

BIODATA

Name : **Dr (Mrs) Asifa Qureshi**

Designation : **Principal Scientist**

Environmental Biotechnology and Genomics Division

CSIR-NEERI (National Environmental Engineering Research Institute), Nagpur



Academic Qualification:

Degree	Institution Place	Year	Details / Percentage
Ph.D (Microbiology)	Nagpur University	Awarded Oct-2001	Study on biotransformation of nitrophenols by selected microorganisms
M.Sc (Microbiology)	Haffkine Institute for training, testing and Research, University of Mumbai, Mumbai	May-1993	64% Ist Division
B.Sc.	Nagpur University	March-1991	78.88% Distinction (7th merit in Nagpur University)

Work Experience:

Designation	Institution/Place	Dates
Principal Scientist	CSIR-NEERI, Nagpur	Sept 2016 –till date
Senior Scientist	CSIR-NEERI, Nagpur	Sept 2008 - Aug 2016
Scientist Grp (IV)1	CSIR-NEERI, Nagpur	Sept 2005 - Aug 2008
Lecturer (Biotech.)	Sindhu Mahavidyalaya, Nagpur	July 2000 - Dec 2004
Research Scholar	CSIR-NEERI, Nagpur	Aug 1994 – Aug 1999

- Awarded National Merit Scholarship (1999) by Ministry of Human Resource Development, Government of India, for standing 7th in order of Merit from Nagpur University.
- Awarded STTP grant from DBT, Ministry of Science and Technology in 2004
- Recognised as PhD supervisor (Microbiology) at RTMNU

Research experience:

Gene probes/genomic tools designed for monitoring in-situ bioremediation of pesticide contaminated soil, detoxification of heavy metals, biodegradation of aromatics/PAHs/nitrophenols. Metagenomics of biofilm communities in water system. Biofilms and Biofouling remedies in water systems, explored antibiofouling biomolecules for RO membrane treatment.

Currently working as team member on National Mission on Clean Ganga Project and CSIR-Mission Mode Project on Heritage conservation and restoration.

R & D Projects handled as Principal Investigator:

1. Antimicrobial and anti-biofilm activities of medicinal plant extracts obtained from North Eastern India against pathogenic bacteria isolated from pigs, cattle and poultry of NER India; and cattle, poultry and ducks of West Bengal Govt. **(DBT)** (Dept of Biotechnology) under DBT's *Twinning Programme* **Rs 34 lakhs (2017-2020)**
2. Nanoparticles assisted dispersal of biofilms from drinking water distribution system Govt. **(DST)** (Dept of Science and Technology) under DST's Water Technology Initiative (WTI) **Rs 20 lakhs (2016-2018)**
3. Insight into microbial interaction with air pollutants found at heritage structures to evaluate potential biodeteriogens CSIR-Mission mode Project (Conservation and restoration of Heritage structures) **Rs 29.60 lakhs (2018-2020)**
4. Study on microbial diversity and biochemical characterization of non alcoholic fermented products of Assam and Arunachal Pradesh Govt. **(DBT)** (Dept of Biotechnology) under DBT's *Twinning Programme* Govt. **Rs 24.92 lakhs (2012-2015)**
5. Development of microbial consortia for enhancement of plant growth in arid and semi arid regions of Saline Desert, Kachch Govt. CSIR- XII five year plan **(DST)** Department of Science and Technology under *National Programme on carbon sequestration* **Rs 34.98 lakhs (2012-2015)**
6. Metagenomic insight to water biofilm formation and dispersal Govt.(CSIR- XII five year plan)

Publications (International and National):

