

Address: (Office.): Centre for Molecular Genetics,
University of Karachi, Karachi
75270. Pakistan.
Tel. (Off) CMG/KU: ext/2300
E-mail: jakhtar@uok.edu.pk

Dr. JAMEELA AKHTAR

CURRENT STATUS

Confirmed employee as Research Officer in Centre for Molecular Genetics, University of Karachi since 18th May'2007.

My job responsibilities include lab management, research supervision of postgraduate and M.Phil. /Ph. D students, coordination and collaboration development, project writing, and research in molecular Biology and environmental biotechnology, which encompasses industrially significant biosurfactant and enzymes production by environmental bacteria.

TEACHING: As Associate Professor (2023), Biology Compulsory to the BS students at Department of Chemistry (Evening Program)

OBJECTIVE

Keen to win grants to pursue my research targets that could be patented and industrialized to benefit institute and country

Academics

Ph. D. in Genetics (2015)

Centre for Molecular Genetics, Department of Genetics,
University of Karachi, Karachi

Title of the thesis: "Organics degradation in Marine Bacteria"

BSc: 1st division : Biology and chemistry

FSc: 2nd division: Biology, chemistry and physics

SSC. 1st division: Biology, chemistry, physics and Mathematics

Teaching Skills

- Skillful in communicating graduate and post graduate students in transferring knowledge and managing research to the students individually, in groups and class level in Centre for Molecular Genetics (1998-to date)
- Have been a senior Science teacher for Biology and Chemistry (1992-1993) Oxford Grammar School,
- Jinnah Public school (1996-2005) managed under Pan Islamic Society, Model colony

Research Achievements

- **Research Officer, Dundee University, Dundee, Scotland, UK** : (2000)
May-Aug'2000. Dept. of Biological Sciences, University of Dundee, Dundee, Scotland, U.K. British Council Karachi funded
- **Research Officer, Cardiff University, Cardiff, Wales, UK:** (2004)
June-Aug'2004. School of Biosciences, Cardiff University, Cardiff. Wales. U.K. British Council Karachi and DIFID UK funded
- **Research Officer, Vietnam, institute of soil and fertilizer, Hanoi, Vietnam.** (May 2009) to get training on "Biofertilizers development" funded by DIFID, UK. Delphe project on Eco-friendly Biofertilizers Development.
- **Research Associate** (2003-2005)
Project on funded by Ministry of Science and Technology entitled as, **Impact of oil spill and Bioremedial**

measures to mitigate the effects on marine environment along the Clifton beach and adjoining areas of Pakistan. Dec' 2004-Dec' 2006.

- **DSF Research Grant (2008-2009)**
Research project: "Isolation and characterization of Indigenous bacteria with the potential to produce Bio surfactants" Funded by Dean of Science Fund, University of Karachi, Karachi.
- **Research associate: (2011-2015)**
Identification and vaccine development against Leishmaniasis, CMG, University of Karachi.
- **DSF Research Grant: (22-23).**

Research Supervision

- **Supervisor** M. Bashir Ahmed enrolled in Ph. D (2015). Working on "Study of Cheap economical nutrition sources for Biosurfactant production", enrolled in Dept of Genetics, University of Karachi.
- **Thesis submitted on 22-02-023**
- **Supervisor** for Razia Mehrab enrolled in M.Phil in SBK Women University of Quetta, Pakistan. Thesis title 'Study of Growth Kinetics of bacteria isolated from aired and non Aired soil of Quetta Baluchistan'.
Thesis submitted on 12-11-2022
- **Supervisor** : Faiza A. Ansari. Enrolled in Ph. D (2020) in Dept of Genetics, UoK. Biosurfactants of Industrial Significance.

