Paulomi Sanghavi, Ph.D.

Indian Institute of Technology - Bombay, Mumbai 400076, India
Email: polsi.bs@gmail.com
Date of birth: 23rd September, 1987

PROFILE

Cell biologist with expertise in studying intracellular transport of biomolecules, mRNAs and pathogens inside cells using various model organisms. Highly proficient in developing cellular assays using *in vivo* as well as *in vitro* approaches using small molecule inhibitors, proteins. Excellent interpersonal and communication skills, experience in working as a team and mentoring groups of peers, ability to multi-task. Curious to learn to new things and apply my skills in a new environment. Keen on studying patent law and seeking a long-term career in Pharma and Life Sciences sector.

EDUCATION

2010-2015	**PhD with Distinction** in Cell Biology and Anatomy from Augusta University (Medical College of Georgia), USA
2008-2010	**Masters in Biochemistry First Class** from The Maharaja Sayajirao University of Baroda, India
2005-2008	**Bachelors in Biotechnology First Class**, Ramnarain Ruia College, Mumbai University, India

RESEARCH EXPERIENCE

July 2022- present	**Research fellow** with Prof. Roop Mallik Indian Institute of Technology- Bombay, India Project title: "Studying organelle interaction in immune cells during infection and in cancer"
Jun 2016- Jun 2022	**Early Career Fellow with DBT India Alliance /Wellcome Trust** Tata Institute of Fundamental Research, India Project title: "Investigating Dynactin and Lis1 function in Dynein driven motion of phagosomes in immune cells"
Oct 2015- May 2016	**Post Doctoral Researcher** with Prof. Roop Mallik Tata Institute of Fundamental Research, Mumbai, India Project title: "Studying Dynein driven transport of phagosomes using optical trapping"
Aug 2010- Sept 2015	**Graduate Research Assistant** with Dr. Graydon Gonsalvez Augusta University (Medical College of Georgia), USA Thesis project: "Role of motor proteins in mRNA localization in *Drosophila*
July 2009- June 2010	**Masters dissertation project** with Prof. G Naresh Kumar The Maharaja Sayajirao University of Baroda, India Thesis project: "Expression of Na^+ and Mg^{++} dependent citrate transporters in Pseudomonads for phosphate solubilization
Summer 2005	**Bachelors Summer project** Ramnarain Ruia College, Mumbai University, India Project title: ''Studying the action of Lipases as Effective Detergents"

HONORS AND AWARDS (selected)

June 2022	Awarded the **Research Excellence Award** by India Investigator Network, 2022-2023
August 2021	Elected as an **Early-Career Reviewer in Structural Biology and Molecular Biophysics** with the eLife journal
Feb 2019	**Awarded first prize** for outstanding postdoctoral scholar for **Augmented Writing Skills for Articulating Research** (AWSAR) by Department of Science and Technology, India
June 2016-present	**Awarded Early Career Fellowship** for 5 years from India Alliance Wellcome DBT to investigate "**Role of Dynactin and Lis1 in Dynein driven phagosome transport**"
Aug 2015	Awarded **PhD with distinction**, Georgia Regents University, USA

PEER REVIEWED PUBLICATIONS

- **Sanghavi P**., Rathaur P., Roy A., Madhusudan M.S., Mallik R., ON and OFF Controls within Dynein-Dynactin on Native Cargoes **PNAS** June 8, 118 **(2021)**
- Chhatre A., **Sanghavi P**., Mallik R., Lis1 co-localizes with actin in the Phagocytic cup and regulates Phagocytosis **Cytoskeleton Wiley (2020)** Jun 11 doi:10.1002/cm.21621 Highlighted on PreLights
- ***Sanghavi P**., *D'Souza A., Rai A., Rai AP., Padinhatheeri R., Mallik R., Coin-tossing explains the Activity of Opposing Microtubule Motors on Phagosomes **Current Biology (2018)** 1460-1466 **(*Co-first authors)**
- **Sanghavi, P**., Veeranan-Karmegam R, Navarro C, Gonsalvez GB.. Multiple roles of Egalitarian in polarization of the Drosophila oocyte Genetics. **(2016)** pii: **genetics**.115.184622.
- Liu G., **Sanghavi P**., Townes N., Bollinger K.E., Perry L., Marshal B., Roon P., Tanaka T.,Nakamura A., Gonsalvez G.B. Dynein, Dynactin and Lis1 are required for endocytic uptake and maturation in Drosophila oocytes Genetics. **(2015) genetics**. 115.180018
- Adhikary H., **Sanghavi P.**, Macwan SR, Archana G, Naresh Kumar Artificial citrate operon confers mineral phosphate solubilization ability to diverse fluorescent pseudomonads **PLoS One. (2014)** (9):e107554
- **Sanghavi, P**., Laxani, S., Li, X., Bullock, S.L., and Gonsalvez, G.B. Dynein associates with *oskar* mRNPs and is required for their net plus-end localization in *Drosophila* oocytes **PLoS One. (2013)**;8(11):e80605
- **Sanghavi P**., Lu S., Gonsalvez G.B. A functional link between localized Oskar, dynamic microtubules, and endocytosis. **Developmental Biol. (2012);**367(1):66-7

INVITED PROTOCOLS/BOOK CHAPTERS/ REVIEWS

- ***Sanghavi P.,** Rai A., Mallik R., *In vivo* trapping of latex beads phagosomes for quantitative force measurements **Methods in Molecular Biology (2023) *Corresponding author**
- Singh J., **Sanghavi P**., Mallik R., Microtubule Motor Driven Interactions of Lipid Droplets : Specificities and Opportunities **Frontiers in Cell and Developmental Biology (2022)**
- D'Souza A., **Sanghavi, P.**, Mallik R. Isolation of Latex Bead Phagosomes from Dictyostelium for in vitro Functional Assays **Bio-protocol (2016)** 6(23): e2056
- **Sanghavi P**., Young P., Upadhyay S., Hamrick M. W Role of Exosomes & Microvesicles in the Bone Marrow Microenvironment **Clinical & Therapeutic Applications, (2015)** Pages 207-223