Name Dr. Garvita Singh
Designation Assistant Professor
Department Botany
University University of Delhi
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EDUCATIONAL QUALIFICATION

Exam/ Degree	Institution	Subjects	Year
Ph. D.	Banaras Hindu University	Botany	2013
M. Sc.	Banaras Hindu University	Botany	2009
B. Sc.	Banaras Hindu University	Botany (Hons.), Chemistry, Zoology	2007

Research Experience

Project title at Post Graduation Level-Title of Project: Morphological and Molecular Characterization of *Frankia* Isolated from *Hippophae salicifolia* in Dept. Of Botany, BHU, Varanasi.

Worked as JRF in DST project (P-07-444), School of Biotechnology, BHU, Varanasi.

Thesis title- "Ultraviolet-B radiation-induced effects and defense mechanisms in *Anabaena* species: Synthesis of an efficient sunscreen agent employing ZnO nanoparticles".

Areas of Interest/Specialization

Cyanobacterial Biology, UV-B Protectants, Nanobiology and Nanotoxicology.

List of Publications

- Garvita Singh, PK Babele, RP Sinha, MB Tyagi and Ashok Kumar (2013) Enzymatic and non-enzymatic defense mechanisms against ultraviolet-B radiation in two *Anabaena* species. *Process Biochem* 48: 796–802.
- Garvita Singh, PK Babele, RP Sinha, MB Tyagi and Ashok Kumar (2014) Biosynthesis of ZnO nanoparticles using the cell extract of the cyanobacterium, *Anabaena* strain L31 and their conjugation with the mycosporine-like amino acid-shinorine. *J Photochem Photobiol B: Biol*.
- Garvita Singh, PK Babele, RP Sinha, MB Tyagi and Ashok Kumar (2014) Synthesis of silver nanoparticles using cell extract of a N_2-fixing cyanobacterium, *Anabaena doliolum* and screening of their biocidal effects. *J. Microbiol. Biotechnol*.

- Piyoosh K Babele*, Garvita Singh*, MB Tyagi and Ashok Kumar (2015) Induction and differential expression of certain novel proteins in *Anabaena* L31 under ultraviolet-B radiation. *Front. Microbiol.* 6:133.doi:10.3389/fmicb.2015.00133(equal contribution)

- PK Babele, Garvita Singh, MB Tyagi, RP Sinha and Ashok Kumar (2012) Biological effects of ultraviolet-B radiation. In: Proceedings of the seminar on "*Biotechnological Interventions for the Benefits of Mankind*" (Ed. B.D. Kaushik), Publisher AEC, Agra pp. 49-64.

- PK Babele, Garvita Singh, MB Tyagi, RP Sinha and Ashok Kumar (2012) Ultraviolet-B radiation effects on cyanobacteria and the role of sunscreen pigments in its protection. *Phykos* 42: 1-13.

- Richa, RP Rastogi, Sunita Kumari, KL Singh, VK Kannaujiya, Garvita Singh, Minu Kesheri and RP Sinha (2011) Biotechnological potential of mycosporine-like amino acids and phycobiliproteins of cyanobacterial origin. *Biotechnol Bioinf Bioeng* 1: 159-171.

- Richa, VK Kannaujiya, Minu Kesheri, Garvita Singh and RP Sinha (2011) Biotehnological potenials of phycobiliproteins. *Int J Pharma Bio Sci* 2: 446-454.

CONFERENCE / SYMPOSIA / SEMINARS/ SUMMER SCHOOLS and Abstracts

1. Participated in International symposium on Phycological research at Department of Botany, Banaras Hindu University, India.
2. Poster presentation in the Annual conference of Association of Microbiologists of India (AMI), "International Conference on Microbial Biotechnology for Sustainable Development, Punjab University, Chandigarh.
3. Poster presentation in National symposium on "Current Status and New Horizons of Ecological Sciences and Environmental Biotechnology (ESEB-13), Department of Botany, Banaras Hindu University, India.
4. Participated in International conference on "Microorganisms in Environmental Management and Biotechnology, organized by department of Biotechnology and Bioinfomatics centre, Barkatullah University, Bhopal.
5. Abstract entitled "Mycosporine-like amino acids (MAAs) synthesis and protein turnover during UV-B radiation exposure in *Anabaena* species" presented in International conference on microorganisms in environmental management and Biotechnology (ICMEB-2011), organized by Barkatullah University, Bhopal, India.
6. Abstract entitled "Induction of mycosporine-like amino acids (MAAs) and protein turnover in *Anabaena* sp. under UV-B stress" accepted in 52nd annual conference of association of microbiologist of India (AMI-2011) organized by Punjab University, Chandigarh.
7. Abstract entitled "Biological effects of Ultraviolet-B radiations" accepted in National seminar on Biotechnological Interventions for the Benefits of Mankind, organized by Anand Engineering College, Agra, India.
8. Abstract entitled "Alterations in antioxidative enzymes activity and proteome of the cyanobacterium, *Anabaena doliolum* under UV-B stress" presented in 53rd annual conference of association of microbiologist of India (AMI-2012) organized by KIIT university, Bhubaneswar, India.

9. Abstract entitled "Proteomics analysis of *Anabaena* BT2 after UV-B stress" accepted in lost pines conference 2012 organized by The University of Texas, Smithville, Texas, USA.
10. Abstract entitled "Synthesis of Ag nanoparticles from *Anabaena* L31 and its bactericidal effect on multidrug resistant bacteria" accepted and poster presented in 82nd annual session and national symposium on "nano-science and technology for mankind" organized by NASI and BHU, India.
11. Abstract entitled "Enzymatic and non-enzymatic defense mechanisms against ultraviolet-B radiation in two *Anabaena* species" in national symposium on current status and new horizons of ecological sciences and environmental biotechnology (ESEB -13) by Banaras Hindu University, Varanasi, India.

Awards & Achievements

Qualified GATE
Qualified UGC-NET
Awarded with UGC-Post Doctoral Fellowship (School of Biotechnology, BHU)

OTHER TRAINING AND EXPERIENCES

1. Participated in Summer School on "Development and Characterization of Advanced Materials" under UGC Networking Programme held from Feb. 22, 2013 to March 14, 2013 at Department of Physics, Banaras Hindu University, India
2. Worked as resource person in the hands-on training in "Techniques in Biology" organized at Dept. of Botany, MMV, BHU under star College Scheme of DBT in **2011**
3. Worked as resource person in the hands-on training in "Techniques in Biology" organized at Dept. of Botany, MMV, BHU under star College Scheme of DBT in **2012**
4. Participated in Demonstration of Discovery studio 3.0 at Centre for Bioinformatics, School of Biotechnology, Banaras Hindu University on 20th April 2011 for supporting research activity in Protein Modelling and Simulation for Biological Research

GARVITA SINGH