

## Bio-Data

### Faculty Member Details

<b>Name:</b> Dr. Dharmesh Harwani		
<b>Date of Birth:</b>	25 August 1977	
<b>Date of joining:</b>	09 June 2011	
<b>Present Position:</b>	Assistant Professor	
<b>Institute/Department:</b>	Maharaja Ganga Singh University, Bikaner (State Govt. University), Department of Microbiology	
<b>Pay Scale + Grade Pay:</b>	15600-39100 (7000)	
<b>Mailing Address:</b>		
<b>Office:</b> Academic Block-I Department of Microbiology, Maharaja Ganga Singh University, N.H.15, Jaisalmer Road, Bikaner-334004		<b>Residence:</b> III-D-36, "KRISHIKA", Murlidhar Vyas Colony, Bikaner-334001, Rajasthan, India <b>Telephone No.:</b> 0151-2212240
<b>Fax No.:</b> 0151-2212042		<b>Mobile No.:</b> +91 87 64 13 12 40 <b>E-mail:</b> dharmesh@mgsbikaner.ac.in dharmesh_harwani@hotmail.com
<b>Qualifications: M.Sc and PhD in Microbiology (&gt;14 Years of Experience in Academics)</b>		
<ul style="list-style-type: none"><li>• <b>Assistant Professor</b>, Microbiology, Maharaja Ganga Singh University, Bikaner (<i>June 2011-continuing</i>)</li><li>• <b>Post PhD (DBT-Post Doctoral Fellow)</b>, Lab of Prof. S. Mahadevan, Microbial Genetics, Indian Institute of Science (IISc), Bangalore (<i>Jan. 2007- June 2011</i>)</li><li>• <b>PhD</b> (Biodiversity and Efficiency of Bradyrhizobial Strains and AMF), INC)-DEV Microbiology lab., Maharshi Dayanand Saraswati University, Ajmer, Rajasthan (<i>Dec. 2002- April 2006</i>)</li><li>• <b>Senior Lecturer</b>, Microbiology, Gyan Vihar University, Jaipur (<i>Sept. 2006-Jan. 2007</i>)</li><li>• <b>Project Assistant and Junior Research Fellow</b> INCO-DEV Research Project (International Co-operation for Developing Countries (India, Spain, Nepal, Germany) for Improved <i>Biological Nitrogen Fixation</i>, European Comm., Coordinator <b>Dr. Dietrich Werner</b>) (<i>Aug. 2002 - Feb. 2006</i>)</li><li>• <b>UGC/CSIR NET</b> (<i>2003</i>)</li><li>• <b>M.Sc.</b>, Microbiology, Maharshi Dayanand Saraswati University, Ajmer (<i>Aug. 2002</i>)</li><li>• <b>DOEACC "O-Level"</b>, New-Delhi in Computers (<i>2001</i>)</li></ul>		
<b>Specialization:</b>		
<ul style="list-style-type: none"><li>• Microbial Genetics</li><li>• Bioinformatics</li><li>• Infectious Diseases</li></ul>		

**Research and Teaching Experience: (>14 Years of Experience in Academics)**

2002-2006 (Aug.-Sept.)	Teaching and Research	INCO-DEV* laboratory, Deptt. of Microbiology, Maharshi Dayanand Saraswati University, Ajmer-305009, Rajasthan
2006-2007 (Sept.-Jan.)	Pure Teaching	Deptt. of Microbiology, Gyan Vihar University, Jaipur
2007-2011 (Jan.-June)	Pure Research	Lab of Prof. S. Mahadevan, MRDG, Indian Institute of Science (IISc), Bangalore-560012, Karnataka
09 June 2011-continuing	Teaching and Research	Deptt. of Microbiology, Academic Block, Maharaja Ganga Singh University, Bikaner-334001
INCO-DEV* International Cooperation for Developing Countries (Germany, Spain, Nepal and INDIA)		

