



## Dr Shikha Srivastava

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### Professional Summary:

I have been working in the field of Botanical research since 2010 continuously. At present, I am teaching young students about the intricacies of Botany in a simplified manner using various ICT tools. My academic journey started with M.Sc. from Lucknow University which further propelled me for M. Phil from University of Delhi. I worked as Women Scientist for revival of one endangered plant, first in CIMAP Lucknow and then in University of Delhi. I am passionate about Botany in general and Medicinal Plant in particular. In fact, I brought out the medicinal property of the plant, on which I completed my work as women scientist.

I have keen interest in Tissue culture, Phytochemical investigations, Anti-Microbial properties of the compounds isolated and other applied aspects of Botany. Apart from various achievements, I love to learn and share everything about plant world to the best of my ability. I always try to apply my knowledge to find out practical ways to save the natural resources including plants. I have also passion for learning pedagogical skills. Recently, I played a role as member of NAAC task force team and worked for criteria VII for my college where I am working presently as Assistant professor. On August 09<sup>th</sup>, 2024 I got listed as Master Trainer, in Indian Knowledge Systems. (Ref: [https://www.ugc.gov.in/pdfnews/7529940\\_IKS-MT.pdf](https://www.ugc.gov.in/pdfnews/7529940_IKS-MT.pdf))

### Key Technical Skills:

#### **Computational Biology**

- **Phylogenetic Analysis:** Sequence Alignment (Clustal W, MUSCLE, MEGA 5.2, 6.0), Sequence Similarity Search (BLAST, PSI-BLAST, FASTA), phylogenetic tree construction (MEGA 6.0).
- **Statistical Packages:** Microsoft Excel, SPSS, ANOVA
- **Molecular Docking Techniques:** MD techniques especially to obtain the potential molecule for drug designing.
- **Genomics, Proteomics and Metabolomics.**

#### **Experimental Biology**

- **Tissue Culture Techniques:** Well versed in the various techniques used in plant tissue culture.
- **Micropropagation Techniques:** Expertise in *in vitro* establishment of medicinal and aromatic plants, removal of browning from media, acclimatization, biopriming and hardening techniques.
- **Microbiological Techniques:** Culture media preparation, Isolation of microorganisms, Microbial culture preparation, *in vitro* and *ex vitro* elicitation techniques, antimicrobial activity of natural products (secondary metabolites).
- **Molecular Biology Techniques:** Plant and microbial DNA isolation, Gel Extraction, Gel Electrophoresis, PCR amplification, Cloning and marker studies.
- **Chromatographic Techniques:** Thin layer chromatography, High performance liquid chromatography, Gas chromatography-mass spectrometric techniques, Liquid chromatography- mass spectrometric techniques.

#### **Computational Skills**

- **Working Platforms:** Microsoft Windows, Mac OS and proficient in MS office

#### **Work experience:**

- Teaching presently as Assistant Professor (Adhoc) in Bhaskaracharya college of applied sciences University of Delhi (23/07/19 - till date).
- Taught as guest faculty in Kalindi college (15/09/18 - 22/04/19).
- Worked as DST-Woman Scientist in CSIR-CIMAP, Lucknow (04/12/12 – 30-06-2014).
- Continued as DST-Woman Scientist in Department of Botany, University of Delhi (01/07/2014 – 17-02-2015).

#### **Delivered Talks:**

- **Served** as a Key Resource Person during the two days workshop on Comprehensive Strategies for Rejuvenation of River Yamuna jointly organized by Delhi Pharmaceutical Sciences and Research University (DPSRU) and the Indian Institute of Technology (IIT, Delhi) held on October 8<sup>th</sup>-9<sup>th</sup>, 2025.
- **Served** as a Key Resource Person on 23<sup>rd</sup> April in a 15 days International Conference on The Indian Knowledge System: Glorious Legacy, Contemporary Relevance and Future Prospects organized by Kanahaiya Lal Manik Lal Munshi Hindi and Linguistics Vidyapeeth, Dr. Bhemrao Ambedkar University, Agra. Held on July 21st, 2025 to August 03<sup>rd</sup>, 2025.
- **Delivered** a lecture in six days UGC-Capacity-building Program (CBP) in Indian Knowledge System(IKS) on Basic Training Programme on the Indian Knowledge System for the faculty

of Higher Education Institutions (HEIs) at the Malaviya Mission Teacher Training Centre in Hansraj College, University of Delhi, Delhi on February 20<sup>th</sup>, 2025.

