

DR SYED SAEMA

ACADEMIC EXPERIENCE

- Working as an Assistant Professor in the Department of Environmental Science, Integral University, Lucknow (1st April 2021 till date)
- 2 years of Visiting faculty in the Department of Environmental Science, Integral University, Lucknow (7th Feb 2019 to 31st March 2021)

PRINCIPAL INVESTIGATOR

UP-CST sponsored project titled "In vitro secondary metabolite Production through Hairy Root Cultures in *Enicostemma axillare* -an important medicinal plant"(2024-2027)

RESEARCH EXPERIENCE (8 years)

- 1 year of **Postdoc.** experience as a Research Associate at **Biotech Park**, Lucknow.
- 3 years as **Senior Research Fellow** at Council of Scientific and Industrial Research (**CSIR-National Botanical Research Institute, Lucknow**)
- 4 years as **Project Assistant** at Council of Scientific and Industrial Research (**CSIR-National Botanical Research Institute, Lucknow**)

EDUCATIONAL QUALIFICATION

- Ph.D. in Bioscience (Biotechnology) from Integral University, Lucknow (Research Work place: Council of Scientific and Industrial Research-National Botanical Research Institute Lucknow) 2016.
- M.Sc. (Botany-Plant Biotechnology) from Aligarh Muslim University, Aligarh, 76%.
- B.Sc. (Zoology, Botany, Chemistry) from Lucknow University, 68%.

PROGRAM ORGANIZED

- Organizing member in conducting **National Conference-** Plant Tissue Culture Association (PTCA) at National Botanical Research Institute, Lucknow (25-27th Feb. 2016).
- Organizing member in conducting various programs in the department of EVS at Integral University, Lucknow.

AWARDS

- **Gold Medal** during Graduation (B.Sc.) In Mumtaz Post Graduate College, Lucknow.
- **Merit Scholarship** during Masters (M.Sc.) in **Aligarh Muslim University**, Aligarh.
- **Senior Research Fellowship** by CSIR (Council of Scientific and Industrial Research Institute)

- Best Poster cum oral presentation at National Conference of PTCA (Plant Tissue Culture Association)

Invited Speaker:

1. Delivered a lecture for the **Green Skilled Development Programme Plant Tissue Culture Techniques and its Application under Ministry of Environment** held at CSIR-NBRI, Lucknow on dated 04.03.2021 entitled “Conservation of plants through tissue culture”.
2. Deliver a talk in the Session of PDP on 22.11.2021 organised by EVS department, Integral University, Lucknow for the theme of Global Environmental Problems and its remedial measures entitled “Covid-19 and the Environment”.
3. Delivered a talk at **Sagar Institute of Technology and Management (SITM)** for the Inspire Science Camp, Barabanki, Lucknow under the scheme of DST on 14.12.2021 entitled “Plant Tissue Culture”.

MEMBERSHIP

1. Life member of Indian Botanical Society
2. Life member of Vigyan Parishad, BSNV College, Lucknow

LIST OF PUBLICATIONS

1. **Syed Saema**, Laiq ur Rahman, Ruchi Singh, Abhishek Niranjana, Iffat Zareen Ahmad, Pratibha Misra (2016). Ectopic Overexpression of *WsSGTL1*, A Sterol Glucosyltransferase Gene in *Withania somnifera* Promotes Growth, Enhances Glycowithanolide and Provides Tolerance to Abiotic And Biotic Stresses. *Plant Cell Reports*. 35:195-211. **IF:6.2**
2. **Syed Saema**, Laiq Ur Rahman, Abhishek Niranjana, Iffat Zareen Ahmad, Pratibha Misra (2015) RNAi-mediated gene silencing of *WsSGTL1* in *W.somnifera* affects growth and glycosylation pattern. *Plant Signaling & Behavior* (doi.10.1080/15592324.2015.107 8064) **IF:2.24**
3. **Syed Saema**, Iffat Zareen Ahmad, Pratibha Misra (2015) Rapid in Vitro Plant Regeneration from Nodal Explants of *Withania somnifera* (L.) Dunal: a Valuable Medicinal Plant. **International Journal of Science and Research** 2319-7064.

4. Gaurav Singh, **Syed Saema**, Surendra Singh, Pratibha Misra (2017) Effect of antioxidant protection system on regeneration potential of different chemotypes of *Withania somnifera*- A comparative analysis. Indian Journal of Experimental Biology. 55:242-250. **IF:1.165**
5. Toppo DD, Mishra MK, **Syed Saema**, Pratibha Misra (2011) Agrobacterium *tumefaciens*-mediated transformation protocol of *Jatropha curcas* L. using leaves and hypocotyl segments. J Plant Biochem Biotechnol. 21(1): 128-133. **IF:1.2**
6. Pratibha Misra, DK Purshottam, **Syed Saema**, MB Jain, DD Toppo (2010). A comparative study of *in vitro* regeneration of shoots in different cultivars of *Gerbera jamesonii* h. Bolus ex hook. F. Propagation of Ornamental Plants. 10 (3): 156-162. IF:0.6
7. Shahina Parveen, Anwar Shahzad, **Syed Saema** (2010) In vitro plant regeneration system for *Cassia siamea* Lam., a leguminous tree of economic importance. Agroforest Syst. 80:109–116. **IF:2.459**

