



## Faculty Details proforma for Gargi College

<b>Title</b>	DR.	<b>First Name</b>	POONAM	<b>Last Name</b>	SHARMA	<b>Photograph</b>
<b>Designation</b>	ASSISTANT PROFESSOR					
<b>Address</b>	DEPARTMENT OF ZOOLOGY GARGI COLLEGE SIRIFORT ROAD, DELHI 110049					
<b>Phone No Office</b>	011-26494544					
<b>Email</b>	<a href="mailto:poonamsharma.gargi@gmail.com">poonamsharma.gargi@gmail.com</a>					
<b>Educational Qualifications</b>						
<b>Degree</b>		<b>Institution</b>			<b>Year</b>	
B.Sc Zoology (Hons.)		University of Delhi, Delhi, India			1999	
M.Sc Zoology Specialization in Cell & Molecular Biology		University of Delhi, Delhi, India			2001	
Ph.D Molecular Biology		University of Delhi, Delhi, India			2007	
Postdoctoral Fellow Ecological Engineering		LIEBE-CNRS, Université Paul Verlaine, Metz, France			2010	
Others		CSIR-UGC NET			2001	
		ICMAR NET National Award for Advance Studies during Masters			2000	
<b>Career Profile</b>						
<ol style="list-style-type: none"> <li>1. July 2010-July 2011: <b>BOYSCAST FELLOW</b> at Laboratoire des Interactions Ecotoxicologie, Biodiversite, Ecosystemes (LIEBE), Université Paul Verlaine, CNRS UMR 7146, Metz, France.</li> <li>2. July 2007-Continuing: <b>Assistant Professor</b> at Department of Zoology, Gargi College, University of Delhi, India</li> <li>3. May 2004- March 2007: <b>Senior Research Fellow</b> at Molecular Biology Laboratory, Department of Zoology, University of Delhi, Delhi, India</li> <li>4. January 2002-May 2004: <b>Junior Research Fellow</b> at Molecular Biology Laboratory, Department of Zoology, University of Delhi, Delhi, India.</li> </ol>						
<b>Association With Professional Bodies</b>						
<ol style="list-style-type: none"> <li>1. <b>E-content Writer</b> for post graduate and under-graduate student under e-pathshala Sponsored by <b>UGC, Government of India</b> for Zoology.</li> <li>2. <b>Editor and Subject expert</b> for textbook for classes XI and XII <b>NCERT</b>.</li> <li>3. Editorial board/Advisory board of <i>BioJournal</i> 2018.</li> <li>4. <b>E-content Writer and Language Editor</b> for under-graduate student under NME-ICT (Project Sponsored by <b>MHRD Government of India</b> for Zoology.</li> <li>5. <b>Reviewer</b> for <i>Journal of Entomology and Nematology</i>.</li> <li>6. <b>Reviewer</b> for Pearson Education Books.</li> <li>7. Member of <b>American Society for Microbiology</b>: ID 57104945.</li> <li>8. <b>Convenor and Member</b> of Syllabus Committee for Semester System Papers: Applied Biology and Biotechnology, Developmental biology, Genetics and Genomics and Bioinformatics of B.Sc Zoology (Hons). B.Sc Life Science.</li> <li>9. <b>Subject Expert</b> for developing Online Quizzes in Life Science” at Institute of Life Long Learning (ILL), University of Delhi.</li> </ol>						