- Delivered online lecture on the topic “**History of Indian Food**” as one of the chapters, **under NEP, Value added Courses-1: Ayurveda and Nutrition** at University of Delhi for the Delhi University Teachers Peer Group (19/11/2022)
- Delivered online lecture on the topic “**Wonders of Nutrition: with special emphasis on importance of first thousand days in human beings’ life**” to Undergraduate and PG students of Savitri Bai Phule Pune University. (24/09/2021)
- Delivered online lecture on the topic “**Basics of Tissue Culture Techniques: with special emphasis on medicinal plants**” to PG students at All India Institute of Ayurveda. (12/03/2021)
- Delivered several lectures for Indian teachers under Aahar Kranti Mission, a National level initiative launched in 2021.
- **Special Achievements:**
- Attended several FDP’s and Refresher course in Teaching skills/ pedagogical tools with special emphasis on attaining skills for 21<sup>st</sup> century blended learning and NEP, achieved grade A+ in maximum.
- Worked as a volunteer for Aahar Kranti mission for module preparations.

### **Education:**

- **Ph.D. (2014-2017)** from Department of Botany, University of Delhi, on topic “Acclimatization of *in vitro* raised *Decalepis aroyalpathra* KMA 05 clones and assessment of antibacterial properties of secondary metabolites produced”.
- **DST Woman Scientist project (2012-2015)** in Plant Biotechnology on topic entitled, “Tissue culture and Secondary metabolite production studies in *Janakia aroyalpathra* (A Critically endangered medicinal and aromatic plant of southern forests)” 04-12-2012 to 30-06-2014 (CSIR-CIMAP, LUCKNOW). 01-07-2014 to 17-02-2015 (University of Delhi).
- **M.Phil. (2010-2011)** in Applied Microbiology and Biotechnology on dissertation entitled, “Degradation of Aflatoxin B<sub>1</sub> By fungal Peroxidase, from the Department of Botany, University of Delhi, Delhi (84%) marks.
- **M.Sc. (2008-2010)** in Plant Science from University of Lucknow, Lucknow (68.5% marks).
- **B.Sc. (1995-1998)** from Dr. B. R. Ambedkar University, Agra (64.3% marks).

### Research Experience:

- **September, 2010-2011:** M. Phil student at Department of Botany, University of Delhi, Delhi
- **December 2012-June 2014:** Woman Scientist-A at CSIR-CIMAP, Lucknow.
- **July 2014- February 2015:** Woman Scientist-A at Department of Botany, University of Delhi, Delhi, India
- **Accomplishments:** Published seven peer reviewed research articles and one book chapter.

### Publications and Book Chapter:

- Abhijit Debnath, Rupa Mazumder, Avijit Mazumder, Soumya Tripathi, Arpita Dua, Rajesh Kumar Singh, Saloni Mangal, Jahanavi Sanchitra, Pratibha Pandey, Biplab Pal, Hema Chaudhary, Parul Sharma and **Shikha Srivastava** (2024). miRNA-Targeted Vaccines: A Promising Approach for Viral Attenuation and Immunogenicity Enhancement. PMID: 39092652.
- **Shikha Srivastava**, Abhijit Debnath and Nalla Vijay Kumar (2024). *Decalepis arayalpathra*: Ethnobotany, Scientific Interventions and Prospects, Open access journal of botanical insights 2 (1): 1-8
- Abhijit Debnath, Hema Chaudhary, Parul Sharma, Rajesh Singh and **Shikha Srivastava** (2024). A Deep Dive into PDE5 Inhibition: Innovative Discoveries via Virtual Screening, Letters in Drug Design and Discovery 21(16): 3425-3442
- Abhijit Debnath, **Shikha Srivastava**, Shalini Sharma(2023). Artificial Intelligence in Personalized Medicine. Recent advances in Biosciences and Biotechnology (33).
- Abhijit Debnath, Hema Chaudhary, Siddhartha Roy, **Shikha Srivastava** (2023). High-throughput virtual screening of novel CHK1 inhibitors. Oncology and Radiotherapy, 17 (1): 030-036
- Abhijit Debnath, Rupa Mazumder, Avijit Mazumder, Rajesh Singh, **Shikha Srivastava** (2023). In Silico Identification of HDAC Inhibitors for Multiple Myeloma: A Structure-based Virtual Screening, Drug Likeness, ADMET Profiling, Molecular Docking, and Molecular Dynamics Simulation Study. Letters in Drug Design & Discovery, 2023, 20, 000-000
- **Srivastava, S.**, Nalla, V. K., Singh, V. P., & Prasad, R. (2022). Optimization of in vitro micropropagation and root establishment through combinatorial approaches for enhanced

