



Assistant Professor  
Department of Botany  
Netaji Mahavidyalaya  
(affiliated to The University of Burdwan)  
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## Specialization

§ Ph.D.- Microbiology  
§ M.Sc.- Plant Physiology and Biochemistry

## Teaching Experience

§ Assistant Professor: (2019, August- Till date) at the Department of Botany, Netaji Mahavidyalaya, Arambagh, Hooghly (affiliated to The University of Burdwan).

§ Guest Lecturer: (2017, April- 2018, June) at the Department of Botany, Burdwan Raj College, Purba Bardhaman, (affiliated to The University of Burdwan).

# Dr. Sk Aftabul Alam

Assistant Professor (Stage 2)

## Important Research Links

<https://www.researchgate.net/profile/Sk-Aftabul-Alam>

<http://orcid.org/0000-0002-6668-4383>

<https://scholar.google.com/citations?user=kKSwZfUAAAAJ>

## Educational Qualifications

- § **Ph.D.:** (2018 – 2023) Department of Microbiology, The University of Burdwan, W.B, India.
- § **Master of Science: Botany** (2016), Department of Botany, The University of Burdwan, W.B, India, with CGPA 8.71; **Rank 3<sup>rd</sup>**.
- § **Bachelor of Science: Botany** (Honours) (2014), Burdwan Raj College, affiliated to The University of Burdwan. 74%; **Rank 6<sup>th</sup>**.
- § **Higher Secondary** (10+2) (2010), W.B.C.H.S.E, Burdwan C.M.S High School, Burdwan, WB, India.
- § **Secondary School Examination** (2008), W.B.B.S.E, Jotsadi High School, Burdwan, WB, India.
- § Qualified **CSIR NET-JRF in Life Sciences**, held in Dec 2017; **Rank- AIR CSIR JRF-83**.
- § Qualified **CSIR NET-LS in Life Sciences**, held in June 2017; **Rank- AIR CSIR-UGC LS-35**.
- § Qualified **CSIR NET-LS in Life Sciences**, held in Dec 2016; **Rank- AIR CSIR-UGC LS-37**.
- § Qualified **Graduate Aptitude Test (GATE 2017) in Life Sciences**.
- § Qualified **WBSET-2017 in Life Sciences**.

## Achievements

§ “Outstanding paper presentation” award at 6th regional science and Technology Congress (Region Three), (January 9-10, 2024); Durgapur, West Bengal; sponsored by Department of Science and Technology and Biotechnology, Govt. of West Bengal.

§ Awarded Junior Research Fellowship by CSIR. (File no. 09/025(0263)/2019)

## Research Activities

§ Ph.D. Thesis title: “Exploration of p-nitrophenol degrading aquatic bacteria from selected water bodies of West Bengal”.

§ Microbial population study, Microbial genomics study.

§ Genomic DNA extraction.

§ Study of biodegradation of xenobiotics, and chemotaxis.

§ Agarose gel electrophoresis and PCR amplification.

§ Chromatographic separation techniques.

§ Spectroscopies, Microscopies.

§ Bioinformatics based genome and Proteome analysis.

