Venkata Atreya Sai Paturi
ETH Zurich, Zurich, Switzerland 8049

RESEARCH EXPERIENCE

Graduate Student – SUMO Lab [06/2023 – Present]
ETH Zurich, Zurich, Switzerland
Supervisor: Dr**.** Andrea Pichler, Prof. Dr. Matthias Peter
Project: Role of EME1-MUS81 in Mitochondria

- Establish the EME1 localization in mitochondria with super resolution microscopy.
- Assessed mitochondrial bioenergetics to validate the functional of EME1 and MUS81 using Seahorse flux analyzer Mito Stress Test and TMRE dye.
- Executed qRT-PCR and long-range PCR to assess mitochondrial DNA damage resulting from the loss of EME1 and MUS81.
- Developed and optimized protocols for super-resolution imaging and analysis with STED and SIM microscopy and sub-cellular fractionation for mitochondrial isolation.
- Presented posters in D-BIOL symposium (June 2024) and MLS retreat (August 2024).

Graduate Research Assistant – Laboratory of Investigative Nephrology [02/ 2022 – 05/2023]
University of Hyderabad, Hyderabad, Telangana, India
Supervisor: Dr. Anil Kumar Pasupulati
Project: The potential role of growth hormone (GH) in calcium dynamics of podocyte: Implications in diabetic kidney disease and proteinuria.

- Identified differentially expressed genes from GH-treated podocytes RNA-seq data analysis.
- Validated expression patterns by qRT-PCR and immunoblot assays in GH-treated podocyte cell line.
- Standardised assays for studying mitochondrial bioenergetics using sea horse flux analyser.
- Imaging and analysis of immunofluorescence and live cell imaging data for understanding mitochondrial dynamics.
- Writing scientific publications and presentation of research results.

Master's Thesis [01/ 2021 – 06/ 2021]
University of Hyderabad, Hyderabad, Telangana, India
Supervisor: Prof. Krishnaveni Mishra
Project: Elucidating the role of non-essential kinases in the maintenance of ER and mitochondrial morphology in yeast.

- Designed the curriculum framework for confocal imaging of ER and mitochondria of yeast transformed with GFP tag proteins.
- Performed image analysis to identify morphological features using ImageJ software.

Undergraduate Intern [11/ 2017 – 03/ 2018]
Bhavan's Vivekananda College, Hyderabad, Telangana, India
Supervisor: Dr Sushma Patkar
Project: Preparation of wine from flower extracts obtained from Hibiscus, Marigold, and Moringa.

- Conducted growth curve analysis of yeast strain for evaluating strain fitness to a particular environment, lag phase duration, growth rate, and maximum population.
- Quantified the levels of total sugars, reducing sugars, alcohol content, titratable acidity, and antioxidant activity of ferments at interims of 3 days for two months.

EDUCATION

Master of Science (Biochemistry and Molecular Biology) | CGPA- 9.24 / 10.0
University of Hyderabad, Hyderabad, Telangana, India [2019 – 2021]

Bachelor of Science (Microbiology, Genetics & Chemistry) | 84.5%
Bhavan's Vivekananda College, Hyderabad, Telangana, India [2015 – 2018]

Board of Intermediate Education | CGPA- 8.4 / 10.0
Sri Gayatri Junior College, Hyderabad, Telangana, India [2012 - 2014]

Secondary School Education | CGPA- 8.7 / 10.0
Bethany Academy, Hyderabad, Telangana, India [2012]

RESEARCH PUBLICATIONS

- Pasupulati, A. K., Nagati, V., **Paturi, A. S.** ‡, & Reddy, G. B. (2024). Non-enzymatic glycation and diabetic kidney disease. *Vitamins and Hormones*, 251-285. https://doi.org/10.1016/bs.vh.2024.01.002.
- Katta, S. S., Nagati, V., **Paturi, A. S**. ‡, Murakonda, S. P., Murakonda, A. B., Pandey, M. K., Gupta, S. C., Pasupulati, A. K., & Challagundla, K. B. (2023). Neuroblastoma: Emerging trends in pathogenesis, diagnosis, and therapeutic targets. Journal of Controlled Release, 357, 444-459. https://doi.org/10.1016/j.jconrel.2023.04.001
- Nishad, R., Mukhi, D., Kethavath, S., Raviraj, S., **Paturi, A. S**. ‡, Motrapu, M., Kurukuti, S., & Pasupulati, A. K. (2022). Podocyte derived TNF-α mediates monocyte differentiation and contributes to glomerular injury. The FASEB Journal, 36(12). https://doi.org/10.1096/fj.202200923r
- Pasupulati, A., & **Paturi, A**†**.** (2022). The sponging effect of a lncRNA on a miRNA contributes to diabetic nephropathy. Molecular Therapy - Nucleic Acids, 28, 259-260. DOI: 10.1016/j.omtn.2022.03.013

