


Faculty Member Details

Name: Dr. Abhishek Vashishtha		 Photo
Date of Birth:	24/07/1980	
Date of joining:	7-06-2011	
Present Position:	Assistant Professor	
Department:	Microbiology	
Pay Scale + Grade Pay:	15600-39100 (6000)	
Mailing Address:		
Office: Department of Microbiology Academic Block Maharaja Ganga Singh University N.H. 15, Jaisalmer Road, Bikaner-334004	Residence: C-55/III/16, CAD Quarter, Sector-V, Jai Narayan Vyas Colony, Bikaner	
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Qualifications:		
M.Sc (Microbiology), Ph.D (Microbiology).		
Specialization: Bioremediation studies, Plant growth promotion.		
Research and Teaching Experience		
(1) Assistant Prof, Department of Microbiology, MGS University, Bikaner	7-06-2011 till date	
(2) Eight years of Post graduate teaching in Microbiology and Biotechnology at Mahatma Gandhi Institute of Applied Sciences, Jaipur (NAAC 'A' grade, declared as Center for Excellence in Biotechnology by state DST).	27-8-2003 to 6-6-2011	

Research Projects and Grants:**Minor/student Projects**

S. No.	Title	Status	Funding Agency
1.	Improvement in Growth and Salinity Tolerance in some Crop Plants by the Application of Bacterial Species Isolated from Different Sites.	Completed	Department of Science and Technology, Govt. of Rajasthan, Jaipur
2.	Isolation, Characterization and Optimization of Growth Conditions of Hydrocarbon degrading Bacteria Isolated from the contaminated sites of Barmer (Rajasthan) and Plant Growth Promotion by them.	Completed	Department of Science and Technology, Govt. of Rajasthan, Jaipur
3.	Evaluation of plant growth promotion by hydrocarbon degrading bacteria isolated from the contaminated sites of Jaipur (Rajasthan).	Completed	Department of Science and Technology, Govt. of Rajasthan, Jaipur
4.	Comparative study of Protein profile variation in Halophilic Bacteria and halophilic plants in response to variations in salinity and temperature.	Completed	Department of Science and Technology, Govt. of Rajasthan, Jaipur
5.	Comparative analysis of plant growth promoting activity of the Rhizobacteria isolated from different climatic regions and their soil analysis.	Completed	Department of Science and Technology, Govt. of Rajasthan, Jaipur
6.	Low-Cost Soil Engineering to Enhance Hydrocarbon Biodegradation by Soil Indigenous Bacterial Population Isolated from the Contaminated Sites of Bikaner.	Completed	Department of Science and Technology, Govt. of Rajasthan, Jaipur

Major Projects (Communicated)

S.No	Title	Sponsoring agency	Status	Estimated cost	Principle Investigators
1	Low-Cost Soil Engineering to Enhance Bioremediation and Sustainable Plant Growth Enhancement in Hydrocarbon Contaminated Sites near Oil Excavation Sites and Upcoming Refinery in Barmer.	Ministry of Environment and Forests	Submitted	33 Lac	Dr Abhishek Vashishtha and Dr. Gautam Kumar Meghwanshi

Publications:

I. Books/ chapters published:

A. Authored:

- (1) Contributed two chapters on Microbiology for upcoming textbook of Zoology (B.Sc. part II, Zoology) published by Vardhman Mahaveer Open University, Kota.
 - A) Bacteria of Medical Importance (Zoology Zo-07). ISBN: 13/978-81-8496-009-9. (2009)
 - B) Viruses (Zoology Zo-07). ISBN: 13/978-81-8496-009-9.(2009)
- (2) Contributed two chapters for upcoming textbook of Zoology (M.Sc. Previous) being published by Vardhman Mahaveer Open University, Kota.
 - A) Biotechnology in Medicine
 - B) Tolerance, Hypersensitivity and Immunity against Infections
- (3) Contributed two chapters on Microbiology in B.Sc. Biotechnology (Microbial Technology, B.Sc. IInd year), being published by Vardhman Mahaveer Open University, Kota.
 - A) Industrial products II
 - B) Industrial products III

II. Research Papers/Reviews Published:

Published:

1. Pareek A., Vashishtha A., Moin S. and Meghani E. (2014). Bioreduction of Fluoride in affected water samples of Jaipur by *Oscillatoria* species. *International Journal on Algae*, **16(1)**: 86–94. ISSN 1521–9429.
2. Vashishtha A. and Meghwanshi G. K. (2014). Approaches towards Biological restoration of Hydrocarbon polluted sites: Bioremediation and phytoremediation. In Khan J.B. (2014). *Environmental Management: challenges and conservation*. Lap Lambert Publishing House, Germany. pp 89-104. ISBN: 978-3-659-57593-8
3. Kumari N., Vashishtha A., Saini P. and Menghani E. (2013). Isolation, Identification and Characterization of Oil Degrading Bacteria Isolated from the Contaminated Sites of Barmer, Rajasthan. *Inter. J. Biotechnol. Bioengin. Res.* 4 (5): 429-436. ISSN 2231-1238.
4. Meghwanshi G.K. and Vashishtha A. (2012). Microbial Enzymes: Productions and Applications. In 'Recent Trends in Microbiology Eds Kapoor B.B.S. and Arora A. 83-100. Madhu Publications, Bikaner. ISSN/ ISBN. 81-86644-23-7.
5. Lowry M., Vashishtha A. and Jaroli. D.P. (2012). Adding Available Carbonates-An Inexpensive Method of Recovery of Soil Parameters in Petroleum Hydrocarbon Contaminated Soils. Proceedings of The 3rd International Biotechnology and Biodiversity Conference & Exhibition Harnessing Microbes For A Sustainable Future (ISBN 978-983-44324-2-9) (BIOJOHOR 2012), June 9-11, 2012, Johor Biotechnology & Biodiversity Corporation, Universiti Teknologi Malaysia (UTM).
6. Vashishtha A., Lowry M. and Jaroli D.P. (2011). 'Hydrocarbon Bioremediation: Biotic and abiotic factors'. In 'Recent Advances in Environmental Biotechnology' Eds Jain P. et al, PP 112-145. Lap Lambert Academic Publishing Ag & Co. KG, Dudweiler Landstr, Germany. ISBN-978-3-8443-0687.
7. Vashishtha A. (2008). Indian Agriculture Market and its Vulnerability for an Agroterrorist Attack. In 'Bioterrorism and Biological Warfare' Eds Bhatia A.L and Kulshrestha S.K., PP 09-31. Pointer Publishers. India. ISBN 978-81-7132-587-0
8. Pathak H., Vashishtha A., Jain P. K., A. Nagmani, Jaroli D.P. and Lowry M. (2010). Physico-Chemical properties of Petroleum contaminated soil collected from coastal areas of Mumbai. *Asian J.Exp.Sci.*, 24 (1):175-178. ISSN: 0971-5444.

9. Vashishtha. A., Lowry M. and Jaroli D.P. (2006). Protein Profile Variations in Halophilic Bacteria in Response to Variations in Salt and Temperature. *Asian J.Exp.Sci.*20(1):35-40. ISSN: 0971-5444.
10. Pareek.A., Vashishtha A. and Sharma P. (2004). Chlorophycean Microalgal Flora of Keoladeo National Park, Bharatpur (Rajasthan). *J.Phytol.Res.* 17(2): 187-189. ISSN: 0970-5764.

ACCEPTED:

1. Vashishtha A. Growth Enhancement of *Pennisetum typhoideum* by Rhizospheric and Endophytic bacterial inhabitants from *Zea mays*. *Brazilian Journal of Microbiology*. ISSN 1678-4405 (Accepted).
2. Vashishtha A. and Dhawal P. K. Microbial Osmoadaptation – A Road Towards Sustainability in Extreme Conditions. In *Advances in Microbiology*, Scientific Publishers, Jodhpur. (Accepted)
3. Vashishtha A. and Meghwanshi G. K. Biodegradation of Polycyclic aromatic hydrocarbons with special reference to Naphthalene. In *Advances in Microbiology*, Scientific Publishers, Jodhpur. (Accepted).
4. Meghwanshi G. K. and Vashishtha A. Application of Enzymes in Food Processing. In *Advances in Microbiology*, Scientific Publishers, Jodhpur. (Accepted).

COMMUNICATED:

1. Vashishtha A. and Meghwanshi G. K. and Baid S. Quorum sensing and bacterial pheromones: A road to influence the local microbial environment. Communicated for publishing in an edited book going to be published from an International publisher.
2. Meghwanshi G. K. and Vashishtha A. Industrial Biocatalysis: A green solution to environmental safety and sustainability. Communicated for publishing in an edited book going to be published from an International publisher.

Visits Abroad:

Nil

Research Supervised - Ph.D./M.Phil. (Name of student and title):

Name of the candidate (under supervision): Pawan Kumar Dhawal (Ph.D.)

