

Dr. Vikas Srivastava

Assistant Professor (Senior Scale), Department of Botany,
Central University of Jammu, Rahya Suchani (Bagla), Dist. Samba-181143,
Jammu and Kashmir, India; Mobile No. +91-9818079654; 7006916956 Email ID:

vikas.bot@cujammu.ac.in; vikassrivastava25@gmail.com.

Royal Society Newton International Fellow (Visiting Scientist),

John Innes Centre, Norwich Research Park, NR4 7UH

Mobile- 07587412744 (UK)

Email: vikas.srivastava@jic.ac.uk

Academic Qualifications

Ph.D (Botany, 2014)	University of Lucknow/ CSIR-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP), Lucknow, UP, India
M.Sc (Botany, 2006)	University of Allahabad (UoA), UP, India
B.Sc (Biology, 2004)	Ewing Christian College, UoA, UP, India

Research/Academic Experience

Pre-PhD Experience	Plant Tissue Culture Division, CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow (04-04-2007 to 03-04-2009; As Research Intern and CSIR-JRF)
PhD Experience	Plant Biotechnology Division, CSIR- Central Institute of Medicinal and Aromatic Plants, Lucknow (04-04-2009 to 15-01-2013; As CSIR-JRF and SRF)
Post Doc Experience	Plant Immunity Lab, National Institute of Plant Genome Research, New Delhi (19-03-2013 to 25-07-2016; As Project-SRF, NIPGR-PDF and CSIR-RA)
Royal Society- Newton International Fellow	11-04-2022 onwards at John Innes Centre, Norwich, UK.
Regular Employment	26-07-2016 onwards (Assistant Professor, Department of Botany, Central University of Jammu, Jammu)

Area of Interest: Hairy Root research, Secondary metabolism, Plant-microbe interaction, Genomics and Stress biology, Medicinal plant research, Micropropagation, Plant biotechnology.

Sanctioned Project:

- Development of plant hairy root systems to investigate biosynthetic pathways for triterpene saponin vaccine adjuvants.** Royal Society Newton International Fellowship (Applicant: Dr, Vikas Srivastava, CUJ and Co-Applicant: Prof. Anne. Osbourn, John Innes Centre, UK). Funding: £134,962.00, 2022-2024).
- Investigation of heat shock factor gene family (*BvHSFs*) in sugar beet (*Beta vulgaris*) and their relevance in response to Heat Stress.** UGC-Start Up Grant-10 Lakhs (Principal Investigator: Dr. V. Srivastava, 2017-2019)
- Investigation of Common bean (*Phaseolus vulgaris* L.) landraces of Jammu & Kashmir for individual and combinatorial effect of heat and drought stresses** (Principal Investigators: Dr. S. Vaishnavi, Dr. V. Srivastava, Dr. D. Kumar, Dr. D. Bhardwaj), sanctioned amount 8 lacs (2017-2019; University Project, Order No. CUJ/Acad/Proj-PLS/2017/158/80).
- The identification and characterization of key effectors to recognize the mechanism of *Bipolaris sorokiniana* (*Cochliobolus sativus*) pathogenesis causing Spot Blotch in wheat** (Principal Investigator: Dr. V. Srivastava, SERB-National Post Doc Fellowship, 2015, not availed).
- Investigation of LIM domain protein(s) of chickpea and their functional relevance in response to host-microbe interaction** (CSIR-RA Project, 2015).

Awards/ Scholarship

1. Gold Medal in B.Sc. (2004) ; Smt. Yamuna Devi Memorial Medal ; Dudgeon Memorial Medal ; Sri Ayodhya Nath Srivastava Memorial Medal ; Dr. S. N Bhattacharya Memorial Medal ; Dr. Mitra Memorial Medal ; Dr. Lalit Mohan Srivastava Memorial Medal and Scholarship.
2. UGC-NET (2006) in Life Science.
3. ICMR-JRF (2007) in Life Science.
4. CSIR-JRF (2007) in Life Science.
5. GATE (2007) in Life Science.
6. ICAR-NET (2009) in Plant Physiology and Biochemistry.
7. ICAR-NET (2010) in Basic Plant Science.
8. DBT-Research Associateship in Biotechnology and Life Science (2014).
9. CSIR-Research Associateship in General Biology (2015).
10. SERB-National Post Doc Fellowship (2016).
11. UGC Start Up Grant (2017).
12. Awarded in “Oral presentation” under subject theme “Botany and Agriculture” in 12th JK Science Congress (2017).
13. “APSI Smt. Rama Devi Award” for contribution in Plant Biotechnology (2017, Acad. of Plant Sciences, India)
14. Awarded in “Poster presentation” in National Conference on Recent Development in Plant Stress Biology (2018, Dept. of Botany, Central University of Jammu).
15. Best Publication Award in National Science Day (2019, CUJ).
16. Iconic Assistant Professor (World Education Icon Awards, 2021).
17. Royal Society-Newton International Fellowship- 2021 (Royal Society, London).
18. Marie Skłodowska-Curie Actions 2021- Seal of Excellence.

Publications

A. Edited Book

1. **Hairy Root: An Effective Tool of Plant Biotechnology** (Eds. **Vikas Srivastava**, Shakti Mehrotra, Sonal Mishra), Springer (2018, ISBN 978-981-13-2562-5).
2. **Hairy Root Cultures: Methods and Protocols** (Eds. **Vikas Srivastava**, Shakti Mehrotra, Sonal Mishra) Springer (2020, 978-981-15-4054-7).
3. **Tropane alkaloids: Pathway, Potential and Biotechnological Prospects** (Eds. **Vikas Srivastava**, Shakti Mehrotra, Sonal Mishra), (2021, 978-981- 334-535-5).
4. **Plant Transcription factor** (Eds. **Vikas Srivastava**, Sonal Mishra, Shakti Mehrotra, Santosh Upadhyay) to be published by Elsevier (2022, ISBN: 9780323906135).
5. **Plant-Pathogen Interaction** (Eds. Praveen K Verma, Sonal Mishra, **Vikas Srivastava**, Shakti Mehrotra), to be published by Springer in 2023 (In Press).

B. Forum/Review Article/Editorial

1. Bagal, D., Chowdhary, A.A., Mehrotra, S., Mishra, S., Rathore, S. and **Srivastava, V.**, 2023. Metabolic engineering in hairy roots: An outlook on production of plant secondary metabolites. *Plant Physiology and Biochemistry*, p.107847.
2. Mishra S, Mehrotra S and **Srivastava V** (2023) Editorial: Stress-mediated regulation of plant specialized metabolism. *Front. Plant Sci.* 14:1290281. doi: 10.3389/fpls.2023.1290281

3. Rai GK, Mishra S, Chouhan R, Mushtaq M, Chowdhary AA, Rai PK, Kumar RR, Kumar P, Perez-Alfocea F, Colla G, Cardarelli M, **Srivastava V** and Gandhi SG (2023) Plant salinity stress, sensing, and its mitigation through WRKY. *Front. Plant Sci.* 14:1238507. doi: 10.3389/fpls.2023.1238507
4. Mishra, S., Bagal, D., Chowdhary, A.A., Mehrotra, S., Rai, G.K., Gandhi, S.G., Bhau, B.S., El-Demerdash, A. and **Srivastava, V.**, 2023. Signal crosstalk of phyto-melatonin during salinity stress tolerance in plants. *Plant Growth Regulation*, pp.1-17.
5. Mishra, S., Chowdhary, A.A., Bhau, B.S. and **Srivastava, V.**, 2022. Hydrogen sulphide-mediated alleviation and its interplay with other signalling molecules during temperature stress. *Plant Biology* 24: 569–575 [Impact Factor: 3.8]
6. **Srivastava, V.**, Chowdhary, A.A., Verma, P.K., Mehrotra, S. and Mishra, S., 2022. Hydrogen sulfide-mediated mitigation and its integrated signaling crosstalk during salinity stress. *Physiologia Plantarum*, p.e13633. [Impact Factor: 5.0]
7. Mehrotra S, Kumar S **Srivastava V**, Mishra T, Mishra BN. 3D bioprinting in plant science: An interdisciplinary approach. **Trends in Plant Science** (2020) 25, pp 10-14. [Impact Factor: 18]
8. **Srivastava V.** and Verma PK. The plant LIM proteins: Unlocking the hidden attractions. **Planta** 246 (2017): 365–375. [Impact Factor: 3.249]
9. Mehrotra S, **Srivastava V**, Rahman LU, Kukreja AK. Hairy root Biotechnology- Indicative timeline to understand missing links and future outlook. **Protoplasma** 252 (2015): 1189-1201. [Impact Factor: 2.457]
10. Mehrotra S, Goel MK, **Srivastava V**, Rahman LU. Hairy root biotechnology of *Rauwolfia serpentina*: a potent approach for the production of pharmaceutically important terpenoid indole alkaloids. **Biotechnology letters** 37