

Academic curriculum vitae: Saruchi Wadhwa**Personal details**

Birth name: Saruchi Wadhwa

Acad. Degree: PhD

Current Position: Postdoctoral Researcher
Department of Biosciences and Medical Biology,
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Publications: <https://scholar.google.com/citations?user=HalQnEkAAAAJ&hl=en>
382 citations | h-index: 8 | i10-index: 8

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Languages: English (C1-Advanced), Hindi (Native), German (A2 completed, learning B1)

**Education and Degrees**

May 2022- April 2026 Ph.D., University of Salzburg, Austria

2015-2017 M.Sc. Biomedical Sciences, University of Delhi, India

2012-2015 B.Sc. Microbiology, University of Delhi, India

June 2016-July 2016 Summer Internship, Indian Institute of Technology (IIT), Mandi, India

Positions

Nov 2021-Feb 2022 EMBO Fellow, University of Helsinki, Finland

2018-2022 Senior Research Fellow, CSIR-Institute of Genomics and Integrative Biology (IGIB), New Delhi, India

2017-2018 Junior Research Fellow, Translational Health Science and Technology Institute (THSTI), Faridabad, India

Skills and Expertise

- **Microbiology:** Handling of bacterial cultures (pathogenic and non- pathogenic), experience of working in BSL2/BSL3 labs, production of lentiviral particles, lentiviral transduction
- **Molecular Biology:** PCR optimization, gene cloning, transformation and protein expression in bacterial system, qRT-PCR, Site Directed Mutagenesis, Sanger Sequencing, Gene knockout in bacteria, CRISPR-Cas9 gene editing and genome engineering
- **Proteomics:** SDS-PAGE, Western Blotting, ELISA, FRET based assays and calorimetric assays, Antibody Purification
- **CRISPR screening:** Optimization of novel FRET biosensor based CRISPR screening, sgRNA library designing
- **Confocal Microscopy**
- **Cell culture:** Generation and maintenance of Lymphoblastoid cell line (LCL) and Induced

pluripotent stem cells (iPSCs), Secondary cell lines, plasmid transfection in primary as well as secondary cell lines

- **Working on Patient's samples:** Peripheral blood mononuclear cells (PBMC) isolation from the blood of patients.
- **NGS analysis** – performed using Galaxy and MAGECK
- **Bioinformatics & Data Analysis:** Ensembl, UCSC Genome Browser, NCBI, BLAST, Primer3, Jalview, Sequence Manipulation Suite, Galaxy, RStudio, GraphPad Prism, ImageJ, CRISPick, Benchling, BioRender, CRISPOR
- **Office Software:** Microsoft Word, Excel, PowerPoint

PUBLICATIONS

1. Jarzab M, Wadhwa S, Ferner CD, Diechler S, Posselt G, Wessler S. Analysis of the *Helicobacter pylori* proteases HP0087 and HP1037 links HP0087 to growth and cell length defects. *Microb Physiol.* 2026. doi:10.1159/000551544
2. Kumar M*, **Wadhwa S***, Tyagi N*, Ahmad I, Kumar S, Sagar S, Zahra S, Kamai A, Shamim U, Kapoor S, Faruq M. Generation of induced pluripotent stem cell line (IGIBi007-A) from a patient with a novel acromesomelic dysplasia, PRKG2 type (AMDP). *Stem Cell Res.* 2021 May;53:102340. doi: 10.1016/j.scr.2021.102340. Epub 2021 Apr 19. PMID: 33887582
***these authors contributed equally.**
3. Díaz-González F, **Wadhwa S**, Rodriguez-Zabala M, Kumar S, Aza-Carmona M, Sentchordi-Montané L, Alonso M, Ahmad I, Zahra S, Kumar D, Kushwah N, Shamim U, Sait H, Kapoor S, Roldán B, Nishimura G, Offiah AC, Faruq M, Heath KE. Biallelic cGMP- dependent type II protein kinase gene (PRKG2) variants cause a novel acromesomelic dysplasia. *J Med Genet.* 2020 Oct 26;jmedgenet-2020-107177.
4. Tandon H, Sharma A, **Wadhwa S**, Varadarajan R, Singh R, Srinivasan N, and Sandhya S. Bioinformatics and mutational studies of related toxin–antitoxin pairs in Mycobacterium tuberculosis predict and identify key functional residues. *The Journal of Biological Chemistry* 2019, April 24.
5. Faruq M, Kumar D, **Wadhwa S**, Shamim U, Mathur A, Parveen S, Garg A and Srivastava AK. Intrafamilial variable spastic paraplegia/ataxia/ALS phenotype linked to a novel KIF5A mutation. *Clinical Genetics* 2019, July 8.
6. Kumar P, Pandey R, Sharma P, Dhar MS, A V, Uppili B, Vashisht H, **Wadhwa S**, Tyagi N, Fatihi S, Sharma U, Singh P, Lall H, Datta M, Gupta P, Saini N, Tewari A, Nandi B, Kumar D, Bag S, Gahlot D, Rathore S, Jatana N, Jaiswal V, Gogia H, Madan P, Singh S, Singh P, Dash D, Bala M, Kabra S, Singh S, Mukerji M, Thukral L, Faruq M, Agrawal A, Rakshit P. Integrated genomic view of SARS-CoV-2 in India. *Wellcome Open Res.* 2020 Aug 3;5:184.
7. Bhojar RC, Jain A, Sehgal P, Divakar MK, Sharma D, Imran M, Jolly B, Ranjan G, Rophina M, Sharma S, Siwach S, Pandhare K, Sahoo S, Sahoo M, Nayak A, Mohanty JN, Das J, Bhandari S, Mathur SK, Kumar A, Sahlot R, Rojarani P, Lakshmi JV, Surekha A, Sekhar PC, Mahajan S, Masih S, Singh P, Kumar V, Jose B, Mahajan V, Gupta V, Gupta R, Arumugam P, Singh A, Nandy A, P V R, Jha RM, Kumari A, Gandotra S, Rao V, Faruq M, Kumar S, Reshma G B, Varma G N, Roy SS, Sengupta A, Chattopadhyay S, Singhal K, Pradhan S, Jha D, Naushin S, **Wadhwa S**, Tyagi N, Poojary M, Scaria V, Sivasubbu S. High throughput detection and genetic epidemiology of SARS- CoV-2 using COVIDSeq next-generation sequencing. *PLoS One.* 2021 Feb 17;16(2):e0247115.

