


Faculty Member Details

Name: Dr. Gautam Kumar Meghwanshi		 Photo
Date of Birth:	05-01-1978	
Date of joining:	10-06-2011	
Present Position:	Assistant Professor	
Department:	Microbiology	
Pay Scale + Grade Pay:	15600-39100 (6000)	
Mailing Address:		
Office: Deptt. of Microbiology Academic Block Maharaja Ganga Singh University N.H. 15, Jaisalmer Road, Bikaner-334004	Residence: C-123/III/18, CAQ Quarter Jai Narayan Vyas Colony, Sector-V, Nr. Hemu Kalany Circle, Bikaner	
Telephone No.: Fax No.:	Mobile No.: 9680640708 E-mail: drgkm_biotech@yahoo.com drgkm@mgsbikaner.ac.in	
Qualifications:		
M.Sc. Microbiology from Deptt. of Microbiology, M.D.S University Ajmer in 2001		
Ph.D. Microbiology from Deptt. of Microbiology, University of Delhi in 2008		
Specialization: Microbial Biotechnology (Fermentation and Biocatalysis)		
Research and Teaching Experience(Ph.D. onwards): (7 Years)		
CSIR-Research Associate , Dept. of Microbiology, University of Delhi South Campus, New Delhi-21	1st May 2008	20th November 2008
Lecturer , ARIBAS, New V.V. Nagar, Gujarat-388121	5th Dec 2008	10th Oct 2009
Executive Biotechnology , Biotechnology Centre, Unimark Remedies Ltd., Bavla, Ahmedabad, Gujarat. INDIA	28th Oct 2009	8th June 2011

Assist. Professor, Deptt. of Microbiology, Maharaja Ganga Singh University, NH-15, Jaisalmer Road, Bikaner, Rajasthan, INDIA	10 th June, 2011	Continue

Research Projects and Grants:

S. No.	Title	Grant Period	Cost (In lacs)	Funding Agency
1	Bio-Prospecting for Novel Microbial Lipases from Desert Ecosystem of Rajasthan: The Thar desert	3 Years	25	SERB, New Delhi
2	A highly alkaline 1,3-regiospecific lipase from <i>Pseudomonas aeruginosa</i> : process optimization, purification, characterization and its potential industrial applications.	5 Years	5	CSIR
3	Screening, production, characterization and application of protease (keratinase) activity from indigenously isolated bacterial strain	1 Year	0.10	DST-Rajasthan

Publications:

I. Books published: 3

A. Authored:	<p>Book Chapters</p> <p><u>Meghwanshi ,G.K.</u> and Vashishtha, A (2015). Industrial biocatalysis: a green solution to environmental conservation and sustainability (Accepted).</p> <p>Vashishtha, A., <u>Meghwanshi ,G.K.</u> and Baid Sweety (2015). Quorum sensing and bacterial pheromones: a role to influence the local microbial</p>
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	<p>environment. In: Environment Management Chellanges and Conservation J.B. Khan (ed.) pp. 89-104.</p> <p>Vashishtha, A., and <u>Meghwanshi ,G.K.</u> (2015). Approaches towards biological restoration of hydrocarbon polluted sites: bioremediation and phytoremediation. (Accepted).</p> <p><u>Meghwanshi, G. K.</u> and Vashishtha, A. (2012). Microbial enzymes: production and applications. In: Recent trends in Microbiology (eds. B.B.S. Kapoor and Anil Arora). Madhu Publication, Bikaner. Pp. 83-100. ISBN: 81-86644-23-7.</p> <p>Saxena, R. K., Agarwal, L., and <u>Meghwanshi, G. K.</u> (2005). Diversity of fungal and yeast lipases: Present and future scenario for the 21st century. In : Microbial diversity: Current Perspectives and Potential Applications eds. T. Satyanarayana and B. N. Johri. I.K. International Pvt. Ltd., New Delhi. pp. 791-814. ISBN: 9788188237432</p>
B. Edited:	Nil
II. Research Papers Published:	
A. International Journals:	<ol style="list-style-type: none"> (1) Dutt, K., <u>Meghwanshi, G. K.</u>, Gupta , P. and Saxena, R. K. (2008). Role of casein on induction of a milk clotting protease from an indigenously isolated <i>Bacillus subtilis</i>. Lett. Appl. Microbiol. 46(5): 513-518. (2) Agarwal, L., Dutt, K., <u>Meghwanshi, G. K.</u> and Saxena, R. K. (2008). Anearobic fermentative production of lactic acid using cheese whey and corn steep liquor. Biotech Lett. 30(4): 631-635. (3) Agarwal, L., Isar, J., <u>Meghwanshi, G. K.</u>, and Saxena, R. K. (2007). Influence of environmental and nutritional factors on succinic acid production and enzymes of reverse tricarboxylic acid cycle from <i>Enterococcus flavescens</i>. Enz. Microb. Technol. 40(4): 629-636. (4) <u>Meghwanshi, G. K.</u>, Agarwal, L., Dutt, K., and Saxena, R. K. (2006). Characterization of 1, 3-regiospecific lipases from new <i>Pseudomonas</i> and <i>Bacillus</i> isolates. J Mol. Catal. B; Enz. 40:

