

## CURRICULUM VITAE



**Samira Chugh**

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### **Educational qualifications:**

<b><u>Name of the examination passed</u></b>	<b><u>Board/University</u></b>	<b><u>Year of passing</u></b>	<b><u>Percentage of marks scored</u></b>
Ph.D.	University of Delhi	2011	
M.Phil.	University of Delhi	2006	85.8%
M.Sc. Botany	University of Delhi	2004	72.6%
B.Sc. Botany	University of Delhi (Daulat Ram College)	2002	77.4%
XII	ISC	1999	75.6%
X	ICSE	1997	81.7%

### **Academic Achievements:**

- Qualified UGC- JRF June (2005)
- First position in all three years in B.Sc. (Hons.) Botany.
- **Second position in the University in B.Sc. (Hons.) Botany.**
- Received National Scholarship under ‘Centre of Advance study scheme in Botany’ (for the year 2002-03).
- **First position in M.Phil. Botany in the Department of Botany, University of Delhi.**
- Awarded Shri Asa Nanda Memorial Silver medal instituted by Dr. Kanan Nanda given to the student of B.Sc. (H) Botany second year for securing highest marks in first year examination.
- Awarded Dr. Sudha Sehgal, Mrs Vineeta Behl and Mrs Mamta Rastogi Memorial prize instituted by teachers of Daulat Ram College for securing **II<sup>nd</sup> position in in the University in B.Sc. (Hons.) Botany.**

- Awarded Smt. Leelawati Nanda Memorial prize instituted by Dr. Kanan Nanda for **Best All Round Student** of B.Sc. (Hons.) Botany III<sup>rd</sup> year.
- Second position in Poster presentation in National Seminar on Orchid Conservation, Improvement and commercialization, Chandigarh.

### **Certificate Courses:**

- “Energy and Environment Awareness” conducted by Delhi University Environment and Energy Group under the aegis of Centre for Science Education and Communication (1999-2000)
- S4D4C European Science Diplomacy Online Course

### **Research Experience**

*Title of M.Phil. Thesis (Review):* Micropropagation of Orchids

*Title of Ph.D. Thesis: In Vitro* Propagation of Ornamental Plants: Everlasting Paper Daisy [*Helichrysum bracteatum* (Vent.) Andrews], a Commercially Important Orchid Hybrid (*Cattleya Summer Song*) and a Foliage Plant (*Yucca Golden Sword*)

### **Publications**

*Research papers:*

- **Chugh, S.; Guha, S. & Rao, I.U. 2009. Micropropagation of orchids: A review on the potential of different explants. Sci. Hortic., 122: 507-520. (ISSN: 0304-4238) Impact factor: 4.342.**

**Citations: 410**

**Most Downloaded Review of Elsevier in 2010-2011**

- Priyanka Pandey and **Samira Chugh**. 2022. Careers in Science Diplomacy. Science Diplomacy Digest. IN PRESS  
(ISSN: 2456-5318 (Online)).
- **Samira Chugh**. 2022. Science Diplomacy in 2022: More Cooperation or More Division? Science Diplomacy Digest. SD Vol. 5(4): 17-20.  
(ISSN: 2456-5318 (Online)).

- Sharma, A., Raina M., Kumar, D., Singh A., **Chugh, S.**, Jain, S., Kumar, M., Rustagi, A. (2022) Harnessing phytomicrobiome signals for phytopathogenic stress management. *J Biosci.* 47(6). PMID: 35092408. <https://doi.org/10.1007/s12038-021-00240-9>  
Impact Factor: 1.65 (2019)  
ISSN: 0250-5991 (print); 0973-7138 (web)
- Renu Soni, Kirti Sharma, Sanchita Kumar and Samira Chugh (2021) Impact of COVID-19 pandemic on Biotic and Abiotic Factors of the Environment. *Akademios XV*: 168-192. (ISSN 2231-0584).
- **Samira Chugh**, Monika Jaggi, Priyanka Pandey nee Kapoor, and I Usha Rao (2018) *In Vitro* Propagation of Everlasting Paper Daisy [*Helichrysum bracteatum* (Vent.) Andrews] using Shoot Tip Explants. *Phytomorphology*, 68 (3&4): 77-86.
- Priyanka Pandey nee Kapoor, **Samira Chugh** and I Usha Rao (2018) Seed rhizome induction during *in vitro* organogenesis of *Bambusa bambos* var. *gigantea* Bennet and Gaur. *Phytomorphology* 68 (1&2) 1-6.
- **Samira Chugh**, Monika Jaggi & I. Usha Rao. 2015. *In Vitro* Rapid Plantlets Regeneration of Orchid Hybrid *Cattleya* Summer Song. *Phytomorphology*, 65 (3&4), 95-108. (ISSN: 0031-9449).

