CURRICULUM VITAE

PUSHPA LATA, Ph.D.
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EDUCATION

2010	Ph.D., Botany, Banaras Hindu University, Varanasi and Indian Institute of Toxicology Research (CSIR), Lucknow
2004	M.Sc., Botany, Banaras Hindu University, Varanasi
2002	B.Sc., Botany (Hons.) with Zoology and Chemistry, MMV, Banaras Hindu University, Varanasi

POST-DOCTORAL RESEARCH EXPERIENCE

2014-2015	Postdoctoral Research Associate, Dept. of Microbiology and Molecular Biology, University of Central Florida, Orlando, FL, USA
2011-2013	Postdoctoral Researcher, Dept. of Obstetrics and Gynecology, Comprehensive Cancer Center at The Ohio State University, Columbus, OH, USA

POSITIONS HELD

Oct 2015-Present	Assistant Professor, Botany, Mahila Mahavidyalaya, Banaras Hindu University, India
Jul 2015-Sept 2015	Assistant Professor, Botany, Sri Venkateswara College, Delhi University, New Delhi, India

RESEARCH AREA

Exploring the prevalence of antimicrobial resistance and virulence in enteric bacteria from environment has been my long standing interest. My research focuses on the studies of drug resistant enteric bacteria viz., vancomycin resistant enterococci and Extended Spectrum β-Lactamase (ESBL) producing thermotolerant coliform bacteria from river Ganga water and other environmental samples.

Ph.D. thesis supervision: Currently, I am supervising the doctoral thesis of Ms. Pooja Verma (M.Sc., Microbiology), she is registered with me for her Ph.D. degree from Department of Applied Microbiology, Institute of Science, BHU.

RESEARCH PUBLICATIONS

1. Real Time PCR for The Rapid Detection of *vanA* Gene in Surface Waters and Aquatic Macrophyte by Molecular Beacon Probe. **Lata, P.**; Ram, S.; Agrawal, M.; Shanker, R. Environ. Sci. Technol. 2009, 43, 3343.
2. #Enterococci in River Ganga Surface Waters: Propensity of Species Distribution, Dissemination of Antimicrobial-Resistance and Virulence-Markers among Species along Landscape. **Lata, P.**; Ram, S.; Agrawal, M.; Shanker, R. BMC Microbiol. 2009, 18, 140.
   #This article has been tagged as Highly accessed on the BMC Microbiology website.
3. Expression Profiling of Toxicity Pathway Genes by Real-Time PCR Array in Cypermethrin-Exposed Mouse Brain. Singh, P.; **Lata, P.**; Patel, S.; Pandey, A. K.; Jain, S. K.; Shanker, R.; Dhawan, A. Toxicol Mech Methods. 2011, 21, 193.
4. HO-3867, A Safe STAT3 Inhibitor, is Selectively Cytotoxic to Ovarian Cancer. Rath, K.S.; Naidu, S.; **Lata, P.**; Bid, H. K.; Rivera, B. K.; McCann, G. A.; Tierney B. J.; Elnaggar, A.; Bravo V.; Leone, G.; Houghton, P.; Hideg, K.; Kuppusamy, P.; Cohn D. E.; Selvendiran, K. Cancer Research. 2014, 74, 2316.
   Note: *Rath K.S., Naidu S. and* ***Lata P.*** *have* ***equal contribution first authorship***
5. Multiplex PCR Based Genotypic Characterization of Pathogenic Vancomycin Resistant *Enterococcus faecalis* Recovered from An Indian River along A City Landscape. **Lata, P.**; Ram, S.; Shanker, R. SpringerPlus. 2016, 5, 1199.
6. Whole-Genome Sequence of *Pantoea americana* Strain VS1, an Extended-Spectrum β-Lactamase-Producing Epibiont Isolated from *Magnolia grandiflora*. **Lata P**, Govindarajan SS, Qi F, Li JL, Maurya SK, Sahoo MK. **Genome Announc.** 2017 Nov 16;5(46). pii: e01285-17.
7. *De Novo* Whole-Genome Sequence of *Pantoea latae* Strain AS1, Isolated from *Zamia floridana* Rhizosphere in Central Florida, USA. **Lata P**, Govindarajan SS, Qi F, Li JL, Maurya SK, Sahoo MK. **Genome Announc.** 2017 Jul 13;5(28). pii: e00640-17.
8. Draft Genome Sequences of Extended-Spectrum-Beta-Lactamase-Producing *Morganella morganii* Strains AA1 and AV1, Isolated from a Freshwater Lake and *Eicchornia crassipes* Roots. **Lata P,** Govindarajan SS, Qi F, Li JL, Maurya SK, Sahoo MK. **Genome Announc**. 2017 Jun 15;5(24). pii: e00527-17.
9. Whole-Genome Sequence of *Bacillus stratosphericus* Strain 5Co, Isolated from Lichen *Usnea florida* in Central Florida, United States, with High Tolerance to Salt and Heavy Metal. **Lata P,** Govindarajan SS, Qi F, Li JL, Maurya SK, Sahoo MK. **Genome Announc.** 2017 Jun 15;5(24). pii: e00500-17.
10. Deep Sequencing-Identified Kanamycin-Resistant *Paenibacillus sp*. Strain KS1 Isolated from Epiphyte *Tillandsia usneoides* (Spanish Moss) in Central Florida, USA. **Lata P**, Govindarajan SS, Qi F, Li JL, Sahoo MK. **Genome Announc.** 2017 Feb 2;5(5). pii: e01523-16.