1. D-Tryptophan governs biofilm formation rates and bacterial interaction in *P. mendocina* and *S.aureus*. Saheli Ghosh, Asifa Qureshi*, Hemant J. Purohit, **J. of Biosciences**, March **2019**, 44 : 3
2. Molecular detection of biofilm virulence and antimicrobial resistance associated genes of Salmonella serovars isolated from pig and chicken of Mizoram, India. S. Chakarborty, P. Roychoudhury, I. Samanta, P.K. Subudhi, Lalhruaipuii M. Das, A. De, S. Bandyopadhyay, S. N. Joardar, M.Mandal, **A. Qureshi** and T.K. Dutta, **Indian Journal of Animal Research**, **2019**, DOI: 10.18805/ijar.B-3817
3. Intercepting signalling mechanism to control environmental biofouling, Pal S, Qureshi A*, Purohit HJ, **09 August 2018, 3 Biotech**, 8(8):364
4. Enhanced expression of catechol 1,2 dioxygenase gene in biofilm forming *Pseudomonas mendocina* EGD-AQ5 under increasing benzoate stress Saheli Ghosh, Asifa Qureshi*, Hemant J. Purohit, 118, 57-65 **International Biodeterioration and Biodegradation**, **2017** <http://dx.doi.org/10.1016/j.ibiod.2017.01.019>
5. Perspective of cyanobacterial harmful algal bloom (HAB) mitigation: Microcystis toxin degradation by bacterial consortia. Mili Pal, Smita Pal, Asifa Qureshi*, L.N. Sangolkar, 56, pp 511-518, **July 2018, Indian Journal of Experimental Biology (IJEB)**

6. Insights in Waste Management Bioprocesses Using Genomic Tools. Purohit, H. J., Kapley, A., Khardenavis, A., Qureshi, A., & Dafale, N. **Advances in Applied Microbiology** Aln S. Sariaslani, & G. M. Gadd (Eds.), pp. 121–170, **2016**
7. In silico analysis for prediction of degradative capacity of *Pseudomonas putida* SF1. Hitesh Tikariha, Rajesh Pal, **Asifa Qureshi**, Atya Kapley, Hemant J Purohit, **Gene**, June **2016**, doi 10.1016/J.gene. 2016.06.028
8. Isolation and characterization of heavy-metal resistant microbes from Industrial soil. R.A. Ansari, A. **A. Qureshi***, D. S. Ramteke International Journal of Environmental Sciences, (**IJES**) Vol 6, No 5, March **2016**
9. Novel photo-fenton oxidation with sand and carbon filtration of high concentration reactive dyes both with and without biodegradation. Jablonski MR, Ranicke HB, **Qureshi A**, Purohit H, Reisel JR, Satyanarayana KG. **J. of Textile Sci. and Eng.**, May **2016**, Vol 6, Issue 2. doi:10.4172/2165-8064.1000251
10. Bacteria associated with non-alcoholic fermented bamboo shoot food product. **Asifa Qureshi**, Yogeshwari B. Itankar, D.Saikia, M.Mandal, Hemant. J. Purohit Vol. 6, no. 1 **JMBFS**, August **2016** doi: 10.15414/jmbfs.2016.6.1.722-729
11. Antibiofilm activity of biomolecules: gene expression study of bacterial isolates from brackish and fresh water biofouled membranes. Smita Pal, **Asifa Qureshi**, Hemant J. Purohit, **Biologia** 71/3: 1, 239-246, **2016**
12. Antibiofouling Biomaterials. **Asifa Qureshi**, Smita Pal, Saheli Ghosh, Atya Kapley, Hemant J Purohit. International Journal of Recent Advances in Multidisciplinary Research (**IJRMR**), **August**, Vol 02, Issue 08, 0677-0684, **2015**
13. Antimicrobial activity of *Alcaligenes* sp. HPC 1271 against multidrug resistant bacteria Atya Kapley & Himgouri Tanksale, Sneha Sagarkar, A. R. Prasad, Rathod Aravind Kumar, Nandita Sharma, **Asifa Qureshi**, Hemant J. Purohit. 16(1):57-65, **Funct Integr. Genomics** DOI 10.1007/s10142-015-0466-8, Oct. **2015**
14. Arid ecosystem: future option for carbon sinks using microbial community intelligence Leena Agarwal, **Asifa Qureshi**, Vipin Chandra Kalia, Atya Kapley, Hemant J. Purohit and R. N. Singh, **Current Science**, Vol. 106, NO. 10, 25 May **2014**
15. Draft Genome Sequence of Atrazine-Utilizing Bacteria Isolated from Indian Agricultural Soil Sneha Sagarkar, Pooja Bhardwaj, Trilok C. Yadav, **Asifa Qureshi**, Anshuman Khardenavis, Hemant J. Purohit, Atya Kapley Jan/Feb **2014** **Genome Announcement**, Vol 2, Issue 1, e01122-13
16. Impact of heavy metal contamination in different soil towards microbial characteristics and nutrient availability R.A.Ansari1, D.S.Ramteke, **A.A.Qureshi**, P.B.Deshbhratar, **ESAIJ**, 9(8) **2014**
17. Genome of two clinical isolates of *Mycobacterium tuberculosis* from Odisha, India Mohammed Majid, Narendra Kumar, **Asifa Qureshi**, Priyadarshini Yerra, Ashutosh

