


Rahul Sharma

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Education

Integrated PhD (Ph.D.) in Biology, IISERTVM, India	2017 - Present
Integrated PhD (M.S) in Biology, IISERTVM, India	2015 - 2017
B.Sc. (Hons.) in Biological Sciences, University of Delhi, India	2012 - 2015

Research Interests

Protein quality control and organelle homeostasis in context of neurological diseases and cancer biology.

Research Experience

Characterization of ubiquitin ligase(s) role in Golgi homeostasis Ph.D. thesis, Supervisor- Prof. S Murty Srinivasula, IISERTVM, India	2017 - Present
Identification of novel CARP1 and CARP2 interacting partners MS thesis, Supervisor- Prof. S Murty Srinivasula, IISERTVM, India	2015 - 2017
Design, synthesis, and evaluation of novel Chalcone and Coumarine derivatives as anticancer Agents Research project intern, Supervisor- Dr. Sanjay Batra, Sri Venkateshwara College, University of Delhi, India	2014 - 2015

Research Skills

Mammalian cell culture • Generation of stable cell lines • Immunofluorescence • Confocal microscopy • Live-cell imaging • Image analysis by ImageJ • RNA interference • Generation of Knock out cell lines using CRISPR-Cas9 • Transfection • Viral transduction • Western blotting • RNA extraction • cDNA synthesis and qRT-PCR • Luminescence based reporter assays • Immunoprecipitation • Enzymatic assays • Molecular cloning • Site-directed mutagenesis • expression and purification of recombinant proteins • Protein Chromatography: size exclusion and affinity chromatography • Gel electrophoresis (agarose and PAGE) • Electron microscopy of protein crystals • Bioinformatics analysis • Phylogeny generation • Statistical analysis • Basics of MS software

Teaching Experiences

- Gained teaching experience for the following courses:
 - Cell biology (BIO 221)- Two semesters
 - Genetics and molecular biology (BIO 211) - Two semesters
 - Physical Principles in Biology (IDC 211)- Three semesters
 - Biology Lab III- Two semesters
- Trained two students towards completion of MS thesis as a co-guide.
- Trained four students for summer internship.

Publications

- **Sharma, R. et al.** A Review on Mechanisms of Anti-Tumor Activity of Chalcones. Anti-Cancer Agents Med. Chem.16(2), 200–211 (2016).
- **Sharma, R. et al.** Core of the Prion Subdomain of the Mammalian CPEB3 that is Involved in Long Term Memory Retention, Journal of Molecular Biology 433, 167084 (2021)

Membership to Professional Bodies

- Member of National Ataxia Foundation: Minneapolis, USA
- American Society for Cell Biology: Bethesda, Maryland, USA

Achievements

- 2021
 - Participated in Popular Science Article under **Augmenting Writing Skills for Articulating Research (AWSAR)** Programme, Department of Science Technology, India
 - Participated in **Saransh-Thesis Competition** for PhD students, Indian National Young Academy of Sciences
- 2019
 - Awarded with **Senior research fellowship**, Council of scientific and Industrial Research, India
- 2017
 - Awarded with **Junior research fellowship**, Council of scientific and Industrial Research, India
 - Secured the All India **60th Rank in NET-JRF** (National Eligibility Test- Junior Research Fellowship- June 2017) in CSIR-UGC Exam.
 - Secured the **1st rank** in Int. PhD- MS (Biology), IISER TVM.
- 2015
 - Secured the **3rd Rank** in B.Sc. (H) in Biological Sciences in University of Delhi.
 - Qualified IISER-TVM Integrated PhD programme Entrance Test, School of Biology. **Awarded with IISER TVM fellowship.**
 - Secured All India **1st Rank** M.Sc. Animal Biotechnology Entrance Exam, University of Hyderabad, India

- Secured All India **5th Rank** in the 20th ALL INDIA ENTRANCE EXAMINATION FOR ADMISSION to Masters (AIEEA PG-2015), Indian Agriculture Research Institute.
- Secured All India **9th Rank** in the Jawaharlal Nehru University COMBINED ENTRANCE EXAMINATION FOR BIOTECHNOLOGY PROGRAMMES 2015-16, India
- Secured All India **27th Rank** in IIT JAM (Joint Admission to M.Sc.) exam for Biological Sciences, India.
- 2013-2014
 - **Awarded with fellowship** for Delhi University Research Innovation project.

Conferences/Symposia/Workshops

- Attended the virtual workshop on Integrating Nutrition and Metabolism on across scales, organized by HHMI, Janelia Research Campus, 2021
- Attended the virtual workshop on Biological tools for 4D Cellular Physiology, organized by HHMI, Janelia Research Campus, 2021
- Attended the virtual workshop on 4D Cellular Physiology: Replace, Repair and Regenerate, organized by HHMI, Janelia Research Campus, 2021
- Attended the virtual workshop on Biological tools for 4D Cellular Physiology, organized by HHMI, Janelia Research Campus, 2021
- Attended the virtual meeting on autophagy, lysosome and membrane trafficking: mechanisms and diseases, organized by EMBO, 2020
- Attended and member of organizing committee of Frontier Symposium in Biology (FS-BIO 2020), IISER TVM, 2020
- Presented the poster in Biology across kingdoms symposium, organized by school of Biology, IISER TVM, 2019
- Presented the poster in satellite meeting to the International Congress of Cell Biology, organized by IISER TVM, 2018.
- Attended as volunteer in the 39th All India Cell Biology Conference on “Cellular biology and Dynamics” organized by IISER TVM, RGCB and Indian Society of Cell Biology, 2015.

References

Prof. S. Murty Srinivasula
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