<b>Administrative Assignments</b>
<ol style="list-style-type: none"> <li>1. <b>Teacher In charge</b> (September 2018) Department of Zoology, Gargi College</li> <li>2. <b>Coordinator</b> of Add-on course “<i>Biotechcellence: Insights and Innovations</i>” 2018, 2017.</li> <li>3. <b>Convener</b> “Summer Immersion Program” July 2018</li> <li>4. <b>Departmental Coordinator of Star College</b> (Grant by DBT).</li> <li>5. <b>Departmental Convener</b> for Time Table and Workload.</li> <li>6. <b>Pathfinder Committee</b> Member: Science</li> <li>7. <b>Convener and Member</b> of Syllabus Committee for Semester System Papers: Applied Biology and Biotechnology, Developmental biology, Genetics and Genomics and Bioinformatics of BSc Zoology (Hons). BSc Life Science.</li> <li>8. <b>Subject Expert</b> for developing Online Quizzes in Life Science” at Institute of Life Long Learning (ILL), University of Delhi.</li> <li>9. <b>Teacher In charge</b> (2014) Department of Zoology, Gargi College.</li> <li>10. <b>Coordinator</b> of Add-on course “<i>Molecular and Computation Biology: A Practical Approach</i>”.</li> <li>11. <b>Coordinator</b> for departmental admissions 2008, 2009, 2012, 2013, 2014.</li> <li>12. College Computer Lab committee member.</li> <li>13. College Prize committee member 2009.</li> <li>14. Editor, Departmental magazine ‘Flight’ 2009, 2008.</li> </ol>
<b>Areas of Interest / Specialization</b>
Biotechnology, Immunology Molecular Biology, Computational Biology, Xenobiotics and Nanotoxicology.
<b>Subjects Taught</b>
Biotechnology, Immunology, Bioinformatics, Functional Genomics, Physiology, Ecology, Evolution and Developmental Biology.
<b>Workshop Organized</b>
<ol style="list-style-type: none"> <li>1. Organized “<b>Summer Immersion Program</b>” under Star College scheme funded by DBT (Ministry of science and Technology) held at Gargi College, 11<sup>th</sup> to 18<sup>th</sup> July 2018.</li> <li>2. Organized a workshop on “<b>It’s in My Genes: A Molecular Biology Approach</b>” as Coordinator held at Department of Zoology, Gargi College on March 14- 15, 2017.</li> <li>3. Organized a workshop on “<i>Molecular Biology Equipments</i>”, Department of Zoology, Gargi College on 9<sup>th</sup> October 2014.</li> <li>4. Organized Interdisciplinary “<i>Summer School</i>” as Deputy Coordinator held at Gargi College on May 26<sup>th</sup>- 31<sup>st</sup> 2014.</li> <li>5. Organized a workshop on <b>laboratory training for technical staff</b> of Science departments of Gargi College on September 2013.</li> <li>6. Organized Interdisciplinary Science Seminar as Deputy- Coordinator on “<i>New Frontiers in Biotechnology</i>” Under “Star College Scheme” Funded by DBT 2<sup>nd</sup> December 2009.</li> <li>7. Organized Bioinformatics Workshop for Faculty Workshop on “<i>Introduction to Bioinformatics</i>” as BIF committee member held at Gargi College on September 15-16, 2009.</li> <li>8. Organized Interdisciplinary “<i>Summer School</i>” as Deputy Coordinator held at Gargi College on June 15- 30, 2009.</li> </ol>
<b>Research Guidance</b>
<ol style="list-style-type: none"> <li>1. Supervised two students in project “<i>Comparative analysis of infectious organisms to comprehend the mechanism of infection and classify potential antimicrobial drug targets</i>” for 2018.</li> <li>2. Supervised two students in project “<i>Analysis of Reprogramming Factors in Cell Transformation</i>” for one year <b>2016</b>.</li> <li>3. Supervised two students in project “<i>Ebola Virus: To Ascertain Drug’s Aim and Hitting the Target</i>” for one year <b>2015</b>.</li> <li>4. Supervised three students in project “<i>Determining Parkinson's genes: Disease causing and risk</i>”</li> </ol>

*factors*” for one year **2014**.

- Supervised four students in project “*Drugs & Genetics: Aspirin resistance: An emerging clinical predicament is associated with single nucleotide polymorphisms*” for one year 2014.
- Supervised three students in project “*BLAST into the Past to Identify T. Rex's Closest Living Relative*” for two months **2013**.
- Supervised three students in project “*Computational Exploration of Protein Function*” for two months **2013**.
- Supervised one student in project “*in silico analysis of gene expression profile in human breast cancer cells and study its applications*” for twelve months under Pathfinder Award **2009**.
- Supervised two summer trainees in project “Polyphasic Approach of Bacterial Classification” April - June **2009** funded by University Grant Commission under Centre for Potential and Excellence Scheme.

#### Refresher Course/Orientation Programme Attended:

- Participated in **Faculty Development Programme** on “Research Methodology” held on 16<sup>th</sup>-22<sup>th</sup> December 2017 at Bhaskaracharya College of Applied Sciences, University of Delhi, Delhi, India.
- Participated in the four week **Refresher Course** in “**1<sup>st</sup> Interdisciplinary course in Contemporary Studies**” from 8<sup>th</sup> February-4<sup>th</sup> March 2016 conducted at the Academic Staff College, Jawaharlal Nehru University, Delhi.
- Participated **1<sup>st</sup> Refresher Course in Life Sciences & Biotechnology**, Jawaharlal Nehru University, New Delhi, July 20- August 14, 2015.
- Participated in **Orientation Programme (OR 62): CPDHE**, University of Delhi, Delhi March 02- March 30, 2010.

