

RESUME



Dr. Savita

Dr. Savita currently working as Assistant Professor in the Department of Botany, Hansraj College, University of Delhi, New Delhi, India. She has completed her M.Sc. and Ph.D. in Botany from Guru Nanak Dev University, Amritsar. She has 11 years of teaching experience and 5 years of research experience. Her areas of interest include Plant Tissue Culture and Biotechnology, biotic and abiotic stresses in plants, induced mutagenesis and nanotechnology. She is a member of various professional and social organizations. She has published more than 20 research articles in journals and books of international repute. She has been conferred with the Best Woman Assistant Professor in Botany award for the year 2020 by the Pearl Foundation Education Excellence to Higher Education in India.

Title of Ph.D Thesis: *In vitro* production of *Phytophthora parasitica* Dast. resistant plants of *Citrus jambhiri* Lush. through induced mutagenesis.

Supervisors:

Prof. Gurdeep Singh Virk and Prof. Avinash Kaur Nagpal

Teaching experience:

Sr. no.	Name of the University/College/ Institution	Designaton	Period	
			From	To
4.	Khalsa College Main, Amritsar	Assistant Professor	02.07.2012	28.02.2013
5.	Deen Dayal Upadhayaya College, University of Delhi	Assistant Professor,	24.07.2013	20.11.2014

6.	Miranda House (University of Delhi)	Assistant Professor,	05-01.2015	19.07.2015
7.	Hindu College, University of Delhi	Assistant Professor,	20.07.2015	06.10.2022
8.	Hansraj College, University of Delhi	Assistant Professor	07.10.2022	Till date

Innovation Project: Innovation Project: Green synthesis of nanoparticles and evaluation of their impact on physiobiochemical activity in *Brassica juncea* under salinity stress.

Co-curricular activities at Hindu College, University of Delhi:

1. Member, Central admission committee
2. Member, Prize distribution committee (Sub-committee of Founder's Day)
3. Member, Core team for NAAC
4. Member, DBT STAR committee
5. Member, Organizing committee of Asian Undergraduate Summit (AUS)
6. Member, Organizing committee of Hindu Fortnightly Lecture Series (HFLS)
7. Supervised groups of students for Innovation Projects, minor projects, internships etc.
8. Outreach activities under DBT STAR College Scheme.

List of Publications

1. Savita, Virk, G.S. and Nagpal, A. (2011) *In vitro* selection of calli of *Citrus jambhiri* Lush. for tolerance to culture filtrate of *Phytophthora parasitica* and their regeneration. *Physiology and Molecular Biology of plants*, 7 (1):41-47. **Impact Factor: 2.391 (SCI)**
2. Savita, Singh, B., Virk, G.S. and Nagpal, A. (2011) Efficient micropropagation protocol for regeneration of *Citrus jambhiri* Lush. using cotyledon as explant. *Physiology and Molecular Biology of plants*, 17(2):161–169. **Impact Factor: 2.391 (SCI)**
3. Savita, Alka, Pati, P.K., Nagpal, A. and Virk, G.S. (2012) An efficient plant regeneration protocol for *Citrus jambhiri* Lush. and its comparative anatomical studies and molecular characterization. *In vitro Cellular and Developmental Biology-Plant*, 48 (5): 512-520. **Impact Factor: 2.404 (SCI)**
4. Savita, Pati, P.K., Nagpal, A. and Virk, G.S. (2015) An efficient somatic embryogenesis protocol for *Citrus jambhiri* and assessment of clonal fidelity of plantlets using RAPD markers, *J. Plant Growth Regulation*, 34 (2), 309-319. **Impact Factor: 3.601 (SCI)**
5. Savita, Pati, P.K., Virk, G.S. and Nagpal, A. (2017). In vitro selection of resistant/tolerant mutants lines of *Citrus jambhiri* Lush. using crude culture filtrate of *Phytophthora parasitica* and their Random Amplification of Polymorphic DNA analysis. *Journal of Phytopathology*, 165 (11-12), 771-781 DOI: 10.1111/jph.12617 **Impact Factor: 1.826 (SCI)**
6. Other Publications: **Savita**, Vijay, Virk, G.S. and Nagpal, A. (2010) Effect of explant types and plant growth regulators on callus induction and plantlet regeneration in *Citrus jambhiri* Lush. *Environment and We-An International Journal of Science and Technology* **5**: 97-106.