ABSTRACTS PRESENTED IN INTERNATIONAL/NATIONAL CONFERENCE/S

1. ***Lata P,*** Agrawal M, and Shanker R. Novel Multiplexed Molecular Beacon qRT-PCR Probes for Detection of Pathogenic VRE in Public Drinking Water and Health Risk Estimation of Exposed Community. In: 85th meeting of Society of Biological Chemists (SBC) India; 2016 November 21-24; Mysore, Karnataka, India.

2. ***Lata P*** and Shanker R. Mapping differential gene expression of vancomycin resistant enterococci associated to *Eicchornia crassipes* roots. [abstract]. In: Proceedings of the International Conference on Transcriptomics: Bacterial transcriptomics; 2015 July 27-29; Orlando, Florida, USA.

3. S. Naidu, U. Saini, A.C. ElNaggar, K. Rath, B.K. Hemant, ***Lata P***, R Wanner, M Sudhakar, A Suarez, J Hays, PJ Goodfellow, DE Cohn, S Karuppaiyah. Suppression of ovarian cancer growth and metastasis with HO-3867, a STAT3 inhibitor, in human tissue culture and in an orthotopic mouse model. Gynecologic Oncology. 2015 April 30; 137: 202.

4. Karuppaiyah Selvendiran, Kellie S. Rath, Shan Naidu, ***Lata P***, Bid Hemant, Georgia A. McCann, Veronica Bravo, Peter Houghton, Gustavo Leone, Kálmán Hideg, Periannan Kuppusamy, David E. Cohn. HO-3867, a safe STAT3 inhibitor, is selectively cytotoxic to ovarian cancer. [abstract]. In: Proceedings of the AACR-NCI-EORTC International Conference: Molecular Targets and Cancer Therapeutics; 2013 Oct 19-23; Boston, MA. Philadelphia (PA): AACR; Mol Cancer Ther 2013;12(11 Suppl):Abstract nr A253.

5. McCann GA, Rath KS, Naidu S, ***Lata P***, Bid HK, Sudhakar M, Hideg K, Houghton P, Kuppusamy P, Cohn DE, Selvendiran K. HO-3867, is selectively cytotoxic to ovarian cancer cells through a dual mechanism of action involving the STAT3 and AKT pathways . [abstract]. In: Proceedings of the 104th Annual Meeting of the American Association for Cancer Research; 2013 Apr 6-10; Washington, DC. Philadelphia (PA): AACR; Cancer Res 2013;73(8 Suppl):Abstract nr 1039.

6. ***Lata P***, Patel CB and Shanker R. Detection of *Enterococcus faecalis* in potable water distribution systems by real-time PCR. International Symposium on Environmental Pollution, Ecology and Human Health, 25th-27th July 2009, Sri Venkateswara University, Tirupati, India.

7. ***Lata P***, Ram S, Agrawal M, and Shanker R. Culture-Independent Specific Detection of Vancomycin Resistant Enterococci in Surface Waters by Molecular Beacon Probe. International Conference on Translational Pharmacology & 41st Annual Conference of Indian Pharmacological Society, 18th-20th December 2008, AIIMS, New Delhi, India.