**Research Projects and Grants:**

S. No.	Title	Grant Period	Cost (In lakhs)	Funding Agency
	<b>Major Projects</b>			
	I. Study on the <b>Genetic Diversity of Malaria Vaccine Candidate Antigen Genes</b> and their Co-relation with Infection in the Field Isolates of North East Region (Bikaner) (Project file no. SR/WOS-A/LS-29/2017) ( <b>Mentor Scientist</b> )	2017-2020	27.5 Lakhs	DST-WOS-A
	II. Biodiversity and Spatial Distribution of Microflora and Fauna of the Thar Desert	2018-2019	8 lakhs	DBT, India
	III. Global analysis of protein profiles of Bgl <sup>-</sup> and Bgl <sup>+</sup> strains to <b>identify putative downstream target genes</b> regulated by the <i>bgl</i> operon of <i>E. coli</i>	2007-2011*		*As a DBT-RA III

**Publications:**

**I. Books published:**

**A. Authored:**

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**B. Edited Chapters:**

**Edited Chapters in Books**

**2018**

*In* In-Silico Approach for Sustainable Agriculture. Co-cultivation Strategies to Induce De Novo Synthesis of Novel Chemical Scaffolds from Cryptic Secondary Metabolite Gene Clusters. **Harwani D.**, Begani J. and Lakhai J. D.K. Choudhary, M. Kumar, R. Prasad, V. Kumar (eds.). Springer, Singapore. [https://doi.org/10.1007/978-981-13-0347-0\\_5](https://doi.org/10.1007/978-981-13-0347-0_5).

**2018**

*In* In-Silico Approach for Sustainable Agriculture. In Silico Methods to Predict Disease-Resistance Candidate Genes in Plants. Lakhani J., Khunteta A., Chowdhary A., **Harwani D.** D.K. Choudhary, M. Kumar, R. Prasad, V. Kumar (eds.). Springer, Singapore. [https://doi.org/10.1007/978-981-13-0347-0\\_5](https://doi.org/10.1007/978-981-13-0347-0_5).

**2018**

*In* Fungi and their Role in Sustainable Development: Current Perspectives. Co-cultivation strategies to induce de-novo synthesis of novel chemical scaffolds from cryptic secondary metabolite gene clusters. **Harwani D.**, Begani J. and Lakhai J. Praveen Gehlot and Joginder Singh

(eds.). Springer, Singapore. [https://doi.org/10.1007/978-981-13-0393-7\\_33](https://doi.org/10.1007/978-981-13-0393-7_33).

**2017**  
*In Genetic Construction of Stable Rhizobial Genotypes for Improved Symbiotic Nitrogen Fixation.* Harwani D., Begani J., Lakhani J. A. Hansen, D. Choudhary, P. Agrawal, A. Varma (eds) Rhizobium Biology and Biotechnology. Soil Biology, vol 50. Springer, 165-184.

**2017**  
*In Hierarchical Clustering-Based Algorithms and In Silico Techniques for Phylogenetic Analysis of Rhizobia.* Lakhani J., Khuteta A., Choudhary A., Harwani D. A. Hansen, D. Choudhary, P. Agrawal, A. Varma (eds) Rhizobium Biology and Biotechnology. Soil Biology, vol 50. Springer pp. 185-214.

**2016**  
*In Natural Resource Management in Arid and Semi-Arid Ecosystem for Climate Resilient Agriculture.* Bio-prospecting for Natural and Novel Metabolites from Rare Thermophilic Actinomycetes from underexplored Arid Thar Desert Regions of Rajasthan, India. Begani J. and Harwani D. 2015. N.K. Pareek and Sanjay Arora (eds.). Soil Conservation Society of India, New Delhi, pp. 1-8.