#### Recent Publications

##### A. **PUBLICATIONS:**

- N. Bisht, N. Chakraborty, I. Prasad and **Sharma. P 2016**. Analysis of Reprogramming Factors in Cell Transformation. International Journal of Biotechnology and Biomedical Sciences. Volume 2, Issue 2, pp. 156-159. (ISSN: 2454 -4582).
- S. Majumdar, S. Rustagi and **Sharma. P 2016**. *In Silico* Analysis of Gene Expression Profile in Human Breast Cancer Cells. International Journal of Biotechnology and Biomedical Sciences. Volume 2, Issue 1, pp. 9-13. (ISSN 2454-4582)
- S. Majumdar, S. Rustagi and **Sharma. P 2015**. Ebola Virus: To Ascertain Drug’s Aim and Hitting the Target. International Journal of Basic and Applied Biology. Volume 4, pp. 274-278. (ISSN: 2349 -5820).
- S. Majumdar, S. Rustagi, S. Mondal, V. Rijhwani, J. Kaur, **Sharma. P 2014**. Aspirin resistance: An emerging clinical predicament is associated with single nucleotide polymorphisms. International Journal of Basic and Applied Biology. Volume 2, pp.63-68. (ISSN: 2349 -5820).
- P. Sharma, P. S. Shyamli, R. Singh, J. Kaur, **Sharma. P 2014**. Determining Parkinson's genes Disease causing and risk factors. International Journal of Basic and Applied Biology. Volume 2, pp.91- (ISSN: 2349 -5820).
- Raina V., Rentsch D, Geiger T., **Sharma, P.**, Buser HR., Holliger C, Lal R, Kohler HP **2008**. Metabolites in the Degradation of alpha- and gamma-Hexachlorocyclohexane (HCH): Pentachlorocyclohexenes Are Hydroxylated to Cyclohexenols and Cyclohexenediols by the Haloalkane Dehalogenase LinB from *Sphingobium indicum* B90A. Journal of Agricultural Food Chemistry 2008 Aug 13; 56(15):6594-603.
- Raina V., Hauser A, Buser HR, Rentsch D, **Sharma, P**, Lal R, Holliger C, Poiger JT, Müller MD, Kohler H.P **2007**. Hydroxylated metabolites of beta- and delta-hexachlorocyclohexane: bacterial formation, stereochemical configuration, and occurrence in groundwater at a former production site. Environmental Science Technology 2007 Jun 15; 41(12):4292-8.
- Lal, R., Jit, S., Verma, M., Dadhwal., M., Singh, A., Prakash, O., **Sharma, P** and Khanna, M. **2006**. Nanoorganisms: Smallest form of Life got smaller! (Research News). Indian Journal of Microbiol.

46: 413.

9. **Sharma, P.**, Raina, V., Kumari, R., Malhotra, S., Dogra, C., Kumari, H., Kohler, H.P E., Buser, H.R., Holliger, C and Lal, R. **2006**. Haloalkane Dehalogenase (LinB) is responsible for  $\beta$ - and  $\delta$ -HCH (Hexachlorocyclohexane) transformation in *Sphingobium indicum* B90A. *Applied Environmental Microbiology* 2006 Sep; 72(9):5720-7.
10. Rup Lal, Mandeep Dadhwal, Ajaib Singh, Om Prakash, Shweta Malhotra, and **Poonam Sharma**. (2005). Hexachlorocyclohexane (HCH) residues in Indian environment: Problems and solution. Proceedings of 8th International HCH and pesticide forum, 26-28 May 2005, Sofia, Bulgaria.
11. Lal, R., Dogra, C., Malhotra, S., **Sharma, P.** and Pal, R. 2006. Recent advances in Microbiological, Molecular Genetics and Evolutionary aspects of Hexachlorocyclohexane degradation in Sphingomonads. *Trends in Biotechnology*. Mar; 24(3):121-30.
12. Dhingra, G., Kumari, RM., Bala, S., **Sharma, P.**, Lal, S., Cullum, J. and Lal, R. 2003. Development of cloning vectors and transformation system for *Amycolatopsis*. *Journal of Industrial Microbiology and Biotechnology*. 30:195-204, Springer Verlag Heidelberg, Germany.