Kumar, Mandala Kiran Kumar, Suma Tiruvayipati, Ramani Baddam, Sabiha Shaik, Aparna Srikantam Niyaz Ahmed, **Genome Announcement**, March/April **2014**, Vol 2, Issue 2 e00199-14

18. Genome Sequence of Probiotic *Lactobacillus plantarum* EGD-AQ4 **Asifa Qureshi***, Yogeshwari Itankar, RamKrishna Ojha, Manabendra Mandal, Anshuman Khardenavis, Atya Kapley, Hemant J. Purohit Jan/Feb **2014** ‘, **Genome Announcement**, Vol 2, Issue 1, e01122-13
19. Genome Sequence of *Alcaligenes* sp. strain HPC1271, Atya Kapley, Sneha Sagarkar, Himgouri Tanksale, Nandita Sharma, **Asifa Qureshi**, Anshuman Khardenavis, Hemant J. Purohit January/**February 2013** Volume 1 Issue 1 e00235-12 **Genome Announcements**
20. Genome sequence of the pigment-producing bacterium *Pseudogulbenkiania ferroxidans*, isolated from Loktak lake, Sampada Puranki, Reshma Talkal, Asifa Qureshi, Anshuman Khardenavis, Atya Kapley, Hemant J Purohit November/December 2013, Volume 1, Issue 6 e01115-13 **Genome Announcements 2013**
21. Degradation kinetics of resorcinol by *Enterobacter cloacae* isolate, Marissa R Jablonski, Shraddha Shaligram, **Asifa Qureshi***, Hemant Purohit, John R Riesel, Rani El-Hajjar, **African Journal of Microbiology Research 2012**
22. Degradation of 2,4,6-Trinitrophenol (TNP) by *Arthrobacter* sp. HPC1223 Isolated from Effluent Treatment Plant, **Asifa Qureshi***, Atya Kapley, Hemant J Purohit, **Indian Journal of Microbiology**: Volume 52, Issue 4 **2012**, 642-647 (DOI 10.1007/s12088-012-0288-5)
23. In-situ bioremediation of organochlorine pesticide contaminated microcosm soil and evaluation by gene probe **Asifa Qureshi**, M Mohan, Gajanan Kanade, Atya Kapley, Hemant J Purohit , **Pest. Management Science**, 65, **2009** , 798-804
24. Degradation of 4-nitroaniline by *Stenotrophomonas* strain HPC 135’ **Asifa Qureshi**, Vinita Verma, Atya Kapley, Hemant J. Purohit, **International Biodeterioration and Biodegradation**, 60, **2007**, 215-218
25. Monitoring of catabolic genes from pesticide contaminated soils **Asifa Qureshi** and Hemant J. Purohit, **J. of Indian Association for Env. Management**, Nov. **2006**
26. Isolation of bacterial consortia for degradation of p-nitrophenol from agricultural soil, **Qureshi A.**, Purohit H.J., **Annals in Applied Biology**, 140: 159-162, **2002**
27. Isolation and Characterisation of *Pseudomonas* strain for degradation of 4-nitrophenol, **Microbes and Environment**, **Qureshi A.**, Prabu S.K., Purohit H.J. 16(1): 49-52, **2001**

Book chapters

28. Ghosh, S., Qureshi, A. and Purohit, H.J. (2019). Microbial degradation of plastics: Biofilms and degradation pathways . In: Kumar, V., Kumar, R., Singh, J. and Kumar, P. (eds)

Contaminants in Agriculture and Environment: Health Risks and Remediation, Volume 1, Agro Environ Media, Haridwar, India, pp. 184-199, <https://doi.org/10.26832/AESA-2019-CAE-0153-014>

29. Biofilm Microenvironments: understanding through modelling approaches.
Saheli Ghosh, Asifa Qureshi*, H.J.Purohit, **Springer plus 2018**. chapter in book
30. Insights in Waste Management Bioprocesses Using Genomic Tools. Purohit, H. J., Kapley, A., Khardenavis, A., Qureshi, A., & Dafale, N. Advances in Applied Microbiology AIn S. Sariaslani, & G. M. Gadd (Eds.), pp. 121–170, 2016