**2015**  
*In Microbes: In Action.* Secondary Structure Modelling of ITS1, 5.8S and ITS2 Ribosomal Sequences for Intra-Specific Differentiation among *Aspergillus* species. Gehlot P., Lakhani J. and Harwani D. 2015. J. Singh and P. Gehlot (eds.), AGROBIOS, India, pp. 337-353. ISBN 978-81-7754-576-0

**2015**  
*In Microbes: In Action.* Endophytic microorganisms and their functions. Gehlot P. and Harwani D. J. Singh and P. Gehlot (eds.), AGROBIOS, India, pp. 167-187. ISBN 978-81-7754-576-0

2015  
 Edited Abstract Book of International Conference on “Saptarashis” of Modern India: Tradition, Change, and Suaraj, 4-6 January, MGS University, Bikaner, INDIA

**2009**  
*In Biotechnology of Agricultural Microorganisms - An Agro-industry Approach.* Tripartite Symbiotic Association: Legume-Rhizobia-Mycorrhiza - A Review. Harwani, D., Choudhary, P., Dhaker, S., Prasad, K. and Mahna, S.K. 2006. D.K. Maheshwari and R.C. Dubey (eds.), I. K. International Pvt. Ltd. New Delhi, India, pp. 406-435. (Google Books) ISBN: 93-80026-53-4.

**2005**  
*In Emerging Trends in Mycology, Plant Pathology and Microbial Biotechnology.* Screening of efficient *Bradyrhizobium japonicum* strains for the improvement of soybean production. Mahna, S.K., Meghvansi, M.K., Prasad, K., Harwani, D. and Werner, D. 2005. G. Bagyanarayana, B. Bhadraiah and I.K. Kunwar (eds.), B.S. Publications, Hyderabad, India, pp. 282-292. ISBN: 8178000814.