	<p>127-131.</p> <p>(5) Agarwal, L., Isar, J., Meghwanshi, G. K., and Saxena, R. K. (2006). A cost effective fermentative production of succinic acid from cane molasses and corn steep liquor by <i>Escherichia coli</i>. J. Appl. Microbiol. 100: 1348- 1354.</p> <p>(6) Poonam, Prasad, A. K., Mukherjee, C., Shakya, G., Meghwanshi, G. K., Wengel, J., Saxena, R. K. and Parmar, V. S. (2005). Selective transacylation reactions on 4-aryl- 3, 4-dihydropyrimidin-2-ones and nucleosides mediated by novel lipases. Pure Appl. Chem. 77(1): 237-243.</p>
B. National Journals:	Nil
Visits Abroad:	
Nil	
Research Supervised - Ph.D./M.Phil. (Name of student and title):	
Name of Student: Mrs. Bharti Dhabhai	
Title: Microbial Lipase: production, purification, characterization and applications	
Other activities:	
Seminars/ Conferences / Workshops (organized/attended)	<p>International</p> <p>4th Biennial International Conference on Entrepreneurship, Tourism, Environment and Energy, organized by Centre for ESBM M.D.S. University, Ajmer (India) during Oct. 11-12, 2014.</p> <p>54th Annual Conferences of Association of Microbiologists of India (AMI) Platinum jubilee celebration & International symposium on Frontier Discoveries and Innovations in Microbiology and its Interdisciplinary Relevance (FDMIR-2013) organized by MD University, Rohtak, Haryana, India, during Nov 17-20, 2013.</p> <p>18th Pradanya 2013: International Conference on Healthcare India: Opportunities, Challenges & Innovations, organized by IIMR, Jaipur (India) during October 3-6, 2013.</p> <p>International Conference on Advances in Ecological Research</p>

organized by Department of Environmental Science, Maharaja Ganga Singh University, Bikaner (Rajasthan) and Nature Conservators, during December 19 -21, 2011.

IUPAC Sponsored Second International Symposium on Green/Sustainable Chemistry, organized by Department of Chemistry, University of Delhi, during January 10-13. 2006.

Microbial Diversity: Current Perspectives and Potential Applications: An International Conference, organized by Department of Microbiology, University of Delhi South Campus, during April 16-18, 2005.

ICOB-4 & ISCNP-24 IUPAC International Conference on Biodiversity and Natural Products. Chemistry and Medical Applications organized by Department of Chemistry, University of Delhi and the CSTR during January 26-31, 2004.

National

National Conference on Energy & Environmental Engineering organized by Manda Institute of Technology, Raiser, Bikaner during April 26- 27, 2014.

