

CURRICULUM VITAE

PRAGYAN SINGH (She/Her)

CURRENT POSITION- POST-DOCTORAL FELLOW (starting May 2024)
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Nationality- Indian

SUMMARY

Yeast biologist with 10 years of experience in studying nuclear RNA surveillance mechanism, their export and its effect on gene expression and regulation, Mechanism of co-ordination between DNA replication and Telomere length regulation.

RESEARCH EXPERIENCE

- **Post Doctoral Fellow (May 2023-April 2024)** in tRNA export and its gene expression and regulation in budding yeast, University of California, Davis.
- **Post-Doctoral Fellow (April 2019- Feb 2023)** in Telomere and Cancer Biology in budding yeast, The Shmunis School of Biomedicine & Cancer Research, Tel Aviv University, Israel.
- **Doctor of Philosophy (Ph.D)** in Yeast genetics and RNA Biology, 2013-2019. Department of Life Science and Biotechnology, Jadavpur University, India.

EDUCATION

- **Master of Science (M.Sc)** in Microbiology, 2009-2011, Bangalore University, India.
- **Bachelor of Science (B.Sc)** in Microbiology, Chemistry, Botany, 2006-2009, Calcutta University, India

PUBLICATION

- **Singh. P**, Chaudhuri. A, Banerjee. M, Marathe. N, Das. B. - Nrd1p identifies aberrant and natural exosomal target messages during the

nuclear mRNA surveillance in *Saccharomyces cerevisiae*, **Nucleic Acids Res.** 2021 Nov 18;49(20):11512-11536. doi: 10.1093/nar/gkab930.

- **Singh. P**, Saha. U, Paira. S, B. Das- Nuclear mRNA Surveillance Mechanisms: Function and Links to Human Disease, **J Mol Biol.** 2018 Jul 6; 430(14):1993-2013. doi: 10.1016/j.jmb.2018.05.009. Epub 2018 May 11.
- Harari Y, Gershon L, Alonso-Perez E, Klein S, Berneman Y, Choudhari K, **Singh P**, Sau S, Liefshitz B, Kupiec M. -Telomeres and Stress in Yeast Cells: When Genes and Environment Interact, **Fungal Biol.** 2020 May;124(5):311-315. doi: 10.1016/j.funbio.2019.09.003. Epub 2019 Sep 13.
- **Singh. P**, Gazy. I, Kupiec. M - Control of telomere length in yeast by SUMOylated PCNA and the Elg1 PCNA unloader, **eLife-RP-RA-2023-86990**.

SKILLS

- **Molecular Biology and Yeast Genetics**-Yeast Transformation by the LiAc/SS Carrier DNA/PEG Method, Tetrad, Random Spore, and Molecular Analysis of Meiotic Segregation and Recombination, PCR Mutagenesis and Gap Repair in Yeast, PCR-Mediated Epitope Tagging of Genes, Manipulating the Yeast Genome: Deletion, Mutation, and Tagging by PCR, Preparation of Yeast Cells for Live-Cell Imaging and Indirect Immunofluorescence, **(Core and State-of the art and highthroughput techniques of Molecular Biology e.g.** (Core and State-of-the-art and high throughput techniques of Molecular Biology e.g. **Cloning**, complex gene expression analysis, **Real Time quantitative RT-PCR**, half-life study of mRNAs by transcription shut-off, Northern analysis, **Southern analysis**, **Biochemical techniques of RNA**, **Confocal Microscopy (smiFISH)**, **Telomere ChIP**, **RIP (RNA Immunoprecipitation)**, all kinds of Gene disruption and Knock-out techniques in bacteria and Yeast.
- **Proteomics** (Analysis of Multiprotein Complexes using **Tandem affinity purification (TAP)**, **Chromatin Immunoprecipitation- ChIP**, **Immunoprecipitation**, **Western Blot Analyses** and Yeast Two Hybrid system, **Recombinant DNA and protein purification**.

INTERNATIONAL CONFERENCE PARTICIPATION

- **9th** International Conference on Yeast Biology at IACS, Kolkata (Dec 2015): **Presented Poster Entitled** “Studies on the Novel components and mechanism of action of DRN (Degradation of mRNA in Nucleus)”.
- **International Conference on Molecular Biology and its application (Feb 2014)**: Presented a **selected oration** Entitled “Delineating components

involved in DRN (Degradation of mRNA in Nucleus)".

- **Federation of all the Israel Societies for Experimental Biology (FISEB-2020)** at Eilat, Israel.
- **The EMBO Telomere function and evolution in health and disease** in Troia (Portugal) (September-2022)

AWARDS/FELLOWSHIP

- **Ranked 255 (out of approximately 10,737 candidates)** in Graduate Aptitude Test in Engineering (**GATE**) as conducted by Indian Institute of Technology, Delhi in 2012.
- Awarded **WEST BENGAL STATE FELLOWSHIP** from West Bengal Government (2013- 2019).
- Awarded **The Shmunis excellence scholarship 2022, Tel Aviv University, Israel**
- Awarded **The Anat Krauskopf Travel Fund Award.**

TEACHING EXPERIENCE (2013-2019)

- Teaching Practical Courses in "**Molecular Biology and Genetics**" and "**Biochemistry and Biophysics**", to postgraduate students under Master program in Life Science and Biotechnology, Jadavpur University (2013-2018). Practical Courses Entitled:
 - Yeast Genetics- UV survival curve of Yeast and selection of its mutants
 - Protein Denaturation Kinetics using heat and chemical denaturants
 - Protein and Sodium Azide Interaction and determining the Isosbestic point.

Protein quantification and its separation in SDS-PAGE.

FOREIGN LANGUAGE SKILLS

- ENGLISH (Advance Knowledge)
- HINDI (Advance Knowledge)
- BENGALI (Working Knowledge)