

## **Curriculum Vitae**

### **Namrata Shukla**

Date of Birth: May 17, 1992

Nationality: Indian

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### **Current Position:**

Graduate Student (2015-Present)

Professor Ullas Kolthur's Lab

Department of Biological Sciences

Tata Institute of Fundamental Research

Mumbai, India 400 005

### **Publications**

- **Shukla, N.** and Kolthur-Seetharam, U., 2020. Drosophila Sirtuin-6 mediates developmental diet dependent programming of adult physiology and survival. (*under revision at Aging Cell*)
- **Shukla, N.**, Kadam, S., Padinhateeri, R. and Kolthur-Seetharam, U., 2020. Continuous variable response, kinetic gating and connectivity that determine topology of insulin signaling are perturbed in hyper-insulinemic states. (*under publication, accepted at PNAS*)
- Chattopadhyay, T., Maniyadath, B., Bagul, H.P., Chakraborty, A., **Shukla, N.**, Budnar, S., Rajendran, A., Shukla, A., Kamat, S.S. and Kolthur-Seetharam, U., 2020. Spatiotemporal gating of SIRT1 functions by O-GlcNAcylation is essential for liver metabolic switching and prevents hyperglycemia. *Proceedings of the National Academy of Sciences*, 117(12), pp.6890-6900.
- Maniyadath, B.\*, **Shukla, N.\*** and Kolthur-Seetharam, U., 2018. Gene Expression, Epigenetics and Aging. *Biochemistry and Cell Biology of Ageing: Part I Biomedical Science*. (\*equal contribution)
- Deota, S.\*, **Shukla, N.\*** and Kolthur-Seetharam, U., 2017. Spatio-Temporal Control of Cellular and Organismal Physiology by Sirtuins. *Journal of the Indian Institute of Science*, 97(1), pp.147159. (\*equal contribution)

### **Education**

- Masters in Biotechnology (2015) from Pondicherry University, Puducherry, India. CGPA: 9.8/10
- Bachelors in Botany, Chemistry and Biotechnology (2013) from Christ University, Bangalore, India. 84.4%
- Higher Secondary Education in Science (2010), Army Public School, Bangalore, India. 87.2%
- Secondary Education (2008), Kendriya Vidyalaya, Coimbatore, India. 91.6%

### **Work Experience: Writing and editing**

- Reviewer for *Journal of Biosciences*, Springer (2018-present)
- Editor for departmental magazine, Department of Biotechnology, Christ University (2012-2013)
- Junior Editor for school magazine, Air Force Golden Jubilee Institute (2009-2010)

## **Previous Work Experience: Experimental**

- **Dissertation project: Masters in Science (2015)**

Under the guidance of Prof. Arunkumar Dhayalan (Pondicherry University, India)

*“Establishment of Methylation assay for Protein Lysine Methyltransferase, G9a using Epigenetic reading domain, MBT”*

Developed a low cost, high specificity, in house assay to measure the activity of lysine methyltransferase, G9a. The assay utilizes the MBT (Malignant Brain Tumour) domain of L3MBTL1 for the recognition of methylated lysine instead of methyl-lysine specific antibodies. This assay can be used as an affordable alternative for screening of small molecular inhibitors of G9a and has potential application in cancer therapy.

- **IAS Summer Research Fellow (2014)**

Under the guidance of Prof. KN Balaji, MCB, Indian Institute of Science, Bangalore, India.

Worked on a project to characterise a novel antigen of PE/PPE family of *Mycobacteria*. (2014)

- **Dissertation project: Bachelors in Science (2013), Christ University, Bangalore**

1. **Antimicrobial Activity of Traditionally used Plant Extracts:**

Under the guidance of Dr. Suma Sarojini

Characterised antibacterial properties of traditional Indian medicinal plants from their water extracts/raw form: Ginger (*Zingiber officinale*), Amla (*Phyllanthus emblica*), Neem (*Azadirachta indica*) and Tulsi (*Ocimum sanctum*). Anti-microbial effect was tested against both Gram Positive (*Bacillus sp.*) and Gram Negative (*E. coli* and *Pseudomonas sp.*) bacteria as well as a fungal strain (*Aspergillus niger*).

2. **Extraction and Estimation of Caffeine present in popular brands of Tea:**

Under the guidance of Dr. Riya Datta

Solvent extraction based comparative analysis of caffeine content, from commercially popular brands of tea, to estimate safe doses for daily consumption.

3. **Phytochemical Comparison of Commonly Available Species of Genus Aloe:**

Under the guidance of Fr. Dr. Jobi Xavier

Identification of shared active principles among commonly available species of Genus *Aloe*: *Aloe sophie* and *Aloe maculata*. Thin layered chromatography based analysis.

## **Technical Expertise**

- Handling multiple model systems: Bacterial culture, mammalian cell lines: both primary cultures and transformed cell lines, *Drosophila* and mouse models.
- Technical expertise in molecular biology, physiology, biochemistry and genetics.

### **Awards and Honours**

- Awarded CSIR-NET Scholarship by the Council of Scientific Industrial Research, India (2014)
- Awarded JNU DBT Fellowship for pursuing Masters in Science (2013-2015)
- Gold Medalist and winner of ESTA LESSER Gold Medal for overall achievement in the Deanery of Sciences, Christ University from Birla Sanskriti Trust, Kolkata (2010-2013)

### **Co-Curricular Activities**

- Speaker at TIFR-Chai and Why public lecture series: Nobel Talks 2019.
- Lead Organiser, Annual Inter-College Biotechnology and Chemistry Fest, Christ University (2012).
- Volunteer, Environment Week: Be the Change jointly organised by the Departments of Biotechnology, Botany, Chemistry and Zoology, Christ University (2012).
- Social work: Part of Peer educator group in association with Enfold Proactive Health Trust (2012-2013).

### **Other interests and hobbies**

- Travel and photography