#### **Chapters:**

- Malik, G., **Chugh, S.**, Hooda, S., Chaturvedi, R. 2022. Plant Growth Promoting Rhizobacteria (PGPR)- Assisted Phytoremediation of Contaminated Soils. In: *Bacterial Endophytes for Sustainable Agriculture and Environmental Management*, A. K. Singh et al. (eds.). Springer Nature Singapore [https://doi.org/10.1007/978-981-16-4497-9\\_4](https://doi.org/10.1007/978-981-16-4497-9_4)
- Malik, G., Chugh, S., Madan, A. (2022). The Potential of Plant Growth-Promoting Rhizobacteria (PGPR) as Biological Tools in Enhancing Agricultural Sustainability. In: Sayyed, R., Singh, A., Ilyas, N. (eds) *Antifungal Metabolites of Rhizobacteria for Sustainable Agriculture*. *Fungal Biology*. Springer, Cham. [https://doi.org/10.1007/978-3-031-04805-0\\_14](https://doi.org/10.1007/978-3-031-04805-0_14)
- Anjana Singh, **Samira Chugh**, Dwaipayan Sinha, Arpita De (2022) Role of Nanotechnology in Fortifying Nutraceuticals. In: *Bhattacharya T. (ed.) Handbook of Nanotechnology in Functional Foods*. Wiley-Scrivener
- Anjana Rustagi, **Samira Chugh**, Shweta Sharma, Punam Kumari and Deepak Kumar (2021) Plant–Insect Interaction: A Proteomic Approach in Defence Mechanism. In: *Plant-Pest Interactions: From Molecular Mechanisms to Chemical Ecology*. I.K. Singh and A. Singh (eds.) Springer Nature Singapore Pte Ltd.

ISBN 978-981-15-2466-0 ISBN 978-981-15-2467-7 (eBook)  
(<https://doi.org/10.1007/978-981-15-2467-7>).

- Garima Malik, **Samira Chugh**, Anjana Rustagi and Rahul Arora (2020) Plant species forbidden in health and their toxic constituents. *In: Galanakis C.M. (ed) Food Toxicology and Forensics. Academic Press, Elsevier. ISBN: 978-0-12-822360-4.*
- **Samira Chugh**, Geeta, Preeti Agarwal and Reema Mishra (2021) Common Indian Medicinal Plants with antidiabetic Potential. *In: Hand Book of Agriculture & Plant Sciences. D. Sinha (Ed.) ABS Books Trident Enterprise. ISBN- 978-93-91002-25-1*
- Preeti Agarwal, Reema Mishra, **Samira Chugh** and Geeta (2021) Plant Nutraceuticals: An Emerging Approach for Better Health Management. *In: Hand Book of Agriculture & Plant Sciences. D. Sinha (Ed.) ABS Books Trident Enterprise. ISBN- 978-93-91002-25-1*
- Chugh S, Sharma S, **Rustagi A**, Kumari P, Agrawal A, Kumar D (2018) Enhancing Cold Tolerance in Horticultural Plants Using *In Vitro* Approaches. *In: Zargar S., Zargar M. (eds) Abiotic Stress-Mediated Sensing and Signaling in Plants: An Omics Perspective. Springer, Singapore (ISBN 978-981-10-7478-3 ISBN 978-981-10-7479-0 (e book) <https://doi.org/10.1007/978-981-10-7479-0> 8)*
- Rustagi A, Malik G, **Chugh S**, Agrawal S, Shekhar S and Pandey N. 2017. ‘Genetic Manipulation of Litchi for crop Improvement: Challenges and Possibilities *In: Kumar M et al eds. The Lychee Biotechnology’ Springer Nature, Singapore eBook ISBN 978-981-10-3644-6, Hardcover ISBN 978-981-10-3643-9, DOI10.1007/978-981-10-3644-6*
- **Samira Chugh**, Monika Jaggi & I. Usha Rao. 2016. The Blooming Floriculture Industry and Micropropagation of Ornamental Plants. *In: Trivedi, P.C. (Editor) Biotechnology in Crop Improvement. Pointer Publication. Jaipur. (ISBN- 978-81-7132-855-0)*
- Gladys Muivah, Vera Kapai, **Samira Chugh**. 2015. “Totipotency and Organogenesis” Lesson Prepared Under MHRD project “National Mission on Education Through ICT” <http://vle.du.ac.in/mod/book/view.php?id=13159>  
ISSN 2349 154X

### *Conference presentations*

- **Chugh, S.** & Rao, I.U. 2006. Morphogenetic Studies in Straw Flower, *Helichrysum bracteatum*. National Symposium on Plant Biotechnology, Forest Research Institute. Dehra Doon, Uttarakhand.
- Guha, S.; Bhattacharya, M., **Chugh, S.** & Rao, I.U. 2006. Post pollination behaviour in orchids- Some aspects. *In: Abstracts, 8<sup>th</sup> National Seminar on Orchid conservation,*

Improvement and commercialization. Eds, Jasmeet K. Sembi and Promila Pathak. P:44, Chandigarh.

- Vyas, S.; **Chugh, S.**; Kapai, V.Y. & Rao, I.U. 2009. Assessing potential of explants for mass scale propagation of orchid hybrids and electron microscopy analysis to study changes accompanying acclimatization. National Conference on Orchids: Systematics and Diversity Analysis for Conservation and Sustainable Utilization at G.B. Pant Institute of Himalayan Environment and Development, Almora, Uttarakhand, December 20-22.
- **Chugh, S.**; Vyas, S.; Guha, S. & Rao, I.U. 2009. *In vitro* propagation of *Cattleya* Summer Song, a commercially important orchid hybrid. 30<sup>th</sup> Annual Meeting of Plant Tissue Culture Association (India) & National Symposium on “Plant propagation, conservation, modification and characterization.” Institute of Himalayan Bioresource Technology (CSIR), Palampur (HP), April 3-4.
- Participated in National Conference on Combating Industrial Pollution for Sustainable Environment- a fusion of Industrial and Scientific Efforts (CIPSE-2016), September 22-23, 2016, Gargi College, University of Delhi
- **Chugh, S.** & Rao, I.U. Regeneration of protocorm-like bodies and formation of plants by in vitro culture of leaf explants of *Cattleya* Summer Song, a commercially important orchid hybrid. In National conference cum Workshop on “Recent Trends in Biology, Culture, Conservation, Commercialization and Sustainable Utilization Of Medicinally and Floriculturally Important Orchids. Graphic Era University, Dehradun, Uttarakhand. March 24-26, 2017.
- “Amplification and sequence analysis of a flower specific promoter (OsLPS4) from rice”. Chahat Bhatia, Diya Kalra, Dilmeet Kaur, **Samira Chugh** and Shweta Sharma. Presented at National conference on "Interdisciplinarity: prospects & challenges" held in April 2017 at Maitreyi college, University of Delhi.
- Oral presentation (24 Feb 2021) ‘Impact of COVID-19 pandemic on Biotic and Abiotic factors of the Environment’ in Interdisciplinary International e-Conference on Sustainable Future for Humanity: The New Learning Curve Organized by Maitreyi College, University of Delhi, India under the aegis of Avgaahan.
- “Measuring the Carbon Footprint of Gargi College Campus and Assessing Carbon Footprint of People Based on Different Professional Backgrounds” Pathfinder project (2019-2020)

### **Work Experience:**

- Guest lecturer at **S.G.T.B. Khalsa College, University of Delhi** from August, 2008-March, 2009.
- Ad Hoc Assistant Professor at **S.G.T.B. Khalsa College, University of Delhi** from 22<sup>nd</sup> July 2011- 12<sup>th</sup> September, 2011.
- Guest lecturer at **S.G.T.B. Khalsa College, University of Delhi** for the month of January, 2013.
- Ad Hoc Assistant Professor at **Gargi college, University of Delhi** from 24<sup>th</sup> July, 2013-22<sup>nd</sup> May, 2015
- Guest lecturer at **Gargi college** from 10<sup>th</sup> August, 2015-21<sup>st</sup> September, 2015
- Ad Hoc Assistant Professor at **Gargi college, University of Delhi** from 22<sup>nd</sup> September, 2015-till date

#### **Organizer/Resource person in Workshops:**

- Member of organizing committee of summer workshop on Interdisciplinary Sciences for the students of Gargi College (May 26-31, 2014).
- Member of organizing committee of Workshop on ‘Analytical techniques in biochemistry’ (30-31<sup>st</sup> August, 2017)
- Member of organizing committee of Gardening Workshop on ‘Why to grow and How to multiply plants’ (26<sup>th</sup> September, 2017)
- Delivered a lecture and hands on demonstration on ‘**The Art and Science of making a Bonsai**’ in workshop on “*Why to Grow and How to Multiply Plants*” held at Department of Botany in association with Garden committee, Gargi College (26<sup>th</sup> September, 2017)

#### **Member of Societies:**

- Delhi University Botanical Society
- International Society for Plant Morphologists (ISPM)
- The Orchid Society of India (TOSI)

#### **Corporate participation at college level:**

- Member of the Editorial Board of the book “Golden Jubilee of Gargi College”, 2018
- Member of Garden Committee, 2016.
- **Member of the Editorial board of College magazine, 2016 onwards.**
- **Co convenor of College magazine committee (2022).**
- Faculty Advisor of TARU: Gargi College Botanical Society, (2017-2019).
- Member of B.Sc. (Programme) committee
- Member of extended team of IQAC