## II. Research Papers Published (selected):

<b>A. Journals:</b>	<p><b>2018</b>          Current strategies to induce secondary metabolites from microbial biosynthetic cryptic gene clusters. Begani J., Lakhani J. and Harwani D., <i>Annals of Microbiology</i>, 68:7, 419-432. 10.1007/s13213-018-1351-1.</p> <p><b>2018</b>          Draft genome sequence of <i>Streptomyces</i> sp. strain DH-12, a soilborne isolate from the Thar Desert with broad-spectrum antibacterial activity. Jiao J, Paterson J, Busche T, Rückert C, Kalinowski J, Harwani D, Gross H. <i>Genome Announcements</i>, 6:9, 1-3. e00108-18</p> <p><b>2017</b>          Improvisation of Global Pairwise Sequence Alignment Algorithm Using Dynamic Programming. Lakhani J., Khunteta A., Harwani D. <i>International Journal of Scientific Research in Computer Science, Engineering and Information Technology</i>, 2:6, 909-914. ISSN : 2456-3307.</p> <p><b>2016</b>          Auto-Evolving Clusters based on Rejection and Migration. Lakhani J., Khunteta A., Chowdhary A., Harwani D. AICTC '16 Proceedings of the International Conference on Advances in Information Communication Technology &amp; Computing. ACM, USA. ISBN: 978-1-4503-4213-1 DOI: <a href="http://dx.doi.org/10.1145/2979779.2979877">http://dx.doi.org/10.1145/2979779.2979877</a>.</p> <p><b>2015</b>          Clustering techniques for Biological Sequence Analysis: A Review, Lakhani J. and Harwani D.</p>
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	<p><i>Journal of Applied Information Science</i> , 3:1, 14-32. ISSN 2321-6115.</p> <p><b>2015</b> Regulation of Gene Expression: Cryptic <math>\beta</math>-glucoside (<i>bgl</i>) Operon of <i>Escherichia coli</i> as a Paradigm. <b>Harwani, D.</b> <i>Brazilian Journal of Microbiology</i> 4;45(4):1139-44. ISSN 1517-8382</p> <p><b>2015</b> Disambiguation of Multiple Inheritance in C++ Using Biological Law of Genetics Given By Mendel. <b>Harwani, D.</b> and Lakhani, J. <i>Academic Journal of Science, UniversityPublications.net, USA</i> 3:2:361-371. ISSN 2165-628.</p> <p><b>2014</b> Clustering Trend Predictions using Evolutionary k-means Algorithm for Automated Clustering Lakhani, J. and Harwani, D. <i>International Journal of Knowledge Based Computer System</i> 1: 33-36. ISSN Number: 2321-5623</p> <p><b>2013</b> Biodiversity of rare thermophilic actinomycetes in the great Indian Thar Desert: An Overview. <b>Harwani, D.</b> <i>Indo American Journal of Pharmaceutical Research</i> 3:9349-9356. ISSN 2231-6876.</p> <p><b>2013</b> Recent advances in culturing the unculturable bacteria. <b>Harwani, D.</b> <i>International Journal of Recent Scientific Research</i> 4:1488-1491. ISSN: 0976-3031</p> <p><b>2013</b> Bacteria eating pollution and generating electricity. <b>Harwani, D.</b> <i>International Journal of Pharma and Bio Sciences</i> 4:996-1002. ISSN 0975-6299</p> <p><b>2012</b> The <math>\beta</math>-glucoside (<i>bgl</i>) operon of <i>Escherichia coli</i> is involved in the regulation of <i>oppA</i> encoding an oligo-peptide transporter. <b>Harwani, D.</b> and Mahadevan, S. <i>Journal of Bacteriology</i> 194:90-99. (<a href="http://jb.asm.org/content/194/1/90">http://jb.asm.org/content/194/1/90</a>) <b>Print ISSN: 0021-9193 Online ISSN: 1098-5530</b></p> <p><b>2008</b> Response of soybean cultivars toward inoculation with three arbuscular mycorrhizal fungi and <i>Bradyrhizobium japonicum</i> in the alluvial soil. Meghvansi, M.K, Prasad, K., <b>Harwani, D.</b>, Mahna, S.K. and Werner, D. <i>European journal of soil biology</i> 44: 316-323 (<a href="http://www.elsevier.com/locate/ejsobi">http://www.elsevier.com/locate/ejsobi</a>) <b>ISSN: 1164-5563.</b></p> <p><b>2006</b> Stimulatory effect of adonitol on the redifferentiation potential of soybean root nodules bacteroids. <b>Harwani, D.</b>, Meghvansi, M.K, Prasad, K., Mahna, S.K. and Werner, D. <i>Current Science</i> 90: 1474-1475. (<a href="http://www.ias.ac.in/currsci/jun102006/1474.pdf">http://www.ias.ac.in/currsci/jun102006/1474.pdf</a>) <b>ISSN: 0011-3891.</b></p> <p><b>2006</b> Distribution of arbuscular mycorrhizal fungi in soybean (<i>Glycine max</i> (L.) Merrill) rhizosphere. Prasad, K., Meghvansi, M.K., <b>Harwani, D.</b>, Mahna, S.K. and Werner, D. <i>Mycorrhiza News</i> 17:14-17. (<a href="http://mycorrhizae.org.in/files/Jan06.pdf">http://mycorrhizae.org.in/files/Jan06.pdf</a>) <b>ISSN: 0970-695X.</b></p> <p><b>2005</b></p>
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#### Visits Abroad:

- **Academic Visit to Gothenburg, Sweden (2009)**

Poster presentation on research work entitled “Global Protein Profiles to Identify Downstream target gene regulated by *bgl* operon of *E. coli*.” in “**FEMS 2009- 3<sup>rd</sup> Congress of European Microbiologists**

- **Academic Visit to University of Nevada, Las Vegas, USA (2014)**

Oral presentation on research work entitled “Cell to cell contact is necessary for Growth Advantage in Stationary Phase phenotype (GASP)”. in **IJAS-2014, UNLV, Las Vegas, USA**

- **Chaired Two Sessions based on Science and Technology at IJAS-2014, UNLV, Las Vegas, USA**

