

Curriculum Vitae

Name: **Dr. Payel Sarkar**

Designation: Assistant Professor

Mailing Address: Department of Microbiology, University of North Bengal, Raja Rammohunpur, Siliguri-734013, West Bengal, India

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Academic Qualification:

- **B.Sc (Hons)** in Microbiology (2005) from University of North Bengal
- **M. Sc** in Microbiology (2007) from H.N.B. Garhwal University.
Title of Dissertation: Cloning of M2 gene of Influenza A (H5N1) virus strain in Pichia multicopy system and pET series vector.
Work done at National Institute of Virology, Pune
- **Ph.D.** (2016) from University of North Bengal.
Title of thesis: Studies on the biodegradation of petroleum hydrocarbons by a soil bacterium

Professional Experience:

Teaching experience: 11 years

Assistant Professor in Dept of Microbiology, University of North Bengal (Aug 2010 - till date).

Courses taught:

Microbial Diversity, Microbial metabolism, Environmental Microbiology, Wastewater Management, Antimicrobials and chemotherapeutic agents, Soil Microbiology.

Research experience: 11 years

- Experience in working at BSL3 with infectious Influenza H5N1 strain at NIV, Pune (Mar' 2007 – Aug'2007).
- Experience in working at BSL3 with infectious Mycobacterium tuberculosis strain at North Bengal Medical College & Hospital (Jan' 2018 – July'2018).
- Experience in handling several environmental pollutants and successfully applying microbial strains for their degradation at University of North Bengal (2010 – till date).

Research Interest: My research area is environmental and applied microbiology. The key interest is to understand the interaction between the microbial communities and apply them to provide solutions to some of the

current world's most pressing issues, such as alternative energy sources, remediation of industrial pollutions.

List of Publications:

- Effective Degradation of Organic Waste with emphasis on kitchen waste using Microbial Consortium (2010). **Payel Sarkar**, Rajshree Saxena, Mukesh Meghvanshi and Rajni Singh. *ICBFS 2010 Thomson ISI, British Library and Nelson P66-68*.
- Microbial Consortium: Synergistic Approach in Biodegradation of Organic Kitchen Wastes (2011). **Payel Sarkar***, M.K Meghvansi and Rajni Singh. (*International Journal of Environmental Science and Development.*, 2(3): 132-136.
- Isolation and molecular characterization of extracellular keratinase from *Xanthomonas* sp.: a potential approach in feather waste management (2012). **Payel Sarkar**, Espita Dutta, and Rohan Banerjee. *Asian J of Sc and Tech.*, 1(1):38-46.
- Bioremediation potential of a newly isolated solvent tolerant strain *Bacillus thermophilus* PS11 (2012). **Payel Sarkar** and Shilpi Ghosh. *J. BioSci. Biotech.*, 1(2): 141-147.
- Degradation of aromatic petroleum hydrocarbons (BTEX) by a solvent tolerant bacterial consortium (2013). **Payel Sarkar**, Andrew Roysten Rai and Shilpi Ghosh. *Journal of Urban and Environmental Engineering.*, 7(2):274-279.
- Purification and characterization of solvent stable lipase from a solvent tolerant strain of *Geobacillus stearothermophilus* PS 11(2016). **Payel Sarkar**, Khusboo Lepcha and Shilpi Ghosh. *Journal of Microbiology, Biotechnology and Food Sciences.*, 5(6).
- Production, optimization and application of tyrosinase from *Bacillus* sp Cgr6 in dye degradation (2017). Pranita Pradhan and **Payel Sarkar**. *World J Pharma and Med Res*, 3(8): 212-218.
- Bioconversion of organic solid wastes into biofortified compost using a microbial consortium (2017). **Payel Sarkar** and Rounak Chourasia. *Int J Recycl Org Waste Agricult*, 6(4):321-334.
- Physiological adaptation involved in petroleum hydrocarbon degradation by *Geobacillus stearothermophilus* strain PS11 (2019). **Payel Sarkar** and Shilpi Ghosh. . *International J Basic and Applied Biology*, 6(2): 120-126.
- Prevalence of bacteria in external ocular infection and determination of their antibiotic resistance pattern in a tertiary care unit of India (2020). Madhutamo Sengupta, Haroon Rashid, **Payel Sarkar**. *International J Biotechnology and Biomedical sciences*, 6: 48-52.

Achievement and Awards:

- Awarded with ASTIF, Amity University Research Scholar Fellowship (2009-10)
- University rank holder in B.Sc. examination: 1st class 2nd
- University rank holder in M.Sc. examination: 1st class 2nd

Organised Seminar/ Conferences

- Organizing Secretary of MICROTRENDS 2012, UGC sponsored seminar organized by Department of Microbiology, University of North Bengal.

- Joint Organizing Secretary of MIBISEM 2013, UGC sponsored national seminar organized by Department of Microbiology and Department of Biotechnology, University of North Bengal.
- Joint Organizing Secretary of MICROBIAL WORLD 2014, UGC sponsored national seminar organized by Department of Microbiology, University of North Bengal.
- Joint Organizing Secretary of MICROBIAL WORLD 2017, UGC sponsored national seminar organized by Department of Microbiology, University of North Bengal.

Seminar/ Conference Attended

- Poster presentation at 50th Annual Association of Microbiologists of India held at Pune, India on December 2010.
- Participated in UGC sponsored Workshop on Teaching methodology at the UG level organized by Department of Microbiology, University of North Bengal on February 2011.
- Oral presentation at UGC sponsored national seminar on Biotechnology for People: Applications and Awareness organized by Department of Botany, P.D Womens College, Jalpaiguri, West Bengal on December 2012.
- Oral presentation at 22nd WB state science and Technology Congress organized by WB-DST, West Bengal council of science and technology on March 2015.
- Acted as a resource person and conducted scientific session on General Microbiology at UGC sponsored Workshop on Advanced Technique in Microbiology for UG students held at Department of Microbiology, University of North Bengal on March 2016.
- Oral presentation at UGC sponsored national seminar on Emerging Areas of Sericulture: Issues, Challenges and Applications for Sustainable development and Eco-restoration organized by Department of Sericulture, Raiganj University, West Bengal on January 2018.
- Invited lecture at International Seminar on Frontiers in Tea Research 2020 organised by Dept of Tea Science, University of North Bengal on March 6, 2020.

Member of Association of Microbiologists of India.