§ Bioinformatics tool knowledge-Gromacs, PyRx,

Discover Studio 2021 client, UCSF chimera, MEGA11

§ Anti Microbial Peptides

§ Homology Modeling

§ Molecular Docking

§ Molecular Dynamics Simulations

## List of publications

- § **Sk Aftabul Alam** (2025). Epicatechin gallate and anabsinthin: effective inhibitors of *Xanthomonas citri* for citrus canker control. *Discover Chemistry*, 2(1), 1-17. <https://doi.org/10.1007/s44371-025-00150-x>.
- § Suresh K. Mondal, S Chakraborty, T Roy, A Jana, **Sk Aftabul Alam**, G Roymahapatra and Santi M. Mandal. (2024) “Biogenic Synthesis of Glycerol Tributyrates: A Selective Synergistic Agent Against Carbapenem-resistant *Klebsiella pneumoniae*” *Engineered Science*. <https://doi.org/10.30919/escs1385>
- § **Sk Aftabul Alam** and Santi M. Mandal. (2024) “Guardians of the Epidermis: Interplay Between Skin Microbiota and Antimicrobial Peptides” Book- *Evolution of Antimicrobial Peptides*, Springer Nature Switzerland AG [https://doi.org/10.1007/978-3-031-67515-7\\_4](https://doi.org/10.1007/978-3-031-67515-7_4) (Book Chapter).
- § Suresh Mondal, **Sk Aftabul Alam**, Gourisankar Roymahapatra, Santi M. Mandal. (2024) “Anti-MRSA activity of chlorophenyl pyrrolo benzodiazepines compound” *The Journal of Antibiotics* (IF 2.7) <https://doi.org/10.1038/s41429-024-00747-x>.
- § **Sk Aftabul Alam**, and Pradipta Saha. (2023) “Chemotactic response of p-nitrophenol degrading *Pseudomonas asiatica* strain PNPG3 through phenotypic & genome sequence based in silico studies” *3 Biotech* (IF 3.2). <https://doi.org/10.1007/s13205-023-03809-3>
- § **Sk Aftabul Alam**, and Pradipta Saha. (2023) “P-Nitrophenol decolorization and draft genome sequence of *Pseudomonas* sp. strain PNPG3: A preliminary study report”. *Journal of Environmental Biology*. (IF 0.781). <http://doi.org/10.22438/jeb/44/4/MRN-5061>
- § **Sk Aftabul Alam**, and Pradipta Saha. (2022) “Functional, and phylogenetic analysis of maleylacetate reductase of *Pseudomonas* sp strain PNPG3: An in-silico approach”. *Journal of Experimental Biology and Agricultural Sciences*: 1331 – 1343. (IF 0.46). [http://dx.doi.org/10.18006/2022.10\(6\).1331.1343](http://dx.doi.org/10.18006/2022.10(6).1331.1343)
- § **Sk Aftabul Alam**, and Pradipta Saha. (2022) "Evidence of p-nitrophenol Biodegradation and Study of Genomic Attributes from a Newly Isolated Aquatic Bacterium *Pseudomonas asiatica* Strain PNPG3." *Soil and Sediment Contamination: An International Journal* 1-18. (IF 2.96). <https://doi.org/10.1080/15320383.2022.2159321>
- § **Sk Aftabul Alam**, and Pradipta Saha. (2022) “Microbial biodegradation of nitrophenols and their derivatives: A Review”. *Journal of Experimental Biology and Agricultural Sciences* 743-766. (IF 0.46). [http://dx.doi.org/10.18006/2022.10\(4\).743.766](http://dx.doi.org/10.18006/2022.10(4).743.766)
- § **Sk Aftabul Alam**, and Pradipta Saha. (2022) "Biodegradation of p-nitrophenol by a member of the genus *Brachybacterium*, isolated from the river Ganges." *3 Biotech* 12.9: 1-10. (IF 3.2). <https://doi.org/10.1007/s13205-022-03263-7>