Recent Trends and Future Prospects of Microbiology and Biotechnology, organized by Shri JJT University, Jhunjhunu, during March, 3-4, 2014.

National Conference on Biodiversity Conservation Embracing Our Past Preserving Our Future, organized by The IIs University, Jaipur, during September, 27-28, 2013.

National conference on biodiversity depletion -Causes, consequences and solutions, organized by Department of Botany, M. L. V. Govt. college, Bhilwara during September 28 - 29, 2012

National Seminar on Environment Management & Biodiversity Conservation (Present Status & Future Strategy) organized by Govt. Lohia PG College, Churu-331001 (Raj.) India from 06-07 Oct, 2012

One day awareness workshop on “Promotion of Human Health Using Synbiotics” organized by Anand Agricultural University, under the aegis of ICAR Niche Area of Excellence on “Functional Fermented Dairy Products with Synbiotics”, on

	<p>February 26th, 2009</p> <p>National Seminar on Green Chemistry and Natural Products organized by Department of Chemistry, University of Delhi, during November 26-27. 2007.</p> <p>Second Convention, Biotech Research Society of India: “Path to Health- Biotechnology Revolution in India” organized by Centre for Biotechnology & Centre with Potential for Excellence in Environmental Science, Anna University, Chennai, during November 24-26, 2005.</p>
Membership	Life Membership of AMI & Indian Science Congress
Awards	<p>CSIR- JRF</p> <p>CSIR- SRF</p> <p>CSIR- Research Associate</p> <p>Best Poster Awards (two)</p>
Others	<p>PATENT</p> <p>“Optimized process for production of alkaline lipase enzyme from <i>Pseudomonas</i> sp. and applications thereof” Authors name: Prof. R.K. Saxena & Dr. Gautam Kumar Meghawanshi. Application no. is 89/DEL/2011, Date of Filing: 14/01/2011, Date of Publication: 30/08/2013</p> <p><u>Oral/posters presentation on Research Works in Conferences</u></p> <p>➤ International</p> <p>Microbial Lipase Catalyzed Synthesis of Fatty Acid Alcohol Esters for Biodiesel and other Applications (2014). Gautam Kumar Meghwanshi. 4th Biennial International Conference on Entrepreneurship, Tourism, Environment and Energy, M.D.S. University, Ajmer (India).</p> <p>Synthesis of Various Alcohol Esters of Fatty Acids by <i>Pseudomonas aeruginosa</i> Lipase: A Green Solution to Conventional Industrial Processes (2013). Gautam Kumar Meghwanshi and R. K. Saxena. 54th Annual Conference of AMI & International symposium on FDMIR-2013, MD University, Rohtak, (India).</p> <p>Microbial lipase catalyzed synthesis of diglycerides for hypertriglyceridemia treatment in Type II diabetic patients: a new approach to meet current challenges in phatmaceutical</p>

industries. (2013). **Gautam Kumar Meghwanshi** and R. K. Saxena. 18th Pradanya 2013: International Conference on Healthcare India: Opportunities, Challenges & Innovations October 3-6, 2013, IIHMR, Jaipur (India).

Process optimization of lipase production from a potent strain of *Pseudomonas aeruginosa* and its application in bioester synthesis. (2006). **Gautam Kumar Meghwanshi**, Lata Agarwal and R. K. Saxena.. IUPAC Sponsored Second International Symposium on Green/Sustainable Chemistry, University of Delhi, Delhi-110007 (India).

An alkaline thermostable lipase from *Pseudomonas* sp. (2004). **Gautam Kumar. Meghwanshi**, Anoop Batra, Pritesh Gupta and R. K. Saxena. ICOB-4 & ISCNP-24 IUPAC International Conference on Biodiversity and Natural Products: Chemistry and Medical Applications. Department of Chemistry & Council of Scientific and Industrial Research, New Delhi (India).