Title: Application of Halophilic Bacteria Isolated from Saline Water Bodies of Western Rajasthan in Promotion of Plant Growth and Biodegradation of Hydrocarbons.

Other activities:

Seminars/ Conferences / Workshops (organized/attended)			
S.N.	Title of the paper presented	Conference/Seminar etc	Event Dates
1.	Enhanced Microbial Degradation of Hydrocarbons using Low-Cost Soil Engineering Techniques	National Conference on 'Energy & Environmental Engineering	26 -27 April 2014
2.	Impact of Petroleum Hydrocarbons on Physico-Chemical Properties and Microbial Activities in Contaminated Soils.	National Conference on “ Recent and Future prospects in Microbiology and Biotechnology”	3-4 March 2014
3.	Low-Cost Soil Engineering to Enhance Hydrocarbon Biodegradation in Contaminated Sites by Soil Indigenous Bacterial Population	Invitation for the National Conference on Environmental Issues, Toxicology and Exposure Sciences	20-21 September 2013
4.	Emergent Concerns in front of Science and Technology	National Conference on “Recent Advances and Emerging Issues in front of Science and technology”	21 November 2013
5.	Effect of Hydrocarbon Contamination on Physico-Chemical Activities of Soils and Low-Cost Soil Engineering to Enhance the Process of Recovery	UGC-CRO, Bhopal sponsored---“National seminar on Environment Management and Biodiversity Conservation	06-07, October, 2012
6.	Effect of Altered Physico-Chemical Activities of Hydrocarbon Contaminated Soils on Indigenous Microbial Biodiversity	UGC Sponsored---“National Conference on Biodiversity depletion : Causes, consequences and solutions	28-29 September, 2012
7.	Physico-chemical analysis of petroleum hydrocarbon contaminated soil samples of Jaipur south	International Conference on “Advances in Ecological Research	19-21 December, 2011
8.	Agro-terrorism: an under defined threat.	Indian Science Congress	03-07 January, 2008

9.	Isolation of.....Biocontrol activity	National symposium on Biotechnology in 21 st century: The challenges ahead and new advances towards Food security	23-24 December, 2005
10.	Children by choice	Recent Advances in Biosciences after 50 years of DNA Double helix	25 th November 2003
11.	Physico-chemical analysis of oil contaminated soil samples of Jaipur, isolation and screening of the bacterial cultures isolated from them.	National conference on Environment and natural Disaster Management”, at	28-30 November, 2005
12.	Attended	Interrogating New Words of English Language Teaching	24-25 February, 2012
13.	Attended	National symposium on Biotechnology for Human welfare	26-27 March, 2004
14.	Attended	Microbiotech 2000 - 41 st Annual Conference of Association of Microbiologists of India	25-27 November, 2000
Membership			
Indian Science Congress Association, Kolkata.			
Invited Lectures			
<p>A) Agro-terrorism: an under defined threat at 93rd Indian Science Congress on 05-01-2008 organized by Andhra University, Visakhapatnam.</p> <p>B) Emergent Concerns in front of Science and Technology at National Conference on “Recent Advances and Emerging Issues in front of Science and technology” on 21 November 2013, organized at JJT University, Jhunjhunu (Rajasthan).</p> <p>C) Agro-terrorism: Potent threat for society. At refresher Course organized at Department of Zoology, University of Rajasthan, Jaipur.</p>			
Awards			
A) National YOUNG SCIENTIST GOLD MEDAL AWARD for the year 2005-2006 by the Indian Academy of Environmental Sciences. Hardwar, for paper presented at National Seminar on Environment and Disaster Management.			

- B) Invited by Indian Science Congress Association to address a mass of scientists and science scholars at one of the scientific sessions of the congress, held at Vishakhapatnam in the year 2008. The talk highlighted the problem of Agro terrorism and the threats and measures to solve the issue.
- C) International “Dale Carnegie certification” by Wipro technologies (For high Impact teaching).
- D) Adjudged YOUNG SCIENTIST (2nd) in “National conference on Environmental issues, Toxicology and exposure science” held at Jaipur on 20-21 September 2013 for research work on enhancement of bacterial population in hydrocarbon contaminated sites.
- E) Certificate of Academic excellence by the MDS. University, Ajmer on 26th January 2006.
- F) Letter of Appreciation by MGS, University, Bikaner, 2012.

Others

- A) Refresher Programme from academic staff college, University of Rajasthan, Jaipur from 20-02-2006 to 18-03-2006.
- B) Orientation Programme from academic staff college, University of Rajasthan, Jaipur from 20-02-2006 to 18-03-2006.