8. Shanker R, Ram S, ***Lata P***, Vajpayee P, Jyoti A, Patel CB, and Dwivedi PD. Pathogen Detection: PCR Probes to Nano-Probes! International Conference on Nanomaterial Toxicology, 5th-7th February 2008, IITR, Lucknow, India.

9. ***Lata P*** and Shanker R. Rapid detection of *Enterococcus faecalis* by multiplex PCR assay. Biotech-2007, 5th Annual Conference of Biotechnology Society of India, On Advances and Strategies in Biotechnology: A Global Perspective. 17th-19th November, 2007. Industrial Toxicology Research Center, Lucknow.

10.Ram S, ***Lata P,*** Vajpayee P, and Shanker R. Diversity of 'indicator' Bacteria in River Gomti waters: Drug resistance and virulence genes. Presented in XXIX All India cell Biology Conference & Symposium on Gene to Genome: Environment & Chemical Interaction, 17th-20th January 2006 at Industrial Toxicology Research Center, Lucknow, India. pp. 85.

11.***Lata P,*** Ram S, Vajpayee P, and Shanker R. Probing Enterococci in surface waters: Plate to PCR. Presented in International Conference on Toxicology, Environmental and Occupational Health – Toxicology and Genomics: Opportunities and Challenges, 14th-17th November, 2005, Lucknow.

MEMBERSHIP OF SCIENTIFIC SOCIETIES

- Premium member, American Society for Microbiology (ASM), USA
- Associate member, American Society for Biochemistry and Molecular Biology (ASBMB),USA
- Affiliate member, American Association for Cancer Research (AACR), USA
- Life member**,** Biotech Research Society of India (BRSI), India
- Life member, Indian Nanoscience Society (INS), India

AWARDS AND HONORS

- UGC BSR Research Startup Award (2016-2018)
- Distinction certificate in Bioinformatics online course from Johns Hopkins University, USA
- D S Kothari Postdoctoral Fellowship, UGC, 2010 (Not Availed)
- Senior Research Fellowship, CSIR, 2006
- Best Poster award in International Toxicology Conference (ICONTOX), Indian Institute of Toxicology Research, Lucknow
- Junior Research Fellowship, UGC-NET (2005) and GATE-2004
- Junior Research Fellowship, CSIR-NET and shortlisted for Shyama Prasad Mukherjee (SPM) fellowship exam conducted by CSIR in July, 2004
- Mrs. Prem Kumari Singh Gold Medal in Ecology as special paper in M.Sc. (2004), Dept.of Botany, Banaras Hindu University, Varanasi

TEACHING SERVICES AT UNIVERSITIES

Ph.D. Course work teaching on topics: Bioinformatics and Proteomics at Institute of Science, Banaras Hindu University

M. Sc. Metagenomics and recombinant DNA technology in Department of Applied Microbiology at Institute of Science, Banaras Hindu University

M.Sc. Microbiology and biotechnology in Department of Bioinformatics at MMV, BHU

B. Sc. Molecular Biology and Biotechnology, Plant Physiology and Biochemistry, Gymnosperms in Botany at MMV, Banaras Hindu University

B. Sc. Life Sciences, Biological Sciences, and Botany at Sri Venkateswara College, University of Delhi, New Delhi

- Guided dissertation of B.Sc. Botany (Hons.) and M.Sc. Bioinformatics students

RECENT MISCELLANEOUS SERVICES GIVEN TO THE UNIVERSITY

- Member, B.Sc. and M.Sc. Botany course revision committee, Dept. of Botany, Institute of Science, Banaras Hindu University
- Member, Admission and course revision committee of M.Sc. Bioinformatics course, Mahila Maha Vidyalaya, Banaras Hindu University
- Local member, Conference organizing committee of MMV and Dept. of Botany, Institute of Science, Banaras Hindu University
- Warden, Jyoti Kunj Hostel, Mahila Maha Vidyalaya, Banaras Hindu University
- Member, Hostel allotment committee, sports committee and alumni committee MMV, Banaras Hindu University
- Conducted botanical excursion and field trip for the B.Sc. final year students (2017) to BSI, Allahabad and the Jurassic garden (example of *ex situ* conservation and a marvellous collection of archaic gymnosperms from around the world by internationally renowned palaeobotanist late Prof. Divya Darshan Pant) at the department of Botany, Allahabad University