Rohit Suratekar

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Date of Birth: October 16, 1989
Nationality: Indian
Languages: English, Marathi, Hindi

Current position

Postdoctoral Fellow, International Institute of Molecular and Cell Biology, Warsaw

Areas of specialization

Developmental Biology and Mathematical Modelling

Education

2019 - present **Postdoctoral Fellow** in Computational Biology
International Institute of Molecular and Cell Biology, Warsaw, Poland

2012 - 2018 **Doctor of Philosophy** in Computational Cell Biology
National Centre for Biological Sciences, Bangalore, India
Thesis topic: Understanding structure and dynamics of the *Drosophila* PI(4,5)P_2 cycle with mathematical models.

2007 - 2011 **Bachelor of Technology** in Biotechnology
Motilal Nehru National Institute of Technology, Allahabad, India
Thesis topic : Indirect and Direct Effect of Turbulence on Bacterial growth

Publications and Talks

2018 Suratekar R, Panda A, Padinjat R, Krishna S (2018). Evidence of sinks and sources in the phospholipase C activated PIP_2 cycle. *FEBS Lett*. 2018 Mar ; 592(6):962-972. PubMed PMID: 29427502. doi: 10.1002/1873-3468.12998

Preprint

2017 Suratekar R, Padinjat R, Krishna S (2017). Evidence of sinks and sources in the PLC activated PIP_2 cycle. *bioRxiv*. 183509 doi: 10.1101/183509

Research talks

2018 *2nd International FishMed Conference on Zebrafish Research, FishMed2018*, Warsaw, Poland
Evidence of sinks and sources in the PLC activated PIP_2 cycle (Mar 25–27, 2018)

2018 *Aspects of Gene and Cellular Regulation*, Chennai, India
Evidence of sinks and sources in the PLC activated PIP_2 cycle (Jan 12–13, 2018)

2017 *Physical Concepts in Stem Cell Biology*, Tisvildeleje, Denmark
Evidence of sinks and sources in the PLC activated PIP_2 cycle (Aug 6–10, 2017)

2015 *NCBS-RIKEN joint meeting for theoretical approaches in biology*, Wako, Japan
Speeding up $PI(4,5)P_2$ recovery with top gear (Apr 7–10, 2015)

Posters

2018 *EMBL Symposium: Tissue Self-Organisation*, Heidelberg, Germany
Evidence of sinks and sources in the PLC activated PIP_2 cycle (Mar 11–14, 2018)

2018 *2nd International FishMed Conference on Zebrafish Research, FishMed2018*, Warsaw, Poland
Evidence of sinks and sources in the PLC activated PIP_2 cycle (Mar 25–27, 2018)

2018 *Celebrating Diversity in Biology - NCBS Annual Talks*, Bangalore, India
Evidence of sinks and sources in the PLC activated PIP_2 cycle (Jan 3–5, 2018)

2017 *Futures in Biology - NCBS Annual Talks*, Bangalore, India
The Hitchhiker's Guide to The Regulation of $PI(4,5)P_2$ Cycle During Drosophila melanogaster Phototransduction (Jan 11–14, 2017)

2015 *Biology across scale - NCBS Annual Talks*, Bangalore, India
Regulation of levels of $PI(4,5)P_2$ on the plasma membrane (Jan 5–8, 2015)

2014 *Aspects of gene regulation*, Chennai, India
$PI(4,5)P_2$ dynamics during Drosophila melagogaster phototransduction (Dec 16, 2014)

2014 *NCBS Annual Talks*, Bangalore, India
$PI(4,5)P_2$ dynamics during Drosophila melagogaster phototransduction (Jan 15–17, 2014)

Research Projects

2019-Present **Understanding the dynamics of transcriptional regulatory networks of heart development with mathematical modelling**
Supervisors : Dr. Cecilia Winata
International Institute of Cell and Molecular Biology, Warsaw.

2014-2019 **Understanding lipid transfer across membranes**
Supervisors : Dr. Sandeep Krishna and Prof. Raghu Padinjat
National Centre for Biological Sciences, Bangalore.

2013-2018 **Regulation of lipid signaling pathway in *Drosophila melanogaster***
Supervisors : Dr. Sandeep Krishna and Prof. Raghu Padinjat
National Centre for Biological Sciences, Bangalore.

2012 **Exploring connections between protein content, codon bias and GC content**
Supervisor : Dr. Mukund Thattai
National Centre for Biological Sciences, Bangalore.

2010-2011 **Indirect and Direct Effect of Turbulence on Bacterial growth**
Supervisor : Dr. Shivesh Sharma
Motilal Nehru National Institute of Technology, Allahabad.

Fellowships and Awards

2018 Young FishMed Speaker and Travel Award, FishMed, Poland
2018 Best Poster and Travel Award, NCBS Annual Talks, India
2012 - 2018 NCBS-TIFR graduate fellowship, India
2012 Graduate Aptitude Test in Engineering (GATE) fellowship, India

Minimum Skill Set

Experimental Biology

Average: Molecular biology techniques, Protein purification
Basic: Fly pushing, Optical Microscopy, Electro-physiology (ERG)

Computational Biology

Above average: Ordinary Differential Equations, Monte Carlo simulations, Diffusion reactions, Dynamical Systems, Parameter sensitivity analysis
Average: Optimization techniques, Stochastic Calculus, Boolean Modelling
Basic: Partial Differential equations, Bayesian Analysis

Programming languages

Above average: Python 3, Java, Kotlin, Typescript, LaTeX
Average: C++, Perl, Matlab
Basic: CSS, C#, SQL/Non-SQL database

References

Dr. Cecilia Winata (IIMCB, Warsaw), email: cwinata@iimcb.gov.pl
Dr. Sandeep Krishna (NCBS, Bangalore), email: sandeep@ncbs.res.in
Prof. Raghu Padinjat (NCBS, Bangalore), email: praghu@ncbs.res.in