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

##### Scholars pursuing PhD

1. **Ms. Jyotsna Begani** 2014. Thesis title: Exploring Diversity of Thermophilic Actinomycetes in Thar Desert of Rajasthan
2. **Ms. Jyoti Acharya Gopa** 2016. Thesis title: Study on the Genetic Diversity of Malaria Vaccine Candidate Antigen Genes and their Co Relation with Infection in the Field Isolates of North East Region

**Other activities:****Seminars, Conferences  
(Participated,  
Abstracts Published)****2017 (Best Poster-Consolation Award)**

Polyphasic Characterization of a rare actinomycete strain from a sand dune soil of Thar Desert in Rajasthan producing anti-leukemic enzyme L-asparaginase. Begani J. and Harwani D. Scientific Symposium in Hindi, 29-30 October 2017, Desert Medical Research Center, Rajasthan India, p-8.

**2017**

Study of Genetic Polymorphism in Vaccine Candidate Genes to Develop Stable Vaccine against Malaria. Gopa J. and Harwani D. Scientific Symposium in Hindi, 29-30 October 2017, Desert Medical Research Center, Rajasthan India, p-3.

**2016**

Optimization and Purification of Anti-Leukemic Enzyme L-Asparaginase from Actinomycetes Bacteria Native to the Thar Desert of Rajasthan, India. Harwani D, Begani J and Lakhani J. National Seminar on Environment Management and Technology 8-9 March 2017, MGSU, Bikaner, Rajasthan, India.

**2016 (Best Poster Award)**

Unconventional Methods to Characterize Thermophilic Actinomycetes Producing Novel Metabolites from underexplored Thar Desert. Harwani D and Begani J. National Conference on Biotechnology for Sustainable Development, 23-24 December 2016, MD College, Sri Ganganagar, Rajasthan India.

**2016 (Invited lecture)**

Bioprospecting for Potential Drug Candidates for Biotechnological Development of Antibiotics targeting Multi Drug Resistance Pathogens. Harwani D. National Conference on Biotechnology for Sustainable Development, 23-24 December 2016, MD College, Sri Ganganagar, Rajasthan India

**2016 (Best Poster Award)**

Bio-prospecting for Natural and Novel Metabolites from Rare Thermophilic Actinomycetes from underexplored Arid Thar Desert Regions of Rajasthan, India. Begani J and Harwani D. 25th National Conference on "Natural Resource Management in Arid and Semi-Arid Ecosystem for Climate Resilient Agriculture and Rural Development", 17-19 February, 2016, Swami Keshwanand Rajasthan Agricultural University, Bikaner, Rajasthan p-

**2016 (Best Oral Award)**

Probiotics and Antibiotics Resistance : Safety Issue of Dietary Supplements. Harwani D and Begani J. National Seminar on "Agriculture Resource Management for Sustainability and Eco-Restoration", March 11-13, 2016, ICAR-Central Institute for Arid Horticulture, Bikaner, Rajasthan, p.171.

**2015**

Phylogenetic Appraisal of Rare Actinomycetes Native to the Thar Desert Environment using Conserved Ribosomal 16SrDNA Sequence Analysis. Harwani D. National Seminar on Current Trends in Environmental Research. 18 Feb.-March 2, 2015, MGSU, Bikaner, Rajasthan, India.

**2014**

Cell to Cell Contact is Necessary for the Growth Advantage in Stationary Phase (GASP) Phenotype Conferred by the Activation of the *bgl* operon of *Escherichia coli*. Harwani D. "International Journal of Arts and Science: Conference of Science and Technology", University of Nevada, Las Vegas, USA.

<http://vegas2014internationalconference.sched.org/?s=dharmesh>

**2014**

Selective Discovery of Rare Thermophilic Actinomycetes Producing Novel Antimicrobial Compounds from Desert Soils. Harwani D. ESF, EMBO Symposium, Synthetic Biology of antibiotic production, Sant Feliu de Guixols, Costa Brava, Spain.