**B. CONFERENCE PROCEEDINGS:**

13. Shreya Majumdar, Sonakshi Rustagi, Sreshtha Mondal, Vani Rijhwani, Jasvinder Kaur, **Poonam Sharma**. Genetic polymorphism of platelet aggregation pathway genes is related to aspirin resistance. 2014. pp. 156-162 in Proceedings of national conference on Striving & Thriving towards Diffusion of Student-driven Research in Science and Technology for Inspired Learning ISBN 978-81-7273-958-4.
14. Perna Sharma, P. Sushree Shyamli, Richa Singh, **Poonam Sharma**, Jasvinder Kaur. Determining why some gene mutations cause Parkinson's disease and others do not. 2014. pp. 273-279 in Proceedings of national conference on Striving & Thriving towards Diffusion of Student-driven Research in Science and Technology for Inspired Learning ISBN 978-81-7273-958-4.

**C. CHAPTERS:**

**e-Chapters (Institute for Life Long Learning and UGC e-pathashala)**

1. Recombinant DNA in health (Recombinant insulin and human growth hormone) 2014
2. Polymerase Chain Reaction. 2014
3. Gene Therapy. 2015
4. Gene Therapy of Cystic Fibrosis and SCID. 2015
5. Southern Blot Hybridization 2016
6. In-situ hybridization. 2016

**Book Chapters**

7. Diversity of *lin* genes in HCH degrading *Sphingobium* species 2005. I.K International Publishing House, New Delhi. ISBN 81-88237.

**Conference Organization/ Presentations**

1. Attended the Symposium in "Mathematical & Computational Biology" held during March 10, 2015 organized by NNMCB at Sri Venkateswara College, University of Delhi.
2. Participated and presented poster at JNU conference on Indo-US conference and workshop on "Synthetic and Systems Biology" on November 9-12 2014, JNU convention center, New Delhi.
3. Poster presentation at one day Symposium on "Recent Trends in Biology" on 25th February, 2015 held at Maitreyi College.
4. Participated and Won Best Poster at national conference "Striving & Thriving Towards Diffusion of Student-driven Research in Science and Technology for Inspired Learning" on 16th – 17th October 2014 organized by Embedded Systems and Robotics Centre and Department of Electronics, Maharaja Agrasen College, University of Delhi, New Delhi.
5. Participated in American Society of Microbiology (ASM) Workshop on "Culture of Responsibility" held during September 2, 2013 at Maitreyi College, Delhi University, Delhi, India.
6. Participated in one day workshop on "Non coding RNA" held during November 7, 2009 at School of Life Sciences, Jawaharlal Nehru University, Delhi.

7. Participated in The 3rd Virtual Training Workshop on Bioinformatics, organized by Asian Bioinformatics Research and Education Network (ABREN), sponsored by Kyushu Institute of Technology (KIT), Fukuoka, Japan and Advanced Technology Institute (ATI), Saitama, Japan, from March 25-April, 2009.
8. Participated in the workshop entitled “Development of Online Quizzes in Life Science” as Subject Expert, organized by Institute of Life Long Learning (ILLL), University of Delhi, on 13th April 2009.
9. Participated in National Symposium on Biotechnology in the Post-Genomic Era held during April. 9-10, 2009 at Sri Venkateswara College, Delhi University, Delhi, India.
10. Participated in 49th Annual Conference of AMI held during Nov. 18-20, 2008 at Delhi University, Delhi, India.
11. Participated in 46th Annual Conference of AMI “Micro-Biotech 2005” held during Dec. 8-10, 2005, at Hyderabad, India.
12. Participated in the International Conference, “Bioconvergence 2004” held during 18-20 November 2004 at TIET, Patiala, India.
13. Participated in the International symposium on “Biological Approaches for Detection and Removal of Pesticides” under the Indo-Swiss Collaboration in Biotechnology at Agharkar Research Institute, 8-9 March 2004, Pune, India.
14. Mini Symposium on “Utilization of Microbes for the Development of Bioremediation Technologies” organized and held from 7-8 October, 2002, in Department of Zoology, University of Delhi and sponsored by SDC, Switzerland and DBT, India.
15. Attended and participated in Quiz and M.CQ competition at Sri Aurobindo College (Zoology Society), D.U (Inter-College Competition 1999). POSTER/ ORAL PRESENTATIONS
16. Chandana Mukherjee, Malini Rajendra, Poonam Sharma and S. Bhanumati paper “Empowering Student Education in Chemistry with Novel Ideas and Tools” presented at the 13th Annual Green Chemistry and Engineering Conference held at Washington, DC 20036, USA from 23- 25 June 2009 Oral presentation.
17. Poster presentation (2006) “Genes Responsible for Degradation of  $\beta$ - and  $\delta$ - Hexachlorocyclohexane (HCH) in *Sphingobium indicum* B90A”. Vishakha Raina, Poonam Sharma, Christoph Werlen, Hans-Rudolf Buser, Christof Holliger and Hans-Peter E. Kohler at Leipzig Conference, Germany.
18. Participated in 46th Annual Conference of AMI “Micro-Biotech 2005” held during December 8 – 10, 2005, Hyderabad, India and made a Poster presentation.
19. Participated in the International Conference, “Bioconvergence 2004” held during 18-20 November 2004 and made a Poster presentation.
20. Participated in the International symposium on “Biological Approaches for Detection and Removal of Pesticides” under the Indo-Swiss Collaboration in Biotechnology at Agharkar Research Institute, March 8-9, Pune, India and made an Oral presentation.