Workshops Participated

- **2nd National Workshop on Bioassay Techniques.** International Centre for Chemical Sciences HEJ Research Institute of Chemistry, University of Karachi, Karachi. 26-28Aug'1999
- Workshop on, "**Information Handling in Biological Research**" organized by Department of Biochemistry. University of Karachi. Pakistan & PASTIC. 4-6 March 2002.
- Workshop on "**Gas chromatography and Mass Spectroscopy**", organized by PCSIR laboratories, Karachi, Pakistan. 22-25 June'2002
- Workshop on "**Genetics for Medical Professionals**". Centre for Molecular Genetics University of Karachi in collaboration with HEC Pakistan. Audiovisual. Dec. 6-11' 2004
- Workshop on, "**Writing Scientific Papers**". University of Karachi, Centre for Molecular Karachi. Audiovisual, 9th Dec 2005
- Of Workshop on, "**Genome, Microbes and Human**". In collaboration with British council and Centre for Molecular Genetics, University of Karachi. Pearl Continental Hotel. Karachi 9th Dec'2006.
- Workshop on "**Bioinformatics**". Centre for Molecular Genetics, University of Karachi, COMSATS, Islamabad. at LEJ, University of Karachi, 28th - 30th 2007.
- Workshop on "**Writing Scientific Projects**" organized by Dean of Sciences, University of Karachi. At Dean Office, Dated: 16Aug' 2008.
- Organized four day Workshop on "**Biofertilizers: Importance and Development using Indigenous Resources**" Aug 17th-20th 2009. Centre for Molecular Genetics, British Council and DelpHE, UK. At University of Karachi.
- Organizing member of a three day workshop on "**Biofertilizers and Environment**", March' 8th-10th, 2010. British Council, Dundee University, Vietnam Institute of Soil and Fertilizer development", DelpHE and Centre for Molecular Genetics, University of Karachi.
- Participated in three days training workshop on "**LAB Bio-safety**", organized by ICCBS, University of Karachi. 2014.
-

Conferences participated/Organizing member

- Of international Conference on "**Hazardous Effects of Pollutants on Women Workers**". Organized by Centre for Molecular Genetics & Overseas Development Administration U.K 16th-18th Dec' 1996
- Of Third International Symposium on Genetic Engineering & Biotechnology with the theme of **Industrial & Environmental Biotechnology** at Hotel Marriott, Karachi. 24-28th Feb'1998
- Organizing member of a National Conference on **Human Rights Based Strategies for Women during Pregnancy**". Organized by Centre for Molecular Genetics & DFID and British Council. Feb16-18Feb'1999
- Organizing member of a Seminar on "**Price of Leather** Social and economical cost of having tanneries in Karachi in collaboration with the British Council and Pakistan tanners Association. Oct 17th, 2000
- Organizing member of a Seminar on "**Antibiotic Abuse; A major Threat to Human Health.**" By Dr. Hilary K. Young, university of Dundee, U.K. 2001
- Organizing member of a seminar on "**No Water no Life**", in collaboration with the British Council, DFID UK and Centre for Molecular Genetics. 2003
- Organizing member of a seminar on "**Soil, Water and Ecosystem**", in collaboration with British Council, DFID UK and Centre for Molecular Genetics. Feb. 21, 2004
- Organizing member of a seminar on "**Environment and Us: a two-way traffic**" in collaboration with British Council, DFID UK and Centre for Molecular Genetics. 9th Feb'2005
- Organizing member of, 4th International Symposium on Genetic Engineering & Biotechnology with the theme of **Genomics, Bioinformatics, Biotechnology and Economic Development**. Hotel Pearl Continental, Karachi. 4-8th Dec' 2005
- Participated in Four day conference on "**EnviroArabia 2010**" Gulf Hotel, Bahrain, for an oral presentation.
- Participated in 5th Annual Conference on **Environmental Horizon, ICEH 2019**. Held from 11-13 Jan 2019 at Dept. of Chemistry, University of Karachi. Pakistan.
- Participated in National conference, "**Genes, Genome, Genetics and Diversity**", held from 18-20 Dec, 2019 at Dept of Genetics, University of Karachi.

