

SERGEY ISAEV

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[LinkedIn](#) · [Google Scholar](#)

Current positions Research Fellow at National Medical Research Center for Endocrinology

Research interests Single cell genomics · Cancer studies · Animal evolution

EDUCATION

- 2021 — PhD, Bioinformatics and Computational Biology, Faculty of Biological and Medical Physics, **Moscow Institute of Physics and Technology**, Dolgoprudny, Russia
- 2015-2021 Specialist degree, Bioengineering and Bioinformatics, Faculty of Bioengineering and Bioinformatics, **Moscow State University**, Moscow, Russia

SIGNIFICANT RESEARCH EXPERIENCE

- 2021 — Project "Thymic mesenchymal niche cells and their role in T cell immune regeneration", **National Medical Research Center for Endocrinology**, Moscow, Russia
Supervisor: Peter Kharchenko, Harvard Medical School
- 2021 — Project "Systematic comparison of multimodal single-cell omics integration methods", **National Medical Research Center for Endocrinology**, Moscow, Russia
Supervisor: Peter Kharchenko, Harvard Medical School
- 2020-2021 Project "Analysis of interactions between follicular lymphoma and its microenvironment using scRNA-Seq", **BostonGene**, Moscow, Russia
Supervisors: Alexander Bagaev, BostonGene, and Mikhail Gelfand, Institute for Information Transmission Problems of Russian Academy of Sciences
- Aug 2020 Project "Surface protein imputation using scRNA-Seq data", **School of Molecular and Theoretical Biology**, Online, *Project leader*
- 2018-2019 Project "Circular DNA in *Dicyema sp.* genome", **Institute for Information Transmission Problems of Russian Academy of Sciences**, Moscow, Russia
Supervisor: Yury Panchin, Institute for Information Transmission Problems of Russian Academy of Sciences
- 2018 Project "Metagenomic study of eukaryotic microbiota of meromictic lakes on the coast of Kandalaksha Bay of the White Sea", **White Sea Biological Station of Lomonosov Moscow State University**, Republic of Karelia, Russia
Supervisor: Elena Krasnova, White Sea Biological Station of Lomonosov Moscow State University

PUBLICATIONS

- Apr 2020 Han G, Deng Q, Dai E, . . . , **Isaev S**, et al. Immune microenvironment subtypes and association with tumor cell mutations and antigen expression in follicular lymphoma. *bioRxiv* [doi:10.1101/2021.04.27.441656](https://doi.org/10.1101/2021.04.27.441656)
- May 2019 Zverkov OA, Mikhailov KV, **Isaev SV**, et al. Dicyemida and Orthonectida: Two Stories of Body Plan Simplification. *Frontiers in Genetics* [doi:10.3389/fgene.2019.00443](https://doi.org/10.3389/fgene.2019.00443)

Jul 2019 Kuznetsov VP, Slivko-Koltchik GA, **Isaev SV**, et al. Ion channels of the intestinal hyperpolarizing action potential in nematodes. *Russian Journal of Nematology* doi:10.24411/0869-6918-2019-10008

CONFERENCES

Dec 2020 Radtke AJ et al., "Using Advanced, High-Content Imaging and Single-Cell Gene Expression Analysis to Uncover Unique Aspects of Follicular Lymphoma Biology". Co-author of a poster at *62nd ASH Annual Meeting & Exposition*, Online ([Conference paper](#))

Nov 2019 **Isaev SV** et al., "Metagenomic study of eukaryotic microbiota of meromictic lakes on the coast of Kandalaksha Bay of the White Sea". Poster at *VII International conference "Marine Research and Education"*, Moscow, Russia ([Conference paper in Russian](#))

Sep 2019 Kuznetsov VP et al., "Sleep-like state in mollusk *Clione limacina*". Co-author of a poster at *Information Technologies and Systems 2019*, Perm, Russia ([Conference paper](#))

Sep 2018 **Isaev SV** et al., "Circular DNA in *Dicyema sp.* genome". Poster at *Information Technologies and Systems 2018*, Kazan, Russia ([Conference paper in Russian](#))

TEACHING

2021-2022 Lecturer of course "NGS data analysis", **Blastim**, Moscow, Russia

2020-2021 Teacher of online course "Introduction to Bioinformatics" for high school students, **Foxford**, Moscow, Russia ([Course](#))

Nov 2020 Lecturer of course "Introduction to NGS analysis" for undergraduate students (4 lectures about RNA-Seq), **MIPT**, Moscow, Russia

2018-2021 Teacher of course "Introduction to Bioinformatics" for high school students, **Letovo School**, Moscow, Russia

2017-2018 Teacher of advanced chemistry course for high school students, **Association of Olympiad Winners**, Moscow, Russia

Aug 2016 Teacher of the 8-day intensive course "Phylogenetics and Eukaryotic Phylogeny", **School of Molecular and Theoretic Biology**, Barcelona, Spain

HONORS

May 2019 II FBB Alumni prize (2nd place), FBB MSU

Mar 2019 "Sberbank 2025" contest (2nd place)

SKILLS

Languages: English (fluent), Russian (native)

Programming: Python, R, C++; Git, CWL, Docker, Nextflow, Snakemake

NGS data analysis: bulk RNA-Seq data processing (STAR, RSEM, kallisto) and analysis (DESeq2, edgeR, GSEAPY); scRNA-Seq and snRNA-Seq data processing (Cell Ranger, kallisto-bustools) and analysis (Seurat, SCANPY, velocity, scVelo, CytoTRACE, Monocle2/3, CellPhoneDB and other)

Other bioinformatics: homology search (HMMER3, BLAST), phylogenetics (Mr. Bayes, RAxML, BEAST 2)

Basic "wet" lab skills: DNA / RNA extraction, PCR, vector cloning, Sanger sequencing, SEM / TEM