production of secondary metabolites in the endangered species *Decalepis arayalpathra* KMA 05 clones. Brazilian Journal of Botany, 1-13.

- **Srivastava, S., & Singh, V.P.** (2020). Characterization of biocontrol microorganisms from the rhizoplane of *Decalepis arayalpathra* and screening of secondary metabolites. *Vegetos: An International Journal of Plant Research and Biotechnology*, 33(2), 352-359.
- **Srivastava, S., Laisram, N. and Singh, V. P.** (2018). *In vitro* secondary metabolite production from the roots of *Decalepis arayalpathra* KMA 05 clones and its antimicrobial potential using *Methylobacterium* sp. VP103 as an elicitor. *European Journal of Experimental Biology*. 8: 3-17.
- **Srivastava, S., Laisram, N., Ram, H. and Singh, V. P.** (2017). Bio-priming of tissue culture raised *Decalepisarayalpathra* (J. Joseph & V. Chandras.) Venter, KMA 05 clones with the phyllospheric bacterium, *Methylobacterium* sp. VP103 and its biocontrol potential. *Vegetos* **30 (Special-1)**: 41-51.
- **Singh, V. P., Kumar R., Singh I and Srivastava S.** (2013) Microsome Technology as a Potential Bioremediation option for health and Environmental protection. *Journal of Environmental Research and Development*, 8 (1):27-32.

### Presentation in Conferences, seminars and symposia:

- **Laisram, N. and Srivastava, S.** (2018) “Elicitors as a Tool for Production of Secondary Metabolites from Cell Cultures” (**Poster Presentation**), National Conference on “Challenges and Strategies to Improve Crop Productivity in Changing Environment: An Integrated Approach” at Zakir Hussain Delhi College (University of Delhi), January 12, 2018.
- **Srivastava, S., Laisram, N. and Singh, V. P.** (2017) “Comparative *In Silico* Analysis for Assessing Antibacterial Properties of Compounds of Bacterial [Cyclo (leucyloprolyl)] and Plant (Alpha-amyrin) Origins Against *Helicobacter pylori* Through its Peptide Deformylase” (**Oral Presentation**), National Seminar on “Microbes and Human Welfare” at Jaipur National University, Jaipur, September 23-24, 2017.
- **Srivastava, S., Laisram, N., Ram, H. and Singh, V. P.** (2017) “Bio-priming of Tissue Culture Raised *Decalepisarayalpathra* (J. Joseph & V. Chandras.) Venter, KMA 05 clones with the Phyllospheric Bacterium, *Methylobacterium* sp. VP103” (**Oral Presentation**), International Conference in “Technological advancement for rural development and agricultural sustainability” (TASARD) at National Academy of Agricultural Sciences, New Delhi, February 20-22, 2017 (**Best Paper Award**).