#### Research Projects (Major Grants/Research Collaboration)

“Toxicological effects of residues from the degradation of commercialized  $TiO_2$ -based nanomaterials on bacteria” Funded by **Department of Science & Technology (DST), Government of India, Ministry of Science & Technology.**

#### Awards and Distinctions

1. Awarded “**SCIENCE AMBASSADOR-2017**” at 1 st Science Ambassador Program organized by Bio-Rab Laboratories in association with Deshbandhu College on 6 th November, 2017 and held at St. Thomas Girls Sr. Sec. School, Delhi.
2. **BOYSCAST FELLOWSHIP** 2009-2010 by Department of Science & Technology (DST), Ministry of Science and Technology, Government of India for conducting advanced research in the area of Ecological Engineering for duration of twelve months at LIEBE-CNRS, Metz, France.
3. Best poster award given by **American Society of Microbiology** on a paper entitled “Localization of

*lin* genes and IS6100 on plasmids in HCH-degrading *Sphingobium indicum* B90A, *Sphingobium japonicum* UT26, *Sphingobium francense* Sp+ and transposition of IS6100 in *Sphingobium chlorophenolicum* DSM 7098” at the 46th Annual Conference of AMI “Micro-Biotech 2005” held during December 8 – 10, 2005, at Hyderabad, India.

4. Received Council of Scientific and Industrial Research- **Senior Research Fellowship** (CSIR-SRF) in Life Sciences (2004) {<http://csirhrdg.nic.in/jrfsrfra2.htm>}.
5. Awarded Council of Scientific and Industrial Research-**Junior Research Fellowship** (CSIR-JRF) in Life Sciences (2002) {<http://csirhrdg.nic.in/jrfsrfra2.htm>}.
6. Qualified Council of Scientific and Industrial Research-University Grants Commission (CSIR-UGC) **National Eligibility for Lectureship Test (NET)**, June 2001 {<http://csirhrdg.nic.in/jrfsrfra2.htm>}.
7. Selected among **top 20% Junior Research Fellows** in 2001-2002 {<http://csirhrdg.nic.in/spm.htm>}
8. Qualified **ICMR - JRF** Year 2001 {<http://icmr.nic.in/jrf.htm>}
9. Awarded **National Award for Advance Studies** 2000 during Master of Science.
10. Topped the college during Bachelor of Science Zoology (Hons.) in year 1999.

#### **Other Activities**

##### **OVERSEAS WORK EXPERIENCE:**

1. **BOYSCAST Fellow** for twelve months (June 2010- June 2011) at Laboratoire Ecotoxicologie Universite Paul Verlaine, Rue du General Delestraint 57070 Metz, France for conducting advanced research in the field of Ecological Engineering Science LIEBE, Université Paul Verlaine-Metz, France.
2. Worked as a **Visiting fellow** for six months in the Dr. H.P. Kohler’s laboratory (2 March, 2006-30 August, 2006) at Swiss Federal Institute for Environmental Science and Technology (EAWAG), Dubendorf, Switzerland in the project entitled “Bioremediation of pesticide-contaminating soils and its effect on soil functionality” under the “Indo-Swiss Collaboration in Biotechnology” (ISCB). During this training, I got an opportunity to familiarize with many biochemical techniques like NMR, GC-MS which further substantiated into good publications.