7. **Savita** (2012). Evergreen revolution. *Dreams 2047*, November **2012**, Vol. 15(2): 34-35.
8. **Savita**, Virk, G.S. and Nagpal, A. (2012) Citrus diseases caused by *Phytophthora* species. *GERF Bulletin of Biosciences*. 3(1):18-27.
9. Savita, (2014). Genetic Engineering of Citrus for Agronomic traits. Cotemporary Pant Sciences (An annual newsletter published by the Botanical Society “Kalpvrikshya” of Department of Botany, Deen Dayal Upadhayaya College, University of Delhi, Delhi).
10. Savita, Srivastava A, Jain R, Pati, P.K., Koul, KK (2022). Plant Mediated Green Synthesis of Nanoparticles and their Role in Mitigation of Abiotic Stress in Crop Plants: A Review. *Ecology and Environmental Analysis*. 10(1): 1077-1103.
11. Justine, A.K., Kaur, N., Savita, Pati, P.K. (2022). Biotechnological Interventions in Banana: Current Knowledge and Future Prospects. *Heliyon (Cell-Press)* (Accepted)

Book Chapters/Books

Books: Savita, Anju Srivastava, Reena Jain, Pratap Kumar Pati (2022). *Myconanotechnology: Green Chemistry for Sustainable Development*. Bentham Books ISBN: ISBN (Online): 978-981-5051-36-0 ISBN (Print): 978-981-5051-37-7

Book Chapters:

1. **Savita**, Pati, P.K. and Nagpal, A. (2018). Rough Lemon (*Citrus jambhiri* Lush.): A protocol for somatic embryogenesis in 2nd Edition of Step-wise protocols for Somatic embryogenesis of important woody plants Volume-II. (Eds) Dr. S.M. Jain and Pramod Gupta pp. 199-208. (**Springer**) ISBN- **978-3-319-79087-9**.
2. **Savita**, Chopra, V. and Sharma, A. (2019). Environmental contaminants: Sources and effects" for the edited book entitled "Environmental Risk Factors and Natural Products: A Human Health Perspective" Editor(s): Ashita Sharma, Manish Kumar, **Bentham Science banner**. ISBN: **978-981-14-1095-6**.
3. **Savita**, Sharma, A. (2019). “Fungi as Biological control agents” for the edited book entitle ” **Biofertilizers for Sustainable Agriculture and Environment (Soil Biology)**” (Edt) Dr. Bhoopander Giri, Dr. Ram Prasad, Prof. Qiang-Sheng Wu and P Dr. Ajit Varma (**Springer**) ISBN- **978-3030189327** DOI: [10.1007/978-3-030-18933-4_18](https://doi.org/10.1007/978-3-030-18933-4_18)
4. Jatinder Kaur Katnoria, **Savita**, Amritpreet Kaur, Akanksha Bakshi, and Avinash Kaur Nagpal (2020). “Cancer Chemoprevention by Natural Plant Products and Their Derivatives: Clinical Trials” in edited book “Pharmacotherapeutic Botanicals for Cancer Chemoprevention” (Edt) Manish Kumar, Ashita Sharma. https://doi.org/10.1007/978-981-15-5999-0_13 (**Springer**) ISBN **978-981-15-5999-0**
5. **Savita**, Nagpal A.K., Pati P.K. (2021) Plant Tropane Alkaloids (TAs): Chemotaxonomic Significance, Biogenesis, and Biotechnological Interventions. In: Srivastava V., Mehrotra S., Mishra S. (eds) *Tropane Alkaloids*. Springer, Singapore. https://doi.org/10.1007/978-981-33-4535-5_1 ISBN- **978-981-334-534-8**
6. **Savita** (2021). Impacts of Air Pollutants on Forest Ecosystem and Role in Ecological Imbalance. In: Tiwari S., Saxena P. (eds) *Air Pollution and Its Complications*. Springer

Atmospheric Sciences. Springer, Cham. https://doi.org/10.1007/978-3-030-70509-1_8 ISBN- 978-3-030-70509-1

7. **Savita**, Sharma, A, Kalia, R., Kumari A., Nagpal, A. (2021). “Genetic Engineering of Legumes for abiotic stress tolerance” for edited book entitled “Abiotic stress and legumes: Tolerance and Management” (Edt) Vijay Singh, Samiksha Singh, Durgesh Tripathi, Sheo Prasad, Renu Bhardwaj, Devendra Chauhan Publisher: Elsevier ISBN- 978-012-815-355-0.

Paper Presentations:

1. **Savita**, Virk, G.S. and Nagpal, A. (2010). *In vitro* selection of calli of *Citrus jambhiri* Lush. for tolerance to culture filtrate of *Phytophthora parasitica* and their regeneration (Abstract). **13th Punjab Science Congress on Climate Change: Concerns and Solutions**, organized by Punjab University, Chandigarh (Under the aegis of Punjab Academy of Sciences), February 7-9, 2010. p. 206.
2. **Savita**, Alka, Virk, G.S. Singh, B. and Nagpal, A. (2009). Plant regeneration from callus cultures of *Citrus jambhiri* Lush. (Jatti Khatti) (Abstract). **International Conference on Changing Environmental trends and Sustainable Development**, organized by Guru Jambheshwar University, Hisar, India, Feb. 7-9, 2009. p. 204.
3. **Savita**, Virk, G.S. and Nagpal, A. (2009). Tissue culture studies in *Citrus jambhiri* Lush. (Jatti Khatti) (Abstract). **11th Plant Tissue Culture Association**, organized by Institute of Himalayan Bioresource Technology, Palampur, Himachal, India, March 3-4, 2009. p. 209.
4. **Savita**, Vijay, Alka, Virk, G.S. and Nagpal, A. (2009). Effect of different explant types and plant growth regulators on callus induction and regeneration of rough lemon (*Citrus jambhiri* Lush.) (Abstract). **National Seminar on Environment and Sustainable Development**, organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India, Nov. 3-4, 2009. p. 29.
5. Alka, **Savita**, Virk, G.S. and Nagpal, A. (2009). Effect of malt extract and abscisic acid on direct regeneration from nodal segments of *Citrus jambhiri* Lush. (Abstract). **National Seminar on Environment and Sustainable Development**, organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India, November 3-4, 2009. p. 30.
6. **Savita**, Virk, G.S. and Nagpal, A. (2009). *In vitro* selection of *Phytophthora parasitica* tolerant plants of *Citrus jambhiri* Lush. (Abstract). **5th International Conference on Plant Pathology in the Globalized Era**, organized by Indian Agricultural research Institute, New Delhi, India. November 10-14, 2009. p. 255.
7. **Savita**, Virk, G.S. and Nagpal, A. (2011). Somatic embryogenesis in *Citrus jambhiri* Lush. (Abstract). UGC Sponsored seminar on Environmental analysis and conservation, organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India, March 21-22, 2011. p. 109.

8. **Savita (2022)** Biotechnological interventions in Citrus: Current and future prospects. International e-conference on 'Mitigating environmental issues by sustainable approaches (ICMCESA-2022)' organized by Acharya Narendra Dev College, DU, Delhi, Feb 24-28, 2022.
9. Anamika Sharma, **Savita** and Avinash Kaur Nagpal (2022) Effect of Organic Extracts on In Vitro Germination and Growth of *Withania somnifera* (L.) Dunal. National Conference on Current scientific Innovations and Research in Plant Biology (CSIR-PB) May 27-28, 2022.

Workshops/faculty Development Programs attended

- Participated in the workshop VIROCON 2008 (**XVIII National Conference of Indian Virological Society**) organized by Department of Virology, Postgraduate Institute of Medical Education and Research, Chandigarh India.
- **Workshop cum Training on Management of Municipal Solid and Plastic Waste** (Sponsored by Ministry of Environment and Forests, Govt. of India) organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar and HRD Foundation, New Delhi. (April 16-17, 2009).
- Attended **National Zone Master Resource Person's Training Programme on TOTAL SOLAR ECLIPSE-2009**, held at Guru Nanak Dev University, Amritsar during June 29-July 1, 2009. The programme was catalyzed and supported by Rashtriya Vigyan evam Prodhogiki Sanchar Parishad (RVSP) and Vigyan Prasar (VP), Department of Science and Technology (DST), New Delhi and organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar.
- Attended **Workshop on "Bioinformatics Applications in Genomics & Proteomics"** held at the **Distributed Informatics Sub-Centre, Department of Biotechnology, Guru Nanak Dev University, Amritsar** on 5th-6th November, 2011.
- Attended Workshop on **"DNA Fingerprinting"** held on 22nd January, 2016 at Hindu College, University of Delhi, under **Science Setu** programme organized by DBT and NII and seven colleges of University of Delhi including Hindu College, University of Delhi.
- **Participated** in the two-day workshop "Training the Trainers: IPR workshop" held on August 10-11, 2016 at Ramjas College, University of Delhi.
- Attended and assisted in the organization of 5 day workshop entitled **"3rd Asian Undergraduate Summit 2017"** organized by Hindu College, University of Delhi in Association with Singapore University" held at Hindu College, University of Delhi on 5th June, 2017 – 9th June, 2017.
- Attended **"Workshop on Bonsai"** organized by Department of Botany, Miranda House on March 22, 2018.

