

Curriculum Vitae

Personal Details:

Name: Dr. Jayanti Saha

Address: Department of Botany, A.P.C. Roy Govt. College, Himachal
Bihar, Siliguri- 734010

Designation: Assistant Professor

Email: jayantisaha98@gmail.com



Education and Qualifications:

- Earned Ph.D. award in Botany from Raiganj University in 2022.
- Completed B.Ed. from University of North Bengal in 2015.
- Post-Graduated in Botany from University of North Bengal in 2013.
- Graduated in Botany (Hons.) from Raiganj College (University College) in 2011.

Other Qualifications:

1. Qualified CSIR-UGC NET (JRF, June 2017 and June 2018; LS, December 2017).
2. Qualified WBSET 2015.
3. Qualified GATE 2016.
4. Qualified WBSSC 2016.
5. Qualified WBPSB for the post of Assistant Mistress in Govt. School, 2015.

Awards and Achievements:

- UGC Junior research fellow at Raiganj University.
- “Young Scientist Award” in DBT & DST-SERB (Govt. of India) sponsored international conference on “Advances in Plants, Microbes and Agricultural Science” held at Department of Botany, University of North Bengal in 2nd-4th March, 2023.

Computational Skills:

- Basic computational skill and usage of softwares for statistical analysis used in the field of computational biology.

Expertise on instruments/Technical Skills:

- Autoclave
- Laminar Airflow/ Biosafety Cabinet
- UV-Visible Spectrophotometer
- Colorimeter
- Centrifuge
- Shaking Incubator
- Microscope
- PCR
- Rotary Shaker

Conference/Workshop attended:

1. **'Heavy metal tolerance in soil bacteria isolated from arable land'** (poster) presented in National Seminar on *New Horizon in Botanical Research*, (20-21 February, 2020) organized by the Department of Botany, University of North Bengal.
2. **'Study on heavy metal uptake and plant growth promotion potential of multiple heavy metal resistant *Pseudomonas* spp. isolated from arable land of Uttar Dinajpur'** presented (oral) in two days national seminar (online mode) on *Advancement of Plant Sciences for food diversity and nutritional security*, organized by DST (FIST) & UGC-SAP assisted DRS, University of North Bengal in collaboration with UGC-Human Resource Development Centre, University of North Bengal.
3. **'Study on metal uptake ability of multiple heavy metal as well as antibiotic resistant soil bacteria isolated from arable land of Uttar Dinajpur and adjoining areas'** presented in International web seminar on *Modern Trends in Humanities, Science & Technology and Social Sciences for Sustainable Development* organized by A. P. C. Roy Govt. College in collaboration with UGC-Human Resource Development Centre, University of North Bengal.
4. Oral presentation in *5th Regional Science and Technology Congress, 2022-23* held at Cooch Behar Panchanan Barma University.

5. Oral presentation in DBT & DST-SERB (Govt. of India) sponsored international conference on “*Advances in Plants, Microbes and Agricultural Science*” held at Department of Botany, University of North Bengal in 2nd-4th March, 2023.
6. Participated in the 3-day workshop cum Lecture Series on “**Skill Development in Molecular Strategies for Understanding Biodiversity and Human Diseases**” conducted by the Bioinformatics Centre, North-Eastern Hill University, Shillong in 28th February-2nd March, 2019.

Profession:

Working as an Assistant Professor in Botany at A.P.C Roy Govt. College Siliguri from August, 2021.

Teaching Experience:

- Worked as a Guest Lecturer at Raiganj University for the undergraduate students (Botany Hons.).
- Worked as an Assistant Teacher at Debinagar Kailash Chandra Radharani Vidyapith (Raiganj) appointed through WBSSC.
- Presently working as an Assistant Professor in Botany at A.P.C. Roy Govt. College.

Administrative Experience:

- Served as a member of CBCS exam Committee, Scholarship Committee, Anti-ragging Committee, Student Harassment Cell etc. at APC Roy Govt. College.

Research Experience:

I have an experience on working with potential heavy metal resistant bacteria isolated from multicrop cultivating arable lands of Uttar Dinajpur and adjoining areas, their screening, identification, including whole genome sequence analysis to explore the bioremediation capability of natural indigenous bacteria, that would be beneficial in developing eco-friendly cost-effective strategy for heavy metal clean-up from natural environments. Moreover, detection of plant growth promoting activity (both *in vitro* and *in vivo* assay) was also performed to comprehend the PGPR activity of the bacteria along with the reduced metal accumulation (bioreduction) within the plant.

Publications:

- **Saha J**, Saha BK, Pal Sarkar M, Roy V, Mandal P, Pal A (2019): Comparative Genomic Analysis of Soil Dwelling Bacteria Utilizing a Combinational Codon Usage and Molecular Phylogenetic Approach Accentuating on Key Housekeeping Genes. **Frontiers in Microbiology** 10:2896 <https://doi.org/10.3389/fmicb.2019.02896>
- Pal A, Saha BK, **Saha J** (2019): Comparative in silico analysis of *ftsZ* gene from different bacteria reveals the preference for core set of codons in coding sequence structuring and secondary structural elements determination. **PLOS ONE** 14(12): e0219231. <https://doi.org/10.1371/journal.pone.0219231>
- **Saha J**, Bhattacharjee S, Pal Sarkar M, Saha BK, Basak HK, Adhikary S, Roy V, Mandal P, Chatterjee A, Pal A (2021): A comparative genomics-based study of positive strand RNA viruses emphasizing on SARS-CoV-2 utilizing dinucleotide signature, codon usage and codon context analyses. **Gene Reports** 23:101055 doi: <https://doi.org/10.1016/j.genrep.2021.101055>
- Pal A, Bhattacharjee S, **Saha J**, Sarkar M, Mandal P (2021): Bacterial survival strategies and responses under heavy metal stress: a comprehensive overview. **Critical Reviews in Microbiology** 1-29. doi:10.1080/1040841X.2021.1970512
- **Saha J**, Sarkar M, Mandal P, Pal A (2021): Comparative Study of Heavy Metal Uptake and Analysis of Plant Growth Promotion Potential of Multiple Heavy Metal-Resistant Bacteria Isolated From Arable Land. **Current Microbiology** 79, 7. <https://doi.org/10.1007/s00284-021-02704-5>.
- **Saha J**, Dey S, Pal A (2022): Whole genome sequencing and comparative genomic analyses of *Pseudomonas aeruginosa* strain isolated from arable soil reveal novel insights into heavy metal resistance and codon biology. **Current Genetics** 68(3): 481-503. <https://doi.org/10.1007/s00294-022-01245-z>
- **Saha J**, Adhikary S, Pal A (2022): Analysing the heavy metal resistance pattern and biosorption potential of a *Bacillus tropicus* strain isolated from arable soil. **Geomicrobiology Journal**. 39(10): 891-905(15). DOI: 10.1080/01490451.2022.2089781

- Roy V, Saha B. K, **Saha J**, Pal A. Assessment of Water Quality of Kulik River of Raiganj with Reference to Physicochemical Characteristics and Potability. *Current World Environment* 2022;17(2). DOI:<http://dx.doi.org/10.12944/CWE.17.2.19>
- Pal A, Roy V, Dutta P, Adhikary S, **Saha J** (2022): Genomic islands in bacterial genome evolution and speciation. In *Microbial Genomic Islands in Adaptation and Pathogenicity* for Springer Singapore edited by Dr. Indra Mani, Dr. Vijai Singh, Dr. Khalid J. Alzahrani and Dr. Dinh-Toi Chu.