

# AVINASH DEVIDAS LONDHE

## Education

- 1) Ph.D. in Nanobioscience (July-2023)  
Advisor: - Dr. Benoit Boivin, Laboratory of Redox Biology and Signal Transduction  
College of Nanoscale Science and Engineering, SUNY Polytechnic Institute.
- 2) Master of Science in Molecular Biomedicine  
Faculty of Medicine, Autonomous University of Madrid, 2014-2015  
Dissertation: Regulation of cardiovascular diseases by inflammation-related miRNAs.  
Supervisor: Dr. Pilar Martin, Molecular Regulation Lab, Spanish National Centre for Cardiovascular Research, CNIC.
- 3) Master of Science in Virology  
National Institute of Virology, University of Pune, India. 2008-2010.  
Dissertation: Characterization of helicase activity of chikungunya virus.  
Committee: Dr. Kavita S Lole, Scientist D, Head Hepatitis Division, NIV, Pune.
- 4) Bachelor of Science in Microbiology  
Padmashree Manibhai Desai College, University of Pune. 2005-2008:

## Work Experience:

- 1) Department of Pathology, Stanford University, Palo Alto, California, United States.  
Post Doctoral Fellow, Nov-2024-ongoing.
- 2) Biomedicine Discovery Institute, Monash University, Melbourne, Australia.  
Post Doctoral Fellow, March-2024-Oct 2024: Department of Biochemistry and Metabolism.
- 2) Translational Health Science and Technology Institute (THSTI), Gurgaon, India.  
Senior Research Fellow, May 2013-August 2014: Dr. UC Natchu, Pediatric Biology Center,  
Project: Vitamin D supplementation to improve immune responses to vaccines administered in early infancy- The Nutrivac-D trial.
- 3) National Institute of Immunology, New Delhi, India.  
Junior Research Fellow, Nov-2010-April-2013: Dr. PB Tailor, Innate Immunity Laboratory.  
Project: Role of Interferon regulatory factors in dendritic cell development and differentiation.
- 4) King George Medical College, Lucknow, India.  
Research Assistant, June-2010-Oct-2010: Department of Microbiology  
Project: Set-up Regional Virology Testing Laboratory.

## Skills and expertise

Mice handling, Bone Marrow Isolation, Tail Vein Injections, Lymph Node and Organs Isolation, Exosome Isolation, ECG on Mice, Adjuvant Preparation, Mammalian and Bacterial Cell Culture, Virus Culture, Cloning and Genetic Engineering, Protein Purification, FPLC, SDS PAGE and Western Blots, Agarose Gel Electrophoresis, Real Time PCR, Flow Cytometry and Cell Sorting, pNPP activity of phosphatases, ROS Measurement, Colony

Formation Assay, ELISA, Immunohistochemistry (IHC), Confocal and Fluorescence Microscopy, BioSafety Level 2, X-ray Crystallography, Surface Plasmon Resonance, CRISPR-cas9 Gene Editing, Laboratory Set Up and Management, Master, and Undergraduate Level Student Training, single cell data analysis using R/RStudio, clinical data management using CTMS software.

### **Publications:**

- 1) Londhe et al. *Regulation of PTP1B activation through disruption of redox complex formation*. Nature Chemical Biology 16 122-125 (2020).
- 2) Londhe, A.D. et al. *In Vitro Activity Assays to Quantitatively Assess the Endogenous Reversible Oxidation State of Protein Tyrosine Phosphatases in cells*. Curr Protoc Chem Biol. 12, e84 (2020b).
- 3) Coulis, G, Londhe, A.D. et al. *Protein tyrosine phosphatase 1B regulates miR-208b-argonaute 2 association and thyroid hormone responsiveness in cardiac hypertrophy*. Science Signaling 15, eabn6875 (2022).
- 4) Khandokar, Y.B., Londhe, A, et. al. *Expression, purification, and crystallization of acetyl-CoA hydrolase from Neisseria meningitides*. (2013). Acta Cryst. F69.
- 5) Londhe et al. *Measuring the Reversible Oxidation of Protein Tyrosine Phosphatases Using a Modified CysteinyI-Labeling Assay*. (Dec-2023) Methods in Mol Bio Vol. 2743

### **Posters Presentations:**

- 1) Londhe A et al. Characterization of PTP1B activation by small molecules. *SfRBM-2019* Las Vegas, Nevada.
- 2) Londhe A et al. Characterization of PTP1B-OX interactome. *SUNY Polytechnic Institute Annual Symposium 2019*.
- 3) Londhe A et al. Molecular characterization of Protein Tyrosine Phosphatase 1B with scFv45, a conformation sensor nanobody. *ANTS-2016*. SUNY POLY, 2016.
- 4) Londhe A et al. Characterization of Protein Tyrosine Phosphatase 1B redox cycle by small molecules-peptide activators in cells. *ASBMB-EB-2022*.
- 5) Londhe A et al. Regulating the Redox Cycle of Protein Tyrosine Phosphatase 1B using Cell-Permeable Peptides. *FASEB-2022*.
- 6) Londhe A et al. Characterization of Peptide Activators of Protein Tyrosine Phosphatase 1B. *WISC-2021*.

### **Talks**

- 1) "Characterization of Peptide Activators of Protein Tyrosine Phosphatase 1B" at *SfRBM-2021* conference.
- 2) "Regulation of PTP1B by Cholesterol in Insulin Resistance" at *SfRBM-2022* conference.

### **Positions and Honors**

- 1) Young Investigator Award, SfRBM-2022.
- 2) John J. Sullivan Professional Development Award, 11/2022.
- 3) RNA Trainee Travel Award, RNA Institute, University of Albany 11/2022.
- 4) RNA Fellow, awarded by RNA Institute, University of Albany, 2020.
- 5) John J. Sullivan Professional Development Award, 02/2020.
- 6) Graduate Student Employee Union Travel Award, 10/2019.
- 7) Campus de Excelencia Internacional UAM+CSIC, Master Grant awarded by Universidad Autonoma de Madrid, 2014.

- 8) Senior Research Fellow, The Translational Health Science and Technology Institute, Faridabad, UP, India, 04/2013-08/2014.
- 9) Junior Research Fellow, National Institute of Immunology, New Delhi, India, 11/2010-04/2013.
- 11) Member of the Society for Free Radical Biology and Medicine.
- 12) M.Sc. Scholarship in Virology from the Government of India, 2008.

**Hobbies and Interests:**

Table Tennis, Badminton, avid reader of Non-Fiction, History, Politics, Theology and Spirituality, Philosophy, Astrophysics.

**Special Skills:**

I am a multilingual person, fluent in English, Hindi, Marathi and have good Knowledge of Spanish and Sanskrit. Good knowledge of computer software's such as GraphPad Prism, EndNote, R/RStudio, CTMS, Microsoft Office suite, Adobe Acrobat and FLOWJo.

**Information for Referees****1) Dr. Benoit Boivin**

Assistant Professor  
College of Nanoscale Science and engineering  
SUNY Polytechnic Institute, Albany, NY.  
Email: - [bboivin@sunypoly.edu](mailto:bboivin@sunypoly.edu)

**2) Dr. Maria Pilar Martin Fernandez,**

Group Leader  
Molecular Regulation Laboratory,  
National Center for cardiovascular Research  
Madrid, Spain.  
Contact No. (+34) 91 4531200 (Ext 2009)  
Email id: [pmartinf@cnic.es](mailto:pmartinf@cnic.es)

**Declaration**

I hereby declare that all information given by me above is true and correct to the best of my knowledge.

Date: 15/06/2024

Place: Clayton

Avinash D. Londhe