†First Author ‡ Co-Author

WORKSHOPS AND CERTIFICATION COURSES

- **Zurich Winter School Microscopy Workshop (5 Days)** [2024]
  ETH Zurich, Zurich, Switzerland.
- **Next Generation Sequencing Workshop (3 Days)** [2022]
  Redcliffe Genetics at University of Hyderabad, Hyderabad, Telangana, India
- **Microarray Data Analysis Workshop (2 days)** [2019]
  Entrepreneurship Cell, Indian Institute of Technology Kharagpur, India
- **Flow Cytometry and Applications Workshop (3 days)** [2019]
  Central Facilities for Research and Development, Osmania University, Telangana, India
- **Basic to Advanced Genetic Screening Training Program (2 months)** [2016]
  Institute of Genetics and Hospital for Genetic Diseases, Telangana, India

AWARDS AND FELLOWSHIPS

- Secured **All India 71st Rank** in CSIR- JRF June 2019, a **national-level exam** conducted by the National Testing Agency (NTA) to select candidates for the Junior Research Fellowship (JRF) award for pursuing PhD in Indian universities and colleges. (Not availed)
- Awarded **1st Prize** in Scientific Demonstration at **Intercollegiate fest** – Graphene organised by Department of Chemistry, St Francis College for women (2017).
- Awarded **1st Prize** for Poster Presentation on **National Science Day** organised by the Department of Microbiology, Bhavan's Vivekananda College (2017).

- Awarded **2nd Prize** for Poster Presentation at **National Seminar** on Recent Advances in Food Biotechnology organised by Bhavans Vivekananda College (2016). Topic: "Adulteration of Toddy."
- Secured **2nd Rank** in **Genetics** in bachelor's first year (2016).

SCIENCE COMMUNICATION AND OUTREACH

- **Scientific Illustrator at Scicatalyst** [2018 – 2021]
  Scicatalsyt is a student-run science communication channel that aims at highlighting stories of careers in science, scientists, impactful photographs, and science books/movies in the form of newsletters and articles on our blogging website.
- **Contributed to Scientific Illustration in Neuron and Cell Research** [05/ 2021]

1. Nagpal, J., & Cryan, J. (2021). Microbiota-brain interactions: Moving toward mechanisms in model organisms. Neuron, 109(24), 3930-3953. doi: 10.1016/j.neuron.2021.09.036
2. Nagpal, J., Cryan, J.F. host genetics, the microbiome & behaviour—a 'Holobiont' perspective. Cell Res (2021). doi: 10.1038/s41422-021-00512-x

- **Newsletters designs and Illustrations for Scicatalyst** **[**2019 – 2020]
  Paturi, V. (2021). Scicatalyst Newsletter Volumes – Google Drive. Retrieved 4 June 2021, from https://drive.google.com/drive/u/3/folders/1doAdbGHgMQ-GiKgJsdJDk3316XmkEeku

ACADEMIC AFFILIATIONS

- **Coordinator of Senior Science Club** **[**2019 – 2021]
  University of Hyderabad, Hyderabad, Telangana, India
- **Coordinator of BVC Science Club** **[**2015 – 2018]
  *Bhavan's Vivekananda College***,** *Hyderabad, Telangana, India*

DIGITAL SKILLS

- **Image Analysis:** Fiji Image J, Cell Profiler.
- **Data Analysis:** Python (Basic) **&** R (Basic).
- **Creative Digital skills:** Adobe Photoshop, Adobe Illustrator, Adobe InDesign & Adobe Premiere Pro.