- Attended and assisted in the organization of 5 day workshop entitled “4th Asian Undergraduate Summit 2018” organized by Hindu College, University of Delhi in Association with Singapore University” held at Hindu College, University of Delhi on 1st July, 2018 – 7th July, 2018.
- Attended two weeks Interdisciplinary FDP organized by Department of Statistics, Hindu College, University of Delhi from 17th Dec. 2018- 28th Dec. 2018.
- Attended and assisted in the organization of 7 day workshop entitled “5th Asian Undergraduate Summit 2019” organized by Hindu College, University of Delhi in Association with Singapore University” held at Hindu College, University of Delhi on 1st July, 2018 – 8th July, 2019.
- National Workshop on Environment and Society: Inter linkages and Co-existence. Organized by Hindu College, University of Delhi in collaboration with UGC and STE. Feb 27 -29, 2020.
- "Member of Organizing Committee" for the event "EMPOWERING DIVERSITY IN SCIENCE, GWB-2021" organized by Hindu College and Association of Chemistry Teachers in collaboration with International Union of Pure and Applied Chemistry, (IUPAC) on 9th February 2021.
- Member of Organizing Committee of Hindu Fortnightly Lecture Series (HFLS) organized by Hindu College Innovation Council (HCIC) under the aegis of MOEs Innovation Cell (Govt. of India) in association with Royal Society of Chemistry (RSC), NEERI and STE during the academic session 2021.
- Attended Two week Interdisciplinary FDP/Refresher Course on "Managing online classes and Co-creating moocs 6.0" from 05-19 July 2021 organized by TLC Ramanujan College.
- Attended Four Week Faculty Induction (Orientation) Programme (advanced) from 26 July- 24 August 2021 organized by TLC Ramanujan College.

Conferences/ symposia/seminars attended

National:

- **National Seminar on Depleted Uranium: Environmental Hazards** held on April 5, 2008, organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar.
- **Seminar on Ecological Challenges and Social Responsibilities** held on August 6, 2008, organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar.
- Attended National **Symposium on NEW BIOLOGY IN AGRICULTURE** organized by Punjab University, Chandigarh in collaboration with All India Biotech Association, New

Delhi. February 5-6, 2009.

- Attended and presented poster at **UGC Sponsored National Seminar on Environment and Sustainable Development**, organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar during November 3-4, 2009.
- Attended and presented a Paper (oral) at **13th Punjab Science Congress on Climate Change: Concerns and Solutions**, organized by Punjab University, Chandigarh (Under the aegis of Punjab Academy of Sciences) during February 7-9, 2010.
- Attended and presented a poster entitled “*In vitro* induced mutagenesis in *Citrus jambhiri* Lush. to produce *Phytophthora parasitica* resistant/tolerant plants.” at DBT and DST Sponsored National Conference on Climate Change in Indian Perspective, organized by Department of Botany, Deen Dayal Upadhyaya College, University of Delhi, Delhi during March 2-3, 2015 at Conference Centre of University of Delhi, Delhi.
- Attended “Webinar on Innovation: Creating impact and prosperity for tomorrow” organized by HFLS, Hindu College on 22nd Jan. 2021.
- Attended “Webinar on What is Exciting about Science?” organized by HFLS, Hindu College on 9th Feb., 2021.
- Attended “Webinar on Emerging Challenges For Youth Volunteers: Innovation, Inclusion & Integration” organized by HFLS, Hindu College on 25th Feb., 2021.
- Attended “Webinar on Story of Inventions” organized by HFLS, Hindu College on 23rd March, 2021
- Attended “Webinar on Creativity and Innovation” organized by HFLS, Hindu College on 21st April, 2021.
- Attended the “SMART SUMMIT – 2021” a National Conference on 19th June 2021 through Online/ Video Conference.
- Attended webinar “Implementation of Academic Bank of Credits” organized by Guru Angad Dev Teaching Learning Centre, SGTB Khalsa College, University of Delhi under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) of Ministry of Education on 10th July 2021.
- Attended National conference on "Seaweed India 2021"

International:

- Attended and presented a paper (oral) at the **International Conference on Changing Environmental Trends and Sustainable Development (CETAS-2009)** during February 9-11-2009.
- Attended and presented poster at **5th International Conference on Plant Pathology in the Globalized Era**, organized by Indian Agricultural Research Institute, New Delhi, India during November 10-13, 2009.

Academic Honours

- **3rd Prize** in 43rd district level Sr. Sec. School “Hand Ball” Competition (Year 1998-99).
- **Ist Prize** in District level quiz competition organized by Chikitsa and Swasthya Vibhag,

Jodhpur on **INTER NATIONAL AIDS DAY** (December, 1, 2000).

- **2nd Prize on Wet Land Day Competition** held on 2006-07 organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar.
- Qualified **GATE-2007**.
- **2nd Prize on Wet Land Day Competition** held on 2006-07 organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar.
- **3rd Prize in IPR Quiz** organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar on World Intellectual Property Rights Day.
- Conferred with the **Best Woman Assistant Professor in Botany award** for the year 2020 by the scrutinizing expert committee of Pearl Foundation Education Excellence to Higher education in India during the “SMART SUMMIT – 2021” a National Conference on 19th June 2021 through Online/ Video Conference. The award was conferred by chief guest Hon’ble Justice Shri B. Pugalendhi, Judge, Madurai bench of Madras High Court, Madurai, Tamilnadu

(SAVITA)