Scientific Presentations

Oral presentations:

- **Akhtar, J.** and Nuzhat Ahmed. 1998. Isolation, Characterization and Genetics of Marine Bacteria of the Arabian Sea."3rd International Symposium on Industrial Biotechnology, Karachi- Pakistan. February 23-28, 1998. Center for Molecular Genetics, University of Karachi. Abst, p. 27
- **Akhtar, J.** and Nuzhat Ahmed. 2003. Degradation of hydrocarbon components of crude oil by soil isolates. 1st international Symposium of biotechnology. 18-21 Jan'2003. Sind University. Hyderabad. Abst, p. 23
- **Akhtar, J.** and Nuzhat Ahmed. 2006. Monoaromatic resistance and degradation profile of marine bacteria from Karachi coastal area: A tool for bioremediation. National symposium on Biotechnology for economic prosperity. July 24-26, 2006. Green retreat hotel, Nathiagali. Abst, p. 4

- **Akhtar, J.** and Nuzhat Ahmed. 2007. Bioremediation: Application of bacterial consortium on oil contaminated beach sand. A seminar on "Impact of oil spill and bioremedial measures to mitigate the effects on marine environment along the Clifton beach and adjoining areas of Pakistan". Feb 3rd2007. NIO Auditorium Karachi.
- **Akhtar J.** and Ahmed, N. 2010. **Characterization of Marine Bacteria isolated from coastal waters of Karachi for environmental pollution**, in 6th International Conference "Enviroarabia 2010" Bahrain.
- **Akhtar J.** Erum Shoeb and N. Ahmed. 2019. **Assessment of Resistance and Biosurfactant Production in Marine Bacteria Isolated from Marine Environment of Karachi**, In 5th International conference on Environmental Horizon, ICEH 2019. Held from 11-13 Jan 2019 at Dept. of Chemistry, University of Karachi. Pakistan.

Poster presentation:

- **Akhtar, J.**, N. Ahmed, R. Parsons, G. M. Gadd and A. Rahman. 2000. Resistance to aromatic hydrocarbons compound in bacteria from Arabian Sea. *Presented in, Nat. Symp. Arabian Sea as a Resource of Biological Diversity*. 18- 20 Sept. 2000 Abst, p 20.
- Ahmed, N., **J. Akhtar** and F. M. Qureshi. 2001. Treatment of Hazardous petroleum compounds for the control of Environmental Pollution: Bioremediation. *Presented in, The First Int. Congress on Petroleum contaminated soils, sediments and water*. Aug. 2001, London, U. K.
- Jamil, N., **J. Akhtar**, B. Uzair and N. Ahmed. 2002. Wonders and Miracles of Marine Bacteria: An updated Natural resource. *Presented in, Nat. Symposium on Marine Environment: Food, Health and Habitat*. Jan. 29-30, 2002. Karachi. Abst. p 90.
- **Akhtar, J.** and N. Ahmed. 2005. Degradation of phenol and crude oil by marine consortium of Attached bacteria. *Presented in, 4th International Symposium on Genetic Engineering & Biotechnology with the theme of Genomics, Bioinformatics, Biotechnology and Economic Development* 4-8th Dec'2005 at Hotel Pearl Continental, Karachi. Abst. p 109
- Ali, T. Asghar, **J. Akhtar**, N. Ahmed. 2005. Surface-active molecules from bacteria. *Presented in, 4th International Symposium on Genetic Engineering & Biotechnology with the theme of Genomics, Bioinformatics, Biotechnology and Economic Development* 4-8th Dec'2005 at Hotel Pearl Continental, Karachi. Abst. p 110