8. Mehta P, Sahni S, Siddiqui S, Mishra N, Sharma P, Sharma S, Tyagi A, Chattopadhyay P, Vivekanand A, Devi P, Khan A, Waghdhare S, Budhiraja S, Uppili B, Maurya R, Nangia V, Shamim U, Hazarika PP, **Wadhwa S**, Tyagi N, Dewan A, Tarai B, Das P, Faruq M, Agrawal A, Jha S, Pandey R. Respiratory Co-Infections: Modulators of SARS-CoV-2 Patients' Clinical Sub-Phenotype. *Front Microbiol.* 2021 May 28;12:653399.
9. The GUaRDIAN Consortium, Sivasubbu S and Scaria V. Genomics of rare genetic diseases – experiences from India. *Human Genomics* 2019, September 25.
10. Chattopadhyay P, Khare K, Kumar M, Mishra P, Anand A, Maurya R, Gupta R, Sahni S, Gupta A, **Wadhwa S**, Yadav A, Devi P, Tardalkar K, Joshi M, Sethi T, Pandey R. Single-cell multiomics revealed the dynamics of antigen presentation, immune response and T cell activation in the COVID-19 positive and recovered individuals. *Front Immunol.* 2022 Dec 2;13:1034159. doi: 10.3389/fimmu.2022.1034159. PMID: 36532041; PMCID: PMC9755500.
11. Sharma P, Sonakar AK, Tyagi N, Suroliya V, Kumar M, Kutum R, Asokchandran V, Ambawat S, Shamim U, Anand A, Ahmad I, Shakya S, Uppili B, Mathur A, Parveen S, Jain S, Singh J, Seth M, Zahra S, Joshi A, Goel D, Sahni S, Kamai A, **Wadhwa S**, Murali A, Saifi S, Chowdhury D, Pandey S, Anand KS, Narasimhan RL, Laskar S, Kushwaha S, Kumar M, Shaji CV, Srivastava MVP, Srivastava AK, Faruq M; GOMED-Ataxia study group. Genetics of Ataxias in Indian Population: A Collative Insight from a Common Genetic Screening Tool. *Adv Genet (Hoboken).* 2022 Mar 10;3(2):2100078. doi: 10.1002/ggn2.202100078. PMID: 36618024; PMCID: PMC9744545.

Scholarships and Awards

1. Awarded with "Jawahar Bhawan Trust Merit-Cum-Mean Scholarship" for the year 2016-2017
2. Awarded with "Prof. H.C. Gaur Scholarship" for year 2015-2016

Conferences attended

- ÖGMBT Annual meeting 2023 - Salzburg, Austria
- HGSC conference 2023 - Beilngries, Germany
- ÖGHMP 2024 - Salzburg, Austria
- JNM winter summer school 2025 - Funchal, Madeira
- Winter School Tiers 2026 – Tiers, Italy

References

- Univ.-Prof. Dr. Silja Wessler, Professor for Microbiology, University of Salzburg, Austria
Email: silja.wessler@plus.ac.at
- Mag. Dr. Gernot Posselt, Senior scientist, University of Salzburg, Austria
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