

Faculty CV

Name

Sribash Ropy

Designation

Proffessor

Email

sribashroy@uohy.ac.in

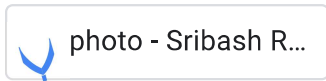
Phone/mobile number

8081799595

Lab/Office room number

Plant Epigenomics and Genomics/ F38

Profile photo (1 photo upto 10 MB)



 Add File

Links of Personal webpage/Google scholar/LinkedIn etc.

.....

Broad areas of research (only keywords)

Plant Epigenomic, Genomics, Biotechnology

.....

Professional Experience

More than 20 years of research experience in various filed of plant research including, protein, genomics, epigenomics, gene silencing, DNA barcoding, small RNAs etc.

.....

Education/Training

PhD (Biochemistry)

.....

Detailed research interests (Upto 2 paragraphs or 10 bullet points)

Epigenomic and Genomic approaches to understand plant adaptation under natural climatic conditions using wild populations of Himalayan *Arabidopsis thaliana* and thereafter utilization of natural epigenetic variants including methylation/demethylation, long non-coding RNA, small RNA for crop improvement in a targeted approach. We further engage in studying the impact of elevated CO₂ and Temperature/ Light intensity on epigenomes of high and low elevation populations.

We are also exploring epigenetics of Millet crops especially Finger millet and Pearl millet to improve the agronomic traits and grain quality

Selected publications (upto 5)

1. Akanksha Singh, Ashwani Kumar Verma, Sunil Kumar, Sumit Kumar Bag and Sribash Roy. Genome-wide DNA methylation and their transgenerational pattern differ in *Arabidopsis thaliana* populations originated along the elevation of West Himalaya. BMC Plant Biology (2024) 24:936 <https://doi.org/10.1186/s12870-024-05641-0>
2. Abhinandan Mani Tripathi, Rajneesh Singh, Akanksha Singh, Ashwani Kumar Verma, Varun Dwivedi, Parneeta Mishra, Shiv Narayan, Vivek Hari Sunder, Pramod Arvind Shirke, P.V. Shivprasad. Sribash Roy. Indian Himalayan natural *Arabidopsis thaliana* accessions with abolished miR158 levels exhibit robust miR173-initiated trans-acting cascade silencing. The plant journal 114, 4 (2023).
3. Ashwani Kumar Verma, Akanksha Singh, Rajneesh Singh, Prabhatam Mishra, Shiv Narayan, Vivek Pandey, Pramod Arvind Shirke, Sribash Roy* Population specific methylome remodeling in high and low elevation populations of Indian West Himalayan *Arabidopsis thaliana* in response to elevated CO₂ Environ. Exp. Botany 203 (2022)
4. Parneeta Mishra, Akanksha Singh, Ashwani Kumar Verma, Shashank Kumar Mishra, Rajneesh Singh, Sribash Roy, MicroRNA775 Targets a Probable β -(1,3)-Galactosyltransferase to Regulate Growth and Development in *Arabidopsis thaliana*. Journal of Plant Growth Regulation. <https://doi.org/10.1007/s00344-021-10511-2> (2021)
5. Abhinandan Mani Tripathi, Akanksha Singh, Rajneesh Singh, Ashwani Kumar Verma, Sribash Roy* Modulation of miRNA expression in natural populations of *A. thaliana* along a wide altitudinal gradient of Indian Himalayas, Sci. Report, 9, 10.1038/s41598-018-37465-y (2019)

Selected projects (upto 5)

Targeted manipulation of population specific DNA methylation induced by elevated CO₂ for trait improvement under climate change scenario (DBT, Ongoing)

2. Editing of lower stem sequence of a pre-miRNA may suppress its biogenesis from pri-miRNA: A case study of pri-miRNA processing for crop improvement (DBT)

3. Effect of elevated CO₂ on epigenomes of *Arabidopsis thaliana* originated from different altitudes (SERB, completed)

4. Functional Characterization of a population specific long non-coding RNA of high elevation population of Himalayan *Arabidopsis thaliana*

5. Elevated CO₂ induced small RNA directed DNA methylation regulation and miRNA expression in low and high altitude populations of *Arabidopsis thaliana* for adaptive advantages (completed)

Selected patents (a paragraph or upto 5 bullet points)

NA

Current PhD scholars and broad research topics

Dr Divya: Targeted manipulation of population specific DNA methylation induced by elevated CO₂ for trait improvement under climate change scenario

This form was created inside University of Hyderabad.

Google Forms