V, Schröder-Schwarz J, Freytag V, Stuke JL, Beine MC, Schiecke A, Haider MT, Kriegs M, Elakad O, Bohnenberger H, Conradi LC, Raygorodskaya M, Krause L, von Itzstein M, Tonevitsky A, Schumacher U, **Maltseva D**, Wicklein D, Lange T (2023). Spontaneous metastasis xenograft models link CD44 isoform 4 to angiogenesis, hypoxia, EMT and mitochondria-related pathways in colorectal cancer. *Mol Oncol* 18 (1), 62–90, [10.1002/1878-0261.13535](https://doi.org/10.1002/1878-0261.13535)
6. Novosad VO, **Maltseva DV** (2023). The RNA-Binding Proteins OAS1, ZFP36L2, and DHX58 Are Involved in the Regulation of CD44 mRNA Splicing in Colorectal Cancer Cells. *Bull Exp Biol Med* 175 (1), 144–149, [10.1007/s10517-023-05826-x](https://doi.org/10.1007/s10517-023-05826-x)
7. Nersisyan S, Zhiyanov A, Engibaryan N, **Maltseva D**, Tonevitsky A (2022). A novel approach for a joint analysis of isomiR and mRNA expression data reveals features of isomiR targeting in breast cancer. *Front Genet* 13, 1070528, [10.3389/fgene.2022.1070528](https://doi.org/10.3389/fgene.2022.1070528)
8. Shilova N, Bovin N, **Maltseva D**, Polyakova S, Sablina M, Niwa H, Zakharova G, Raygorodskaya M, Bufeeva L, Belyi Y, Hushpulan D, Tonevitsky A (2022). Specificity of viscumin revised. As probed with a printed glycan array. *Biochimie* 202, 94–102, [10.1016/j.biochi.2022.08.009](https://doi.org/10.1016/j.biochi.2022.08.009)
9. Volynsky P, **Maltseva D**, Tabakmakher V, Bocharov EV, Raygorodskaya M, Zakharova G, Britikova E, Tonevitsky A, Efremov R (2022). Differences in Medium-Induced Conformational Plasticity Presumably Underlie Different Cytotoxic Activity of Ricin and Viscumin. *Biomolecules* 12 (2), , [10.3390/biom12020295](https://doi.org/10.3390/biom12020295)
10. Knyazev E, **Maltseva D**, Raygorodskaya M, Shkurnikov M (2021). HIF-Dependent NFATC1 Activation Upregulates ITGA5 and PLAUR in Intestinal Epithelium in Inflammatory Bowel Disease. *Front Genet* 12, 791640, [10.3389/fgene.2021.791640](https://doi.org/10.3389/fgene.2021.791640)
11. **Maltseva DV**, Poloznikov AA, Artyushenko VG (2020). Selective changes in expression of integrin α -subunits in the intestinal epithelial Caco-2 cells under conditions of hypoxia and microcirculation. *Bulletin of Russian State Medical University* (06), 2020, [10.24075/brsmu.2020.078](https://doi.org/10.24075/brsmu.2020.078)
12. Nersisyan SA, Galatenko AV, **Maltseva DV**, Ushkaryov YuA, Tonevitsky AG (2020). Interrelation between miRNA and mRNA expression in HT-29 line cells under hypoxia. *Bulletin of Russian State Medical University* (06), 2020, [10.24075/brsmu.2020.074](https://doi.org/10.24075/brsmu.2020.074)
13. Raigorodskaya MP, Turchinovich A, Tsykina IM, Zgoda VG, Nikulin SV, **Maltseva DV** (2020). Laminin 521 Modulates the Cytotoxic Effect of 5-Fluorouracil on HT29 Colorectal Cancer Cells. *APPL BIOCHEM MICRO+* 56 (8), 870–874, [10.1134/S0003683820080074](https://doi.org/10.1134/S0003683820080074)
14. **Maltseva DV**, Raigorodskaya MP, Zgoda VG, Tonevitsky EA, Knyazev EN (2020). Intracellular Transport of Ribosome-Inactivating Proteins Depends on Annexin 13. *Dokl Biochem Biophys* 494 (1), 219–221, [10.1134/S1607672920040092](https://doi.org/10.1134/S1607672920040092)
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18. **Maltseva D**, Raygorodskaya M, Knyazev E, Zgoda V, Tikhonova O, Zaidi S, Nikulin S, Baranova A, Turchinovich A, Rodin S, Tonevitsky A (2020). Knockdown of the $\alpha 5$ laminin chain affects differentiation of colorectal cancer cells and their sensitivity to chemotherapy. *Biochimie* 174, 107–116, [10.1016/j.biochi.2020.04.016](https://doi.org/10.1016/j.biochi.2020.04.016)
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24. Sakharov D, **Maltseva D**, Knyazev E, Nikulin S, Poloznikov A, Shilin S, Baranova A, Tsykina I, Tonevitsky A (2019). Towards embedding Caco-2 model of gut interface in a microfluidic device to enable multi-organ models for systems biology. *BMC Syst Biol* 13 (Suppl 1), 19, [10.1186/s12918-019-0686-y](https://doi.org/10.1186/s12918-019-0686-y)
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27. Knyazeva EA, Knyazev EN, Gerasimenko TN, Kindeeva OV, **Maltseva DV**, Turchinovich A, Sergievich AA (2019). Laminin 521 alters the SNAIL, ZNF708 and GRN gene expression in BeWo b30 cells and creates physiological conditions for the placental barrier. *Biotehnologiya* 35 (5), 87–93, [10.21519/0234-2758-2019-35-5-87-93](https://doi.org/10.21519/0234-2758-2019-35-5-87-93)
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