[http://syntheticbio.esf.org/fileadmin/ressources\\_conferences/syntheticbio/user\\_ressources/Images/PosterList\\_for\\_website\\_Syntheticbio.pdf](http://syntheticbio.esf.org/fileadmin/ressources_conferences/syntheticbio/user_ressources/Images/PosterList_for_website_Syntheticbio.pdf)

**2014**

Bio-prospecting for novel metabolites from rare Thermophilic actinomycetes from underexplored thar desert of Rajasthan, India. Harwani D. International Symposium on the Biology of Actinomycetes ISBA-17, Kusadasi, Aydin-Izmir, Turkey, p-373.

[http://www.isba17.com/abstract\\_book\\_draft\\_v1.pdf](http://www.isba17.com/abstract_book_draft_v1.pdf)

**2014**

Elaborate survival strategy by *E. coli* to sense and adjust external and internal milieu (environment): *bgl* operon and *bgl* genes as Paradigm. **Harwani D.** “National Conference on ‘Energy & Environmental Engineering”, Manda Institute of Technology, Bikaner.

**2013**

Cell to Cell Contact is Necessary for the Growth Advantage in Stationary Phase (GASP) Phenotype Conferred by the Activation of the *bgl* operon of *Escherichia coli*. **Harwani D.** “20th Biennial Evergreen International Phage Meeting – Aug. 4-9, 2013 The Evergreen State College, Olympia, WA 98505, USA. Sections VII & VIII: Proteomics, Genomics and Molecular Mechanisms, p-122.

**2013**

A possible mechanism by which *oppA* an oligo-peptide transporter confers a competitive advantage to *E. coli* cells having activated *Bgl* operon. **Harwani D.** “National Conference on Biodiversity Conservation: Embracing Our Future, Preserving Our Past” Jaipur, Rajasthan, 27 Sep. p-24.

**2013**

Bradyrhizobial Inoculum Production and Its Efficiency Assessment. **Harwani D.** BIOCON 2013: International Conference on Agro-biodiversity and their impact on global challenges. Biyani College, Jaipur, Rajasthan, 23 Sept. pp.137-142.

**2013**

Putative Downstream Target Genes Regulated by the Cryptic *Bgl* Operon of *E. Coli*. **Harwani D.** UGC sponsored National Conference on Environmental Issues, Toxicology and Exposure Science, Agarwal College, Jaipur, Rajasthan, 21 Sept. p-74.

**2013**

Technology Transfer in Nano Science and Technology. Research to Product Awareness Workshop. **Harwani D.** Nano-Medicine and Nano-Therapeutics, 20 June, Dept of Biotechnology, Madurai Kamaraj University, Madurai, Tamilnadu.

**2013**

Organized two day’s Workshop “Field functionaries/Extension offices on organic farming” at the department of Microbiology, Maharaja Ganga Singh University under the auspices of “National Center of Organic Farming” Ghaziabad on 30-31 January, 2013.

**2013 (Best Poster Award)**

Regulation of Gene Expression:  $\beta$ -glucoside (*bgl*) Operon of *Escherichia coli* as a Paradigm. **Harwani, D.** “UGC Sponsored National Conference on Biotechnology”, Mahila P.G. College, Jodhpur, Rajasthan, p. 24.

**2012**

Organised OPEN DAY cum Exhibition: One day visit open to the students and faculty from various colleges and Institutes of Bikaner to the Microbiology Laboratory, Maharaja Ganga Singh University, Bikaner, Rajasthan on 7 Nov. 2012.

**2012**

The  $\beta$ -glucoside (*bgl*) operon of *Escherichia coli* is involved in the regulation of *oppA* encoding an oligo-peptide transporter. **Harwani, D.** and Mahadevan, S. “NCOB-2012 National conference on Omics for Biotechnology” Central university of Rajasthan at Kishangarh, Ajmer, Rajasthan, p. 149.

**2012**

A World of Science and Technology Beyond the English or Within. **Harwani D.** and Lakhani J. “National Symposium on Interrogating New Worlds of English Language Teaching 2012”, Bikaner, p. 30.