## Bacterial 16S rDNA Sequences deposited in NCBI GenBank Database (E-Publications)

- **Sk Aftabul Alam**, and Pradipta Saha (2020). PNP degrading aquatic bacterium isolated from River Ganges water sample, collected from West Bengal, India. GenBank vide Accession no. MW350013. *Pseudomonas* sp strain PNPG3 (<http://www.ncbi.nlm.nih.gov>).
- **Sk Aftabul Alam**, and Pradipta Saha (2021). PNP degrading aquatic bacterium isolated from a pond water sample collected from Bardhaman, West Bengal, India. GenBank vide Accession no. MZ505525. *Pseudomonas* sp strain PNPBRP5(2) (<http://www.ncbi.nlm.nih.gov>).
- **Sk Aftabul Alam**, and Pradipta Saha (2020). PNP degrading aquatic bacterium isolated from River Ganges water sample, collected from West Bengal, India. GenBank vide Accession no. MW064125. *Brachybacterium* sp strain DNPG3 (<http://www.ncbi.nlm.nih.gov>).
- **Sk Aftabul Alam**, and Pradipta Saha (2020). PNP degrading aquatic bacterium isolated from River Ganges water sample, collected from West Bengal, India. GenBank vide Accession no. MW073529. *Brachybacterium* sp strain DNPG4. (<http://www.ncbi.nlm.nih.gov>).
- **Sk Aftabul Alam**, and Pradipta Saha (2022). Nitroaromatic degrading aquatic bacterium isolated from a pond water sample, collected from Bardhaman, West Bengal, India. GenBank vide Accession no. OP459200. *Brachybacterium* sp strain DNPBRP2. (<http://www.ncbi.nlm.nih.gov>).
- **Sk Aftabul Alam**, and Pradipta Saha (2021). PNP degrading aquatic bacterium isolated from River Ganges water sample, collected from West Bengal, India. GenBank vide Accession no.-MZ505526. *Klebsiella* sp. strain DNPG7. (<http://www.ncbi.nlm.nih.gov>).

- **Sk Aftabul Alam**, and Pradipta Saha (2021). PNP degrading aquatic bacterium isolated from a pond water sample, collected from Bardhaman, West Bengal, India. GenBank vide .Accession no.- OK149110. *Microbacterium* sp. strain R6. (<http://www.ncbi.nlm.nih.gov> ).
- **Sk Aftabul Alam**, and Pradipta Saha (2022). *Pseudomonas* sp strain 3PNP 16S ribosomal RNA gene, partial sequence. GenBank vide Accession no.- OP740490. *Pseudomonas* sp. strain 3PNP. (<http://www.ncbi.nlm.nih.gov>).

**Whole genome shotgun Sequence deposited in NCBI GenBank Database (E-Publications)**

- **Sk Aftabul Alam**, and Pradipta Saha (2022). Draft Genome of *Pseudomonas* sp strain PNPG3. GenBank vide Accession no.- NZ\_JALLKV000000000. *Pseudomonas* sp. PNPG3. (<http://www.ncbi.nlm.nih.gov>).

## Seminars/Symposia participated

§ **Sk Aftabul Alam** (2025). “Oleanoic acid: A phytochemical targeting ergosterol biosynthesis enzymes ERG4/ERG24 and serine protease in *Phytophthora infestans* for late blight management” 7th Rional science and Technology Congress (Region Three), (January 10-11, 2025); Rampurhat College, Birbhum; sponsored by Department of Science and Technology and Biotechnology, Govt. of West Bengal.

§ **Sk Aftabul Alam** (2024). “Annotation of the chemotaxis gene clusters in *Pseudomonas asiatica* strain PNPG3” at 31st West Bengal Science and Technology Congress, (February 28-29, 2024); Science City, Kolkata; sponsored by Department of Science and Technology and Biotechnology, Govt. of West Bengal.

§ **Sk Aftabul Alam** (2024). “Annotation of the chemotaxis gene clusters in *Pseudomonas asiatica* strain PNPG3” at 6th regional science and Technology Congress (Region Three), (January 9-10, 2024); Durgapur, West Bengal; sponsored by Department of Science and Technology and Biotechnology, Govt. of West Bengal.

§ **Sk Aftabul Alam** and Pradipta Saha (2020). “Isolation, Characterization and Chemotaxis of p-nitrophenol degrading bacteria from waterbody of West Bengal”. Present and Future strategies to combat emerging and re-emerging contagious disease, organized by the Department of Microbiology, The University of Burdwan. August 16-18, 2020.

§ **Sk Aftabul Alam** and Pradipta Saha (2019). “Isolation and characterization of a nitroaromatic compound degrading bacterial strain isolated from a waterbody of Burdwan: A Preliminary Report”, at 4th regional science and Technology Congress (Western Region), (December 9-10, 2019); The University of Burdwan; sponsored by Department of Science and Technology and Biotechnology, Govt. of West Bengal.