

KARTHIK G SHANBHAG

Integrated PhD Student

Department of Biology, Indian Institute of Science Education and Research, Pune, India

Contact: +91-8892211841

E-mail: karthik.shnabhag@students.iiserpune.ac.in

EDUCATIONAL QUALIFICATIONS

Qualification	University/Board	CGPA/Percentage Marks	
		Secured	Maximum
Integrated PhD	Indian Institute of Science Education and Research, Pune	8.8 (in MS coursework)	10.0
B.Sc. Chemistry, Zoology and Biotechnology	Bangalore University	8.78	10.0

RESEARCH EXPERIENCE

- **PhD Student** (August 2020 – Present): **Mapping and annotation of novel proteins interactors of signalling lipids** [Supervisor: **Dr. Siddhesh Kamat**, IISER Pune]
- **Semester Projects during Masters coursework** (during 2018 – 2020)
 - **Expression and Purification of HtrA2** [Supervisor: **Dr. Sandanaraj S Britto**, IISER Pune]
 - **The effects of mutations in the SF2 helicase domain on the nucleolytic activity of SauUSI** [Supervisor: **Dr. Saikrishnan Kayarat**, IISER Pune]
- **Summer Internship** (June – July 2018): **Activation of MAPK signalling pathway in macrophage upon curd treatment** [Supervisor: **Dr K N Balaji**, IISc Bengaluru] (Part of the 8-week Summer Research Fellowship Programme sponsored by IASc, INSA and NASI)
- **Summer Internship** (May – July 2017): **Preparation of vaccine against leptospirosis using outer membrane proteins of Leptospira** [Supervisor: **Dr K Natarajaseenivasan**, Bharathidasan University] (Part of the 8-week Summer Research Fellowship Programme sponsored by IASc, INSA and NASI)

TEACHING EXPERIENCE

➤ **At IISER Pune (Teaching Assistantship)**

1. Introduction to Biological Systems (BIO202): TAsip with Dr Aurnab Ghose
2. Animal Physiology I (BIO312): TAsip with Dr Nixon M Abraham and Dr Nishikant Subhedar

➤ **At Fergusson College (Currently teaching)**

1. Virology and Immunology [Course code: BTH4203] (M.Sc. 1st year)
2. Emerging Trends and Technologies [Course code: BTH5313] (MSc 2nd Year)

AWARDS AND RECOGNITION

- **Prime Minister's Research Fellowship (PMRF)** awardee 2020
- Secured **All India Rank 32** in CSIR-UGC NET Examination (Dec 2018) in Life Sciences stream and qualified both Junior Research Fellowship (JRF) and Lectureship (LS)
- Secured **All Indian Rank 186** and **161** in IIT-JAM Examination 2018 in Biological Sciences (BL) and Biotechnology (BT) streams respectively
- **Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship** awardee 2015 [Qualified the KVPY Examination and interview process of stream-SB with **All India Rank 9**]

CONFERENCES AND WORKSHOPS

- Attended "Macromolecular Assemblies: Structure, Function, and Evolution (MASFE)" Conference held on 2nd – 4th August 2023
- Attended "EMBO YIP PhD Course 2023" held at EMBL Heidelberg, Germany
- Attended and presented a poster in "MBU50 Symposium" held at IISc Bengaluru from 23rd to 25th January 2023
- Attended and presented a poster in "Asian Chemical Biology Initiative (ACBI) Meeting 2022" held at IISER Pune on 14th September 2022
- Attended "10th International Singapore Lipid Symposium" Virtual Conference held on 8th – 10th March 2022
- Attended "National Science (VIJYOSHI) Camp 2016" held at IISc Bengaluru during 3rd – 5th December 2016

SKILLS

➤ **Experimental:**

1. In-gel fluorescence imaging
2. Liquid Chromatography – Mass Spectrometry
3. Chemoproteomics and lipidomics
4. Cell culture (primary and secondary mammalian cell lines)
5. Immunohistochemistry
6. Mouse breeding, handling and Genotyping
7. Fluorescence and confocal microscopy
8. Fluorescence-activated cell sorting (FACS)
9. Molecular biology (Cloning and in vivo/in situ genetic experiments)

➤ **Software:**

1. Adobe Illustrator
2. ChemDraw
3. MS-Office
4. GraphPad Prism
5. R programming (Basics)

PUBLICATIONS

1. **Shanbhag K**, Mhetre A, Khandelwal N, Kamat SS. The Lysophosphatidylserines-An Emerging Class of Signalling Lysophospholipids. J Membr Biol. 2020 Oct;253(5):381-397.
2. **Shanbhag, K.**, Sharma, K., Kamat, S. S.* (2023) Photoreactive bioorthogonal lipid probes and their applications in mammalian biology, RSC Chemical Biology 4, 37-46.