Research Publications

1. Dawoud, Turki M., Fatimah Alshehrei, Khaizran Siddiqui, Fuad Ameen, **Jameela Akhtar**, and Afsheen Arif (2021). "Purification, Characterization and N-terminal Protein Sequencing of the Enzyme Dextranucrase Produced by *Leuconostoc mesenteroides*." *Biosciences Biotechnology Research Asia* 18, no. 2 (2021): 287-295
<https://doi.org/10.13005/bbra/2915> (ISI Indexed)
2. Khaizran Siddiqui, Samreen Fatima, **Jameela Akhtar**, Erum Shoeb, Uzma Badar, Fouad M. Qureshi (2020). Evaluation of efficient carbon, nitrogen sources, micro and macro nutrients for dextran production by *Weissella cibaria* CMGDEX3 by utilizing a modified multifactorial Placket-Burman statistical design. *Pak. J. Pharm. Sci.*, Vol.33, No.5 (Suppl), September 2020, pp.2351-2353 2351
doi.org/10.36721/PJPS.2020.33.5.SUP.2351-2353.
3. Erum Shoeb., **Jameela Akhtar**., Maheen Waqar., Samina Imtiaz., Faiza A. Ansari., Khaizran Siddiqui., Fouad M. Qureshi., Obaid Y. Khan. (2019). Isolation of non-pathogenic biosurfactant producing bacteria from Karachi Coast of Arabian Sea. *International Journal of Biology and Biotechnology*. 16 (1): 45-48
4. Faiza A Ansari, Bashir Ahmed, Erum Shoeb, **Jameela Akhtar**, Fouad M. Qureshi and Obaid Y. Khan (2018). Concurrent production of biosurfactant and enzyme protease by bacteria and estimation of apple pomace waste for low-cost production. *Int. J. Biol. And Biotechnol*. Vo: 15(3), 419-429

5. Uzma Badar, Erum Shoeb, **Jameela Akhtar**, Komal Daredia and Obaid Yosuf Khan (2018). PCR based gene identification of lux operon in luminescent *Vibrio chagasii* isolated from Karachi Coast. *International Journal of Biology and Biotechnology*. Vol: 15 (1).23-28
6. Erum S., Nuzhat Ahmed, **Jameela Akhtar**, Uzma Badar, Khaizran Siddiqui, Faiza A. Ansari, Maheen Waqar, Samina Imtiaz, Nimrah Akhtar, Qurat ul Ain Shaikh, Roaunq Baig, Saba Butt, Saema Khan, Sidra Khan, Shahid Hussain, Bashir Ahmed, Maqsood A. Ansari. 2015. Screening and Characterization of biosurfactant producing bacteria isolated from Arabian Sea coast of Karachi. **Turkish Journal of Biology**. 39. DOI: 10.3906/biy-1405-63 (ISI Impact Factor: 1.4)
7. Faiza A. Ansari, Shahid Hussain, Basheer Ahmed, **Jameela Akhtar** and Erum Shoeb. 2014. Use of potato peel as cheap carbon source for the bacterial production of biosurfactants. *International Journal of Biology Research*. Vol. 2(1): 27-32 (HEC Recognized-Z category)
8. Siddiqui, K., **Akhtar, J.**, Mujahid T. Y. and N, Ahmed. 2014. Partial characterization of Various Bacteria isolated from indigenous Environments of Karachi and Baluchistan. **International journal of Advanced Research.**, 2(6): 69-90 (Impact Factor 1.5)
9. Ali, I., **Akhtar J.**, Shoeb, E. and Ahmed N. 2014. Gene cloning of Leishmania Major Thiol-specific Antioxidant Antigen (TSA) gene from Pakistan: A step towards Vaccine Development. **Academic Research International**. 5(3), 37-49 (Impact Factor 0.257)
10. Ali, I., **Akhtar J.**, Shoeb, E. and Ahmed N. 2014. Comparison of PCR Assays with direct Microscopy for Diagnosis of Cutaneous Leishmaniasis Patients reported from Sindh, Pakistan, *In*, Proceedings of 2014, **11th International Bhurban Conference on Applied Sciences & Technology (IBCAST) Islamabad, Pakistan**, 14th -18th, 2014. p 69-72.
11. Shoeb, E., Badar U., Akhlaq, F., Ansari, F. A., Imtiaz S. and **Akhtar, J.** 2013. Determination of stress resistance in biosurfactant-producing bacterial isolates. **Int. J. Biol. Biotech.**, 10 (3): 417-424,
12. **Akhtar, J.**, Ahmed, N., Badar, U., waqar M., and Shoeb, E. 2013. Heavy metal and antimicrobial resistant bacteria isolated from Karachi coastal area as indicator of pollution. **International journal of Biological research**. 1(1): 57-66
13. Shoeb, E., Akhlaq, F., Badar, U., **Akhtar, J.** and Imtiaz, S. 2013. Classification and Industrial Applications of Biosurfactants. **Academic Research International**, 4(3), 243-252. [Impact Factor: 0.257]
14. Badar, U., Shoeb, E., Qureshi, F.M., **Akhtar, J.** and Ahmed, N. 2013. Removal of Copper via Bioreactor by soil isolates *Pseudomonas stutzeri*. **Academic Research International**, 4(3), 253-259. [Impact Factor: 0.257]
15. Shoeb, E., Badar, U., **Akhtar, J.**, Shams, H., Sultana, M. and Ansari, M.A. 2012. Horizontal Gene Transfer of Stress Resistance Genes through Plasmid Transport. **World J Microbiol Biotechnol**. 28(3):1021–1025: DOI 10.1007/s11274-011-0900-6DOI: 10.1007/s11274-011-0900-6. [Impact Factor: 1.532]
16. Badar, U., Shoeb, E., Daredia, K., Shawar, D., **Akhtar, J.** and Ansari, M. A. 2012. Screening and Characterization of Luminescent Bacterial Strain. **Journal of Basic & Applied Sciences**, 8, 602-606 ISSN: 1814-8085 / E-ISSN: 1927-5129/12 © 2012 Life science Global.