BOOKS CHAPTER

1. Pooja Singh, **Syed Saema**, Laiq Ur Rahman. Genetic Improvement of *Pelargonium* an important aromatic plant through Biotechnological approaches. (2024) In: "In Vitro Propagation and Secondary Metabolite Production from Medicinal plants: Current trends". Bentham science, Singapore
2. **Syed Saema**, Laiq Ur Rahman, Nafisa Shaheen, Vibha Pandey: Immunostimulatory properties of *Echinacea purpurea* and conservation strategy (26 July, 2023) In: Mishra, M.K., Kumari, N. (eds) Plants for Immunity and Conservation Strategies. Springer, Singapore. https://doi.org/10.1007/978-981-99-2824-8_11 , pp 153–168 (Print ISBN 978-981-99-2823-1 Online ISBN 978-981-99-2824-8) https://doi.org/10.1007/978-981-99-2824-8_10
3. Vibha Pandey, Manju Shri, Sonali Dubey, **Syed Saema**, Shivani Tripathi: An insight of phytochemicals of Satavari (*Asparagus racemosus*) (2023) In: Mishra, M.K., Kumari, N. (eds) Plants for Immunity and Conservation Strategies. Springer, Singapore. https://doi.org/10.1007/978-981-99-2824-8_11, pp 169–205

4. Pratibha Misra, **Syed Saema** Plant Tissue Culture for In Vitro Mutagenesis, Large-Scale Propagation, and Genetic Transformation (2016) In: Plant Tissue Culture: Propagation, Conservation and Crop Improvement. Springer pp: 309-342.
5. Sana Khan, **Syed Saema**, Suchitra Banerjee, Laiq ur Rahman: Role of Rol Genes: Potential Route to Manipulate Plants for Genetic Improvement (2016) In: Plant Tissue Culture: Propagation, Conservation and Crop Improvement. Springer pp: 419-446.
6. P. Misra, G. Singh, M. Mishra, V. Pandey, **Syed Saema**. Functional Analysis and the Role of SGT Gene Family Members of *Withania somnifera* (2016) In: Transgenesis and Secondary Metabolism. Springer pp:1-14.

Papers presented in International Conferences/Seminars/Symposia

1. **Syed Saema** 2023. Overexpression of WsSGTL1 gene of *Withania somnifera* enhances glycosylation in transgenic plants. In: Intl. Festival of “Women In Stem-2023” at the Tashkent Institute of Chemical technology, held from February 10-14, 2023.
2. **Syed Saema**, Rehman LU, Niranjana A, Ahmad IZ, Singh G, Misra P. 2015. Overexpression of WsSGTL1 gene of *Withania somnifera* enhances glycosylation in transgenic plants. In: Intl. Conf on Medicinal Plants: resource for affordable new generation Healthcare, held from March 20-22, 2015, at CSIR-CIMAP, Lucknow, pp. 122, Abst No. T-IC.
3. Misra MK, Pandey V, **Syed Saema**, Trivedi PK and Misra P. 2010. Role of sterol glycosyltransferase gene family under abiotic stress. In: IV Intl. Conf. on Plants and Environmental Pollution, held from 8-11 December, 2010, at NBRI, Lucknow, India. Abstract No. **SIII/P-1**.

Papers presented in National Conferences/Seminars/Symposia

1. **Syed Saema**, Pratibha Misra. 2016. Role of WsSGTL1 gene in growth and development of *W. Somnifera*. In: Symp on 'Plant Biotechnology for Crop Improvement and 37th Annual Meeting of PTCA (25-27th Feb.2016) at CSIR-NBRI, Lucknow, S1/P13,PP 49.
2. Gaurav Singh, **Syed Saema**, Pandey V, Misra P. 2013. Effect of total phenolic contents, H₂O₂ concentration and proline content on regeneration potential of different chemotypes

of *Withania somnifera*. In: Symp on Recent Advances in Biochemistry and Biotechnology: Applications in Health, Environment and Agriculture' (29-31 October, 2013) at Dept of Biochemistry, University of Lucknow, Lucknow, PP-06, PP 67.

3. Singh R, Singh G, **Syed Saema**, Misra P. 2013. Regeneration potential in *Withania somnifera* chemotypes and their antioxidant enzyme activity. In: Natl Seminar on Stress, Dev and Adaptation: Biochemical Basis and Biotechnological Approaches' (March 15-16, 2013), at Deptt of Biochemistry, Lucknow University, Lucknow.
4. Misra P, Toppo DD and **Syed Saema**. 2011. Establishment of long-term cultures of regenerating shoots and *Agrobacterium*-mediated transformation protocol of *Jatropha curcas*. In: Natl. Symp on Recent Advances in Plant Tissue Culture and Biotechnological Researches in India. XXXII Annual Meet of PTCA (India), (4-6th February, 2011) at MNIAS, Bikaner, Rajasthan. P-31.

CONTACT DETAILS

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