Shakir Suleimanov

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github.com/SuleimanovShakir

GitHub • ResearchGate • Document repository • LinkedIn

Research interests: Bulk and single-cell transcriptomics • Immunology • Cancer study

Education

Sep 2023 - present
MSc degree in Life Science
Skoltech, Skolkovo

2017 - 2023
Specialist degree in Medicine with First class Honours
Sechenov University, Faculty of Medicine, GPA 5.00/5.00

Additional education

Sep 2023 - May 2024
Bioinformatics
Institute for Bioinformatics, Moscow

Sep 2022 - Jan 2023
Biostatistics and medical data analysis
Institute for Bioinformatics, Moscow

Working experience

Aug 2023 - present
Junior research fellow
Laboratory of immune engineering, Sechenov University

Sep 2021 - Jul 2023
Laboratory assistant
Laboratory of Clinical Smart-Nanotechnologies, Sechenov University

Selected research experience

Feb 2024 - present
Bioinformatics Institute, Advisor: Maxim Kholmatov (EMBL)
Investigation of Empty Droplets detection in SUMseq (GitHub)

Sep 2023 - present
Laboratory of immune engineering, Advisor: Sennikov Sergei V.
Study of the transcriptional activity of immunoregulatory genes in immune cells during activation of different types of TNF receptors by a mediator in normal conditions and in rheumatoid arthritis using scRNA-seq (CITE-seq)

Dec 2023 Short term internship
National Center for Nanoscience and Technology, Beijing, China, Advisor: Liang X-J
Study of a new type of extracellular nanovesicles for applications in regenerative medicine and tissue engineering

Nov 2022 - Jan 2023
Bioinformatics Institute, Advisor: Bakin Evgeny
Identification of genes associated with immune response using open database ImmuneSpace (GitHub)

2022 - 2023
Laboratory of Clinical Smart Nanotechnologies, Advisor: Vlasova Irina I.
Radical-generating activity, phagocytosis and mechanical properties of four phenotypes of human macrophages

2020
StopCOVID research Team, Research advisor: Munblit Daniil B.
Observational study of patients with COVID-19, data extraction and analysis

2020 - 2022
Institute for Regenerative Medicine, Advisor: Vlasova Irina I., Kosheleva Nastasya V.
Effects of extraembryonic tissues mesenchymal stromal cells (MSC) secretome on

the polarization of macrophages

2020 - 2023 **Institute for Regenerative Medicine, Advisor: Vlasova Irina I., Kagan Valerian E.**
Redox Optimization of Phagocyte/Scaffold Interactions in Tissue Regeneration

2019 - 2022 **Laboratory of Neurobiology and Functional Basics of Brain Development, Advisor: Surin Alexander M.**
Study of the neuroprotective effect of neurolipins - individual student scientific grant

Skills

Wet lab — Flow cytometry • Chemiluminescence assay • Amplex red assay • ELISA • Primary and secondary cell culturing • Fluorescence microscopy • Viability assays • qPCR • RNA isolation • Gel electrophoresis • Western blotting • Immunocytochemistry

Basic analysis — GraphPad Prism • FlowJo • ImageJ • QuPath • ilastik • CellProfiler

Programming — R: *ggplot2, dplyr, tidyverse, plotly, knitr, ggpubr* • Python: Pandas, NumPy, Seaborn, BioPython, scikit-learn, PyTorch • Git • Bash: *basic scripts, remote server* • Snakemake

NGS analysis — Alignment (*STAR, bwa, hisat*), assembly (*SPADES*) and analysis (*DESeq2, Scanpy, Seurat*)

Bioinf — Homology search (*HMMER3, BLAST*), phylogenetics (*MEGA*), secondary RNA structures

Publications and Patents (ORCID 0000-0002-8951-9727)

2024 **Suleimanov S.,** Efremov Y., Klyucherev T. et al, Radical-generating activity, phagocytosis and mechanical properties of four phenotypes of human macrophages, *Int. J. Mol. Sci.,* 2024, doi: 10.3390/ijms25031860

2023 Peshkova M., Korneev A*., **Suleimanov S*.** et al, MSCs' conditioned media cytokine and growth factor profiles and their impact on macrophage polarization, *Stem cell research & therapy*, 2023, doi: 10.21203/rs.3.rs-2182817/v1

2022 Irina I. Vlasova, **Shakir K. Suleimanov** et al, Redox-Activation of Neutrophils Induced by Pericardium Scaffolds, Int. J. Mol. Sci. 2022, 23, 15468, doi: 10.3390/ijms232415468

2022 Pazukhina E. … , **Suleimanov S.,** et al, Prevalence and risk factors of post-COVID-19 condition in adults and children at 6 and 12 months after hospital discharge: a prospective, cohort study in Moscow (StopCOVID), *BMC Med*, 2022, 20, 244, doi: 10.1186/s12916-022-02448-4

2021 Munblit D. … , **Suleimanov S.,** et al, Stop COVID Cohort: An Observational Study of 3480 Patients Admitted to the Sechenov University Hospital Network in Moscow City for Suspected Coronavirus Disease 2019 (COVID-19) Infection, *Clin Infect Dis*, 2021, 73, 1-11. Erratum in: Clin Infect Dis. 2021 Jun 26, doi: 10.1093/cid/ciaa1535

Patent, 2023 Irina I. Vlasova, **Shakir K. Suleimanov** et al, Method for single-walled carbon nanotubes cleaning, Rospatent, №2023103987/28(008724)

Selected conferences

Apr 2023 Redox activity and morphological features of activated human M1 and M2 macrophages, *oral presentation*, **Medical Spring 2023**, Moscow, Russia • 1st place winner

Nov 2022 MSCs' conditioned media navigates human macrophages towards anti-inflammatory phenotype, *presentation*, **Sechenov International Biomedical Summit**, Moscow, Russia

Jun 2022 Scaffolds activate neutrophils to increase generation of oxidants capable to degrade materials, *online poster*, **ISCOMS**, Groningen, Netherlands

Nov 2021 Redox-activation of neutrophils induced by pericardium scaffolds, *research papers competition and presentation*, **VI Russian forum of young scientist and IV International Scientific Conference "Science of the Future",** Moscow, Russia • 1st place winner

Awards and Honors

2022, 2023	Hackathon on bioinformatics and clinical oncology & Biostatistics hackathon
2022 - 2023	Winner of the competition for a scholarship of the government of the Russian Federation
2022	Award of Sechenov University President for scientific achievements
2020 - 2023	Advanced academic scholarship for excellent academic and scientific achievements
2020 - 2022	Winner of personal student grant ($5000) for scientific research ('UMNIK')
2017 - 2023	Winner of the grant of the President of the Russian Federation for persons with outstanding abilities
2016	Laureate of Russian Biology Olympiad

Teaching and Mentorship

2023	Lecture on Introduction to NGS, for 1st year MSc students at Sechenov University
2018 - 2020	Junior and Senior tutor at the Scientific Career's Center - mentored 4 students for 1 year