17. Shoeb, E., Badar, U., **Akhtar, J.**, Ansari, F.A., Waqar, M. and Ansari, M.A. 2012. Screening of surfactant producing bacterial strains isolated from soil samples of an automobile workshop. **Karachi University Journal of Science**, 40 (1): 31-36.
18. Ajmal, S., **Akhtar, J.**, Shoeb, E. and Ahmed, N. 2010. Resistance to the toxicity of conjugative bile salts and Assessment of plasmid borne antibiotic resistance among Indigenous *Lactobacillus* isolates of Pakistan. **The Internet Journal of Nutrition and Wellness**. Volume 10 Number 1.
19. Affan, Q., Shoeb, E., Badar, U. and **Akhtar J.** 2009. Isolation And Characterization of Bacterial Isolates Having Heavy Metal Tolerance. **Journal of Basic and Applied Sciences**, 5(2): 55-60.
20. Farooq, S., Shoeb, E., Badar, U. and **Akhtar, J.** 2008. Isolation and Characterization of Copper Tolerant Bacterial Isolates. **Pakistan journal of biochemistry and molecular Biology**, 41(4): 176-18.
21. Ahmed N., **Akhtar, J.**, Rasheed, M., and Rahman, A. 2005. Hydrolysis of a fungicide, buprimate by indigenous *Achromobacter* species. **Int. J. Biol. Biotech** 2 (2): 357-363
22. **Akhtar J.**, R. Z. Ahmed and N. Ahmed. 2004. Degradation of components of crude oil under limited supply of oxygen and urea. **Int. J. Biol. Biotech**. 1 (1): 1-8
23. Qureshi, F. M., **Akhtar, J.**, Badar, U., Fasim, F., Jamil, N., Raihan, S., Hassan, T. M., and Ahmed, N. 2000. Towards effective bioremediation in third world countries. **Contaminated soils, sediments and water**, 2001(October): <http://www.aehsmag.com/issues/2001/october/bioremediation.htm> . (ISI indexed, Impact Factor 0.5)