- **Srivastava, S.,** Laisram, N , Rahman, L. and Singh, V.P. (2016) “ Evaluation of 2H4MB (2-hydroxy 4-methoxy benzaldehyde) and its Antimicrobial Properties in the Roots of *Decalepis aryalpathra* (Joseph & Chandras) (KMA 05) Clones using Silver Nitrate Stress: An *in-vitro* Approach”(Poster Presentation), National Conference on “Plant Science Research: Looking beyond 21<sup>st</sup> Century for Environmental and Agricultural Revolution”, Department of Botany, Delhi University, February 5-7, 2016.
- **Srivastava, S.,** Velusamy, S., Zhang, T. and Rahman, L. (2015) “*In vitro* Establishment and Mitigation from Calcium Deficiency: A Comprehensive Study in *Decalepis aryalpathra*: A Lithophytic Plant from Southern Forests” (Poster Presentation), International Conference on “Medical Plants Resource for Affordable New Generation Healthcare”, CSIR-CIMAP, Lucknow, March 20-22, 2015.
- **Srivastava, S** and Alam, S. (2015) “Revealing The Therapeutic Activity of Secondary Metabolites of *Decalepis aryalpathra*: An *In-Silico* Approach” (Poster presentation), National Seminar on “Biotechnology and Molecular Biology for Industry and Common Man”, St. Aloysius college, Mangalore, January 29-31,2015.
- **Srivastava, S.,** Rahman, L. and Velusamy, S. (2014) “Establishment of an Efficient Callus Induction and Direct Regeneration System in *Decalepis aryalpathra*”(Oral presentation) National Symposium on “Advances in Plant Molecular biology & Biotechnology”, IISER, Pune, March 10-12, 2014.
- **Srivastava, S.,** Singh, V.P and Kumar, R. (2013) “Microsomal Degradation of Aflatoxin B<sub>1</sub>”(Poster presentation) National Conference on “Microbes Promoting crop health, productivity & sustainability”, CSIR-CIMAP, Lucknow, October 26-27, 2013.

### Scientific Workshops/Training Programmes:

- “One day workshop on, Recent Trends in Plant Systematics and Future Prospects”, held at Dyal Singh College, University of Delhi, March 12, 2019.
- **International Hands-on Workshop on “Transcript Profiling using Real Time PCR”,** Faculty of Life Sciences and Biotechnology (FLSB), November 1-2, 2018.
- “One day workshop on, How, What and Where to Publish Research Articles?”, held at Centre for Professional Development in Higher Education (CPDHE), University of Delhi, June 5<sup>th</sup>, 2018.
- “Training Workshop on Advanced Techniques in Mycorrhizal Research”, The Energy and Resources Institute (TERI), Gram, GualPahiri, Gurgaon, Haryana, February 21-23, 2018.

- **“Training On Commercial Cultivation of Aromatic Crops, its Processing and Marketing”**, Fragrance and Flavour Development Centre, Kannauj, Uttar Pradesh, April 09-13, 2018.
- **“Bioinformatics Workshop on Genomics, Proteomics, Drug Design & High-Performance Computing”**, Indian Institute of Technology Delhi, August 21-31, 2017.
- **“Energy Dispersive X-Ray Fluorescence Spectrometry (EDXRF) and its applications”**, from Advanced Instrumentation Research Facility, Jawaharlal Nehru University, New Delhi, July 12, 2017.
- **“Gas Chromatography-Mass Spectrometry: Principles and Applications”**, from Advanced Instrumentation Research Facility, Jawaharlal Nehru University, New Delhi, April 28, 2017.
- **“Fundamentals of GC-MS with GC-MS Solution Workstation”**, Shimadzu Analytical (India) Pvt. Ltd. New Delhi, November 17-18, 2016.
- **“MS Excel training programme”** organized by weekendr training centre by expert faculty of Delhi University (Dr. Supriya Chopra), July 30<sup>th</sup> to August 27<sup>th</sup>, 2016.
- **“SPSS training programme”** organized by weekendr training centre by expert faculty of Delhi University (Dr. V. Ravi), July 16<sup>th</sup> to August 30<sup>th</sup>, 2016.
- **2<sup>nd</sup> Plant Proteomics Workshop / Training Programme”** organized by the Delhi University Botanical Society (DUBS), Department of Botany, University of Delhi, December 21-26, 2015.
- **“Bioinformatics Workshop on Genomics, Proteomics, Drug Design & High-Performance Computing”**, Indian Institute of Technology (IIT), Delhi, July 01-10, 2015.
- For more achievements 2019 onwards visit to [www.bcas.du.ac.in](http://www.bcas.du.ac.in) in **Publications >Annual Reports Section>Dept. of Botany**

### Memberships:

- **Lifetime membership** of International Society of Plant Morphologists, Department of Botany, University of Delhi.
- **Lifetime membership** of Nutrition Society of India, National Institute of Nutrition, Hyderabad.
- **Membership at Global Scientists and Technocrats Forum (GIST)**, Worked as volunteer in module preparations of Aahar Kranti during COVID times.

### Miscellaneous:

- **Completed** Discipline Specific Master Trainer Programme in Indian Knowledge Systems.

- **Participated as Volunteer in Academic and Cultural Festival** (Antardhwani, 2015-2017) organized annually by Department of Botany, University of Delhi.
- **Participated in Botanical Quiz Competition** organized annually by Delhi University Botanical Society at Department of Botany, University of Delhi 2014-2015, (Got Appreciation Certificate).
- **Merit Certificate** in M.Sc. Plant Sciences.

### **Current Assignments at Bhaskaracharya College of Applied Sciences:**

(AECC- Ability Enhancement Compulsory Course; ATPS-Analytical Techniques in Plant Sciences; BCAS-Bhaskaracharya College of Applied Sciences; BL & FSB- Basic Laboratory and Field Skills in Botany; BPG-Bryophytes, Pteridophytes, Gymnosperms; CBCS-Choice based credit system; LOCF-Learning outcome-based curriculum framework; NEP-National Education Policy; VAC-Value Added Courses; SEC-Skill Enhancement Courses)

#### **Academic:**

- Taught, Plant Resources and Economic Botany, Microbiology and Plant Microbial Relations, BL & FSB and BPG, the Core papers to NEP batch students.
- Taught, Mushroom cultivation part one and part two, the SEC papers to NEP batch students.
- Taught, Ayurveda and Nutrition, Ethics & Culture, Digital Empowerment, the VAC papers to NEP batch students.
- Taught Analytical techniques in Plant Sciences (ATPS), Industrial Microbiology, Economic Botany, Medicinal Botany, the core papers to B.Sc. (H), Botany students. (CBCS & LOCF batches)
- Taught Economic Botany and Plant Biotechnology, the GE paper to CBCS batch students.
- Taught Environmental Sciences, the AECC paper to CBCs batch students.

#### **Phytomics Society:**

- Coordinated several National and International scientific talks, workshops and educational visits for students which not only breaks the monotony of classroom teaching whereas helping them in giving the practical overview of application and better flavor of the subject.  
([www.bcas.du.ac.in](http://www.bcas.du.ac.in))

#### **Extra-Curricular at BCAS:**

- Currently holding the post of Convener, IKS (Indian Knowledge Systems) Club, Vivaswan.

- Currently working as member, Annual report committee at BCAS.
- Worked as Music Club Convener and organized several competitive and non-competitive musical events for students till the year 2023.
- Working actively as Garden committee member since 2019, taken many initiatives for the green campus of college e.g., Bio compost and preparations of leaf waste compost.  
[https://www.youtube.com/watch?v=L1FgRjtW\\_Pw&t=24s&ab\\_channel=BhaskaracharyaCollegeofAppliedSciences](https://www.youtube.com/watch?v=L1FgRjtW_Pw&t=24s&ab_channel=BhaskaracharyaCollegeofAppliedSciences)
- Worked actively as member of women development cell till the year 2023.
- Working actively as member and department representative of Training and Entrepreneurship committee since 2021.
- Working as NAAC task force member for Criteria seven since 2022.

### **Personal Information:**

**Date of Birth:** 01 January 1978

**Marital Status:** Married

**Nationality:** Indian

**Languages:** Hindi, English

**Residential Address:** C/o Ajeet Kumar Srivastava, CK-03/ 2A, Chanakya Rail Enclave, Near Bihar Niwas, opposite to CRIS Office, Chanakyapuri, New Delhi, Delhi 110 021.

**Permanent Address:** C/o Janardan Lal, A/18, Kamla Nehru Nagar, Khurram Nagar, Lucknow (U.P.), 226 022.

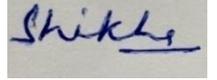
**Mobile no:** 09560167669

### **References:**

- Ajay Kumar Mathur, Retired Chief Scientist, CSIR-CIMAP, Lucknow, presently serving a Private Commercial Plant Tissue Culture Laboratory in Mysore as Chief R&D advisor,  
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- Prof. Avneesh Mittal, Officiating Principal, Bhaskaracharya College of Applied Sciences. Dwarka, Sector 2, Phase 1.  
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**Declaration:**

I hereby declare that all the above information supplied is true in all aspects.



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