**2011**

Microbial fuelling cell (MFC): A bacterial way to clean up nature and produce electricity. **Harwani, D.** “ICAER-2011 – International conference on Advances in Ecological Research”, Bikaner, Rajasthan, p.97.

**2009**

Global analysis of protein profiles of  $Bgl^+$  and  $Bgl^-$  strains to identify putative downstream target genes regulated by the *bgl* operon of *E. coli*. **Harwani, D.** and Mahadevan, S. *Proc.* “FEMS 2009- 3<sup>rd</sup> Congress of European Microbiologists” Gothenburg, Sweden, p. 198.

	<p><b>2004</b> Efficiency of bradyrhizobia in different soybean cultivars in pots filled in with rhizospheric soils of soybean/ non-legume cultivated land. Mahna, S.K., Prasad, K., Meghvansi, M.K., <b>Harwani, D.</b> and Werner, D. <i>Proc. "Rhizosphere 2004 - Perspectives and Challenges - A Tribute to Lorenz Hiltner"</i> Munich, Germany, p. 135.</p> <p><b>2004 (Junior Scientist Award)</b> Stimulatory effect of three carbon sources on re-differentiation potential of soybean nodulating bacteria. <b>Harwani, D.</b>, Meghvansi, M.K., Prasad, K., Werner, D. and Mahna, S.K. <i>Proc. International Symposium on "Microbial Diversity: Challenges, Opportunities &amp; Relevance in new Millennium"</i> Jabalpur, India, p. 25.</p> <p><b>2000</b> Participated Microbiotech 2000. 41<sup>st</sup> Annual Conference, Association of Microbiologists of India, Nov. 2000. Birla Institute of Scientific Research, Jaipur, Rajasthan, India.</p>
<b>Invited Lectures</b>	<ul style="list-style-type: none"> <li>• More than 5</li> </ul>
<b>Membership</b>	<ul style="list-style-type: none"> <li>• ASM (American Society of Microbiology), USA (ASM MN # 56756547)</li> <li>• TERI (The Energy and Resources Institute), India</li> <li>• AMI (Association of Microbiologist of India LMID#4533-2017)</li> </ul>
<b>Awards</b>	<ul style="list-style-type: none"> <li>• Best Poster-Consolation Award, 29-30 October 2017, Desert Medical Research Center, Rajasthan India</li> <li>• Best Poster Award (First) at National Conference on Biotechnology for Sustainable Development, 23-24 December 2016, MD College, Sri Ganganagar, Rajasthan India.</li> <li>• Best Poster Award (Second) at Natural Resource Management in Arid and Semi-Arid Ecosystem for Climate Resilient Agriculture and Rural Development", 17-19 February, 2016, Swami Keshwanand Rajasthan Agricultural University, Bikaner, Rajasthan.</li> <li>• Best Oral Award (second) at National Seminar on "Agriculture Resource Management for Sustainability and Eco-Restoration", March 11-13, 2016, ICAR-Central Institute for Arid Horticulture, Bikaner, Rajasthan.</li> <li>• First Prize Anveshan 2015: National Student Research Convention, West Zone</li> <li>• Non-ICMR Scientist Travel Award for Academic Visit to USA 2014</li> <li>• Best Poster Award (First) at UGC Sponsored National Conference on Biotechnology in 2014, Jodhpur, India</li> <li>• IAS-SPRF, Indian Academy of Science 2012</li> <li>• DBT-RA, DBT, Govt. of India Funded Project 2007-2011</li> <li>• DST-ITG, Gothenburg, Sweden 2009</li> <li>• UGC-CSIR NET 2003</li> <li>• DOEACC-"O" Level, New Delhi 2001</li> <li>• Junior Scientist Award, Microtech 2004-International Symposium, SBAM, Jabalpur</li> <li>• Gold Medalist in Inter School Hockey Tournament at St. Pauls', Ajmer</li> <li>• Ranked Runner Up MDS Olympiad Table Tennis 2003, MDSU, Ajmer</li> <li>• NCC (2 Raj Naval Wing), First Cadet-March Past, 1992</li> </ul>
<b>Refresher/Orientation and Other Courses</b>	<p style="text-align: center;"><b>Refresher/Orientation and Other Courses</b></p> <ul style="list-style-type: none"> <li>• Indian Academy of Science (IAS), Bangalore- Summer Research Fellowship. Cell (Bgl+) to cell (Bgl-) contact (cellular signaling) analysis by Fluorescent Activated Cell Sorting (FACS) analysis. Indian Institute of Science, Bangalore, Karnataka, India (May-June 2012)</li> <li>• Indian Academy of Science (IAS) Sponsored Refresher Course- Dept of Biotechnology, Madurai Kamaraj University, Madurai, Tamilnadu, India (15.5.2013-29.5.2013)</li> <li>• Orientation Program (68)- Academic Staff College, Madurai Kamaraj University, Madurai, Tamilnadu, India (30.5.2013-26.6.2013)</li> <li>• Refresher Course in Microbiology (May-June 2015) Human Resource Development Centre, Panjab University, Chandigarh. (12.05.2015-01.06.2015)</li> </ul>