Optimization of tannase and gallic acid production from *Aspergillus versicolor* in fermenter using response surface methodology (RSM). Anoop Batra, Shashi Saxena, (2004). **Gautam Kumar Meghwanshi** and R.K. Saxena. ICOB-4 & ISCNP-24 IUPAC International Conference on Biodiversity and Natural Products. Chemistry and Medical Applications. Department of Chemistry, New Delhi (India).

Selective acylation of deoxyribo-/riobonucleosides with a novel lipase in non-aqueous solvents. C. Mukherjee, G. Sakya, **G.K. Meghwanshi**. Y.S. Sanghvi. V.S Parmar, R.K. Saxena and A.K. Prasad (2004). ICOB-4 & ISCNP-24 IUPAC International Conference on Biodiversity and Natural Products, Organized by Chemistry and Medical Applications. Department of Chemistry, New Delhi (India).

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Enzymatic Synthesis of Antioxidants under Mild Reaction Conditions (2014). **Gautam Kumar Meghwanshi**. National Conference on Energy & Environmental Engineering, Manda Institute of Technology, Raiser, Bikaner.

Optimization for Bacterial Protease Production and its Applications in Bioremediation of Keratin Rich Wastes (2014). **Gautam Kumar Meghwanshi** and R. K. Saxena. Recent Trends and Future Prospects of Microbiology and Biotechnology, Shri

JJT University, Jhunjhunu.

Pseudomonas aeruginosa lipase mediated synthesis of flavour and fragrance esters: a green process to conserve the biodiversity (2013). **Gautam Kumar Meghwanshi** and Dr. Abhishek Vasihishtha. National Conference on Biodiversity Conservation Embracing Our Past Preserving Our Future, The IIS University, Jaipur.

Process optimization of bacterial keratinase production & its application in bioremediation of keratin rich waste. Sweety Baid, Khushboo Bothra & **Gautam Kumar Meghwanshi** (2012). UGC Sponsored National Conference on Current Issues and Opportunities in Biotechnology, organized by Department of Biotechnology, Mahila P.G. Mahavidyalaya, Jodhpur.

Optimization of enzymatic synthesis of partial glycerides of lauric acid under solvent free conditions: a solution to conserving biodiversity. **Gautam Kumar Meghwanshi** (2012). National conference on biodiversity depletion -Causes, consequences and solutions, organized by Department of Botany, M. L. V. Govt. college, Bhilwara-311001 (Raj.) India.

Enzyme (Lipase) Mediated Green Synthetic Processes: An Approach Towards Conserving Biodiversity and Sustainability. **Gautam Kumar Meghwanshi** (2012). National Seminar on Environment Management & Biodiversity Conservation (Present Status & Future Strategy) organized by Govt. Lohia PG College, Churu-331001 (Raj.) India

An alkaline lipase from *Bacillus* sp. IR2: production, characterization and its applications in synthesis of cocoa butter substitute. R. K. Saxena, Isha rawat, Swati Misra, Pritesh Gupta and **Gautam Kumar Meghwanshi**. (2007). National Seminar on Green Chemistry and Natural Products. University of Delhi, Delhi-110007 (India).

Production and optimization of alkaline lipase by a thermophilic mould *Thermomyces lanuginosa* in solid-state fermentation. (2005). Pritesh Gupta, **Gautam K. Meghwanshi**, Saurabh Saran and R. K. Saxena. Second Convention, Biotech Research Society of India, 24th-26th November 2005.

A marked enhancement in succinic acid production by *Enterococcus flavescens* using response surface methodology. Lata Agarwal, Jasmine Isar, **Gautam Kumar Meghwanshi** and

	<p>R.K. Saxena (2005). Second Convention, Biotech Research Society of India, 24th-26th November. Anna University, Chennai (India).</p>
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Statistical optimization of most influential parameters affecting succinic acid production from *E. coli* M87049. Lata Agarwal, Jasmine Isar, **Gautam Kumar Meghwanshi** and R.K. Saxena (2005). Second Convention, Biotech Research Society of India, 24th-26th November. Anna University, Chennai (India).