



SAMUDRA PAL

Nationality: Indian **Date of birth:** 14/07/1994 **Gender:** Male

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Senior Research Fellow

Cytogenetics and Genomics Research Unit
Department of Zoology, University of Calcutta, Kolkata, India

ABOUT ME

Dedicated and enthusiastic researcher committed to unraveling the intricate genetic underpinnings of male infertility while pioneering innovative therapeutic avenues. Proficiently skilled in various advanced genomics methodologies encompassing Sanger sequencing, Genotyping, and next-generation sequencing (NGS) analysis. Possessing substantial proficiency in the realm of Computational Biology. Known for rapid adaptation to new concepts and exemplary collaboration skills that foster effective teamwork.

Research Interests

- Exploring the interplay between genetic variations, epigenetic modifications, and environmental influences in human health to identify comprehensive risk factors contributing to various genetic disorders and impaired physiological functions.
- Investigating the intricate interactions among differentially-expressed genes that disrupt normal biological processes, potentially leading to disease development and dysfunction across various systems.
- Identifying potential molecular biomarkers that hold promise for early diagnosis, risk assessment, and the customization of therapeutic interventions in genetic disorder cases.

EDUCATION AND TRAINING

Ph.D. in Human Genetics at Department of Zoology, University of Calcutta

Supervisor: Prof. Sujay Ghosh.
University of Calcutta

City: KOLKATA

Country: India

Completed M.Sc. (equivalent to MS) In Zoology (First Division) from University of Calcutta with specialization in Genetics (2016-2018) with 82.8% marks.

University of Calcutta

City: KOLKATA

Country: India

Completed B.Sc. (equivalent to BS) In Zoology as Major subject (First Division) from University of Calcutta with Botany and Chemistry as minor subjects (2013-2016) with 77.25% marks.
University of Calcutta

City: KOLKATA

Country: India

Qualified Higher Secondary Examination in 2013 with 88.2% marks. (WBCHSE)

West Bengal Council of Higher Secondary Education

Country: India

Qualified Madhyamik (Tenth Grade) Examination in 2011 with 89% marks. (WBBSE)

West Bengal Board of Secondary Education

Country: India

PUBLICATIONS

[Novel Mutations Reduce Expression of Meiotic Regulators SYCE1 and BOLL in Testis of Azoospermic Men from West Bengal, India](#)

[2023]

Pal S, Paladhi P, Dutta S, Mullick RB, Bose G, Ghosh P, Chattopadhyay R, Ghosh S. Novel Mutations Reduce Expression of Meiotic Regulators SYCE1 and BOLL in Testis of Azoospermic Men from West Bengal, India. *Reprod Sci.* 2024 Apr;31(4):1069-1088. doi: 10.1007/s43032-023-01393-8. Epub 2023 Nov 13. PMID: 37957469. **Impact Factor- 2.9**

[Novel variations in spermatogenic transcription regulators RFX2 and TAF7 increase risk of azoospermia](#)

[2021]

Pal S, Paladhi P, Dutta S, Bose G, Ghosh P, Chattopadhyay R, Chakravarty B, Saha I, Ghosh S. Novel variations in spermatogenic transcription regulators RFX2 and TAF7 increase risk of azoospermia. *J Assist Reprod Genet.* 2021 Dec;38(12):3195-3212. doi: 10.1007/s10815-021-02352-5. Epub 2021 Nov 11. PMID: 34762273; PMCID: PMC8666464. **Impact Factor- 3.412**

[Prevalence of Y chromosome microdeletion in azoospermia factor subregions among infertile men from West Bengal, India](#)

[2021]

Dutta S, Paladhi P, **Pal S**, Bose G, Ghosh P, Chattopadhyay R, Chakravarty B, Ghosh S. Prevalence of Y chromosome microdeletion in azoospermia factor subregions among infertile men from West Bengal, India. *Mol Genet Genomic Med.* 2021 Oct;9(10):e1769. doi: 10.1002/mgg3.1769. Epub 2021 Aug 24. PMID: 34427986; PMCID: PMC8580071. **Impact Factor- 2.21**

[Novel Mutations of TSPY1 Gene Associate Spermatogenic Failure Among Men](#)

[2022]

Paladhi P, Dutta S, **Pal S**, Bose G, Ghosh P, Chattopadhyay R, Chakravarty B, Saha I, Ghosh S. Novel Mutations of TSPY1 Gene Associate Spermatogenic Failure Among Men. *Reprod Sci.* 2022 Apr;29(4):1241-1261. doi: 10.1007/s43032-021-00839-1. Epub 2022 Jan 18. PMID: 35041134. **Impact Factor- 3.06**

[Evaluation of potency of the selected bioactive molecules from Indian medicinal plants with MPro of SARS-CoV-2 through in silico analysis](#)

[2022]

Halder P, Pal U, Paladhi P, Dutta S, Paul P, **Pal S**, Das D, Ganguly A, Dutta I, Mandal S, Ray A, Ghosh S. Evaluation of potency of the selected bioactive molecules from Indian medicinal plants with M^{Pro} of SARS-CoV-2 through in silico analysis. *J Ayurveda Integr Med.* 2022 Apr-Jun;13(2):100449. doi: 10.1016/j.jaim.2021.05.003. Epub 2021 May 21. PMID: 34054246; PMCID: PMC8139275. **Impact Factor- 2.32**

[Screening of the Combined Risk of Genetics and Epidemiology on Infertility Among Indian Men: Synergistic Effect of AZFc Partial Deletions and Habits of Smokeless Chewing Tobacco](#)

[2024]

Dutta, S., Paladhi, P., **Pal, S.**, Srimani, S., Bose, G., Ghosh, P., Chattopadhyay, R., & Ghosh, S. (2024). Screening of the Combined Risk of Genetics and Epidemiology on Infertility Among Indian Men: Synergistic Effect of AZFc Partial Deletions and Habits of Smokeless Chewing Tobacco. *American journal of men's health*, 18(5), 15579883241279195. <https://doi.org/10.1177/15579883241279195>

CONFERENCES AND SEMINARS

4th Regional Science and Technology Congress (Western Region), 2019

[The University of Burdwan, Burdwan, West Bengal, 09/12/2019 – 10/12/2019]

Participated in the paper presentation (Oral)

Two days International Conference on "Down Syndrome Research - Indian Initiative in Global Perspective"

[Institute of Jute Technology, University of Calcutta, Kolkata, West Bengal, 11/02/2020 – 12/02/2020]

Participated

ACE 2021 (9th annual conference of the Academy of Clinical Embryologists)

[Kolkata, West Bengal, 01/10/2021 – 03/10/2021]

Participated in the paper presentation (Oral)

Yuva ISAR (Indian Society For Assisted Reproduction) 2021

[The Bengal Club, Kolkata, West Bengal, 26/11/2021 – 28/11/2021]

Participated in the paper presentation (Oral)

European Society of Human Reproduction and Embryology (ESHRE) 2022

[Milan, Italy, 03/07/2022-06/07/2022]

Presented a Poster. Also published in 'Human Reproduction' journal.

Reference: S Pal, P-105 Genetic variants in the spermatogenic transcription regulators RFX2 and TAF7 enhance the incidence of azoospermia, Human Reproduction, Volume 37, Issue Supplement_1, July 2022, deac107.101, <https://doi.org/10.1093/humrep/deac107.101>

Zoospectra 2022 (Two days international Conference) organized by Department of Zoology, University of Calcutta

[University of Calcutta, Kolkata, West Bengal, 05/12/2022 – 06/12/2022]

Participated in the paper presentation (Oral)

5th Regional Science and Technology Congress (Region No.4), 2022-23

[Maulana Azad College, Kolkata, West Bengal, 04/01/2023 – 05/01/2023]

Participated in the paper presentation (Oral)

Improving the quality of life of people with Down syndrome (INCLUDE DCC) workshop 2024

[University of Colorado at Boulder, Colorado, USA, 07/07/2024-19/07/2024]

Attended the short-read sequencing workshop (NGS, RNA-seq, ATAC-seq, ChIP data analysis)

HONOURS AND AWARDS

Received INNOVATION IN SCIENCE PURSUIT FOR INSPIRED RESEARCH (INSPIRE) scholarship in 2013

Department of Science & Technology, Government of India

Qualified Council of Scientific and Industrial Research – University Grants Commission (CSIR-UGC) National Eligibility Test (NET), Subject- Life Sciences, held on December 2017, for Junior Research Fellowship with Rank-79.

Council of Scientific & Industrial Research (CSIR) and University Grants Commission (UGC)

Qualified West Bengal State Eligibility Test (WBSET) in 2017

West Bengal College Service Commission (WBCSC)

Qualified Graduate Aptitude Test in Engineering (GATE) Life Sciences Examination in 2018 with Rank 1971

Indian Institutes of Technology (IITs)

Scored highest marks in M.Sc. in Zoology examination in 2018 with 82.8% marks

University of Calcutta

Received K.C. Ghose Memorial award for securing highest marks in M.Sc. Examination in 2018

The Zoological society, Kolkata

Secured 1st position in oral presentation at ACE 2021 (9th annual conference of the Academy of Clinical Embryologists), Kolkata, India.

Academy of Clinical Embryologists

Won Sudev Bhusan Ghosh Young Scientist award, 2022

The Zoological society, Kolkata

Awarded as 2nd best Oral Presenter at Zoospectra 2022 (a two-day international conference)

University of Calcutta

HOBBIES AND INTERESTS

Music, Painting, Sports, Photography

COMMUNICATION AND INTERPERSONAL SKILLS

Laboratory Skills

Sanger's dideoxy Sequencing, Polymerase Chain Reaction, Agarose Gel Electrophoresis, SDS-PAGE, ELISA, IHC, Western Blot, Quantitative RT-PCR, Bioinformatics, Human mutation analysis, Classical Genetics, Population Genetics, Reproductive Biology, Genetic Epidemiology, NGS data analysis, RNA-Seq and ATAC-seq Analysis, DNA Methylation Analysis, Molecular Docking and simulation, Statistical Analysis (SPSS, Stata, GraphPad), Manuscript preparation

Other Qualities

Teaching (involved in NET coaching), Critical Thinking, Research and analytical skills, Decision-making, Team-work oriented, Motivated, Organizational and planning skills, Good listener and communicator, Written and Verbal skills, Creativity, Responsibility

RECOMMENDATIONS

Ph.D. Supervisor

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Cytogenetics and Genomics Research Unit, Department of Zoology, University of Calcutta

35, Ballygunge Circular Road, Kolkata-700019, West Bengal, India

Collaborator

Name: Dr. Subhra Prakash Hui

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Assistant Professor, S.N. Pradhan Centre for Neurosciences

35, Ballygunge Circular Road, Kolkata-700019, West Bengal, India

Collaborator

Name: Dr. Ratna Chattopadhyay

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Email: bncirm@gmail.com, irmbnc2020@gmail.com

Chief Embryologist, Institute of Reproductive Medicine, Kolkata

HB-36/A/3, Sector-III, Salt lake, Kolkata-700106, India

03/10/2024



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