	<p style="text-align: center;"><b>Other Academic and Administrative Jobs</b></p> <ul style="list-style-type: none"> <li>• Assistant Center Superintendent Examinations MGS University, Bikaner (2017)</li> <li>• Director, Centre for Entrepreneurship and Skill Development (CESD), MGS University, Bikaner (2017-)</li> <li>• RUSA Coordinator, MGS University, Bikaner (2016-continued)</li> <li>• Coordinator Public Outreach and Extension Cell, MGS University, Bikaner (2016-continued))</li> <li>• Member of Board of Studies, MGS University, Bikaner (2013-continued)</li> </ul>
<b>Others</b>	<ul style="list-style-type: none"> <li>• Research Co-ordinator, Microbiology and Biotechnology, Gyan Vihar University</li> <li>• Assisted in Coordinating Small Teachers and Doctoral Students Training Program in <i>Rhizobium</i> Technology</li> <li>• Technology Transfer of Bradyrhizobial Bacterial Bio-fertilizers Production from INCO-DEV Laboratory at MDS University, Ajmer to the Farmers' Fields in Kota, Bhundi and Baran Regions of Rajasthan.</li> </ul> <p><b>Reports</b></p> <p><b>2012</b>  Indian Academy of Science (IAS) SPRF-2012 (8 weeks) (LFT-86-Teacher) Cell to cell contact is necessary for the growth advantage in stationary phase (GASP) phenotype conferred by the activation of the <i>bgl</i> operon of <i>Escherichia coli</i> Worked as a Research fellow with Prof. V. Nanjundiah and Prof. S. Mahadevan, MRDG at Indian Institute of Science, Malleshwaram Bangalore-560012</p> <p><b>2011</b>  DBT (Department of Biotechnology), India (2007-2011) reports on two projects entitled “Global analysis of protein profiles of Bgl<sup>-</sup> and Bgl<sup>+</sup> strains to identify putative downstream target genes regulated by the <i>bgl</i> operon of <i>E. coli</i>” and “Cell to cell contact is necessary for the growth advantage in stationary phase (GASP) phenotype conferred by the activation of the <i>bgl</i> operon of <i>Escherichia coli</i>” (Worked as a DBT–PDF/RA-III with Prof. Mahadevan, MRDG at Indian Institute of Science, Malleshwaram Bangalore-560012)</p> <p><b>2006</b>  INCO DEV (International Cooperation for developing countries), International Scientific Cooperation Project (Germany, Spain, Nepal and India), “Soybean Biological Nitrogen Fixation (BNF) and Mycorrhization for Improved Production in South Asia” Contract number: ICA4-CT- 2001-10057. (Worked as a team member)  <a href="http://www.staff.unimarburg.de/~werner/INCO_DEV.html">http://www.staff.unimarburg.de/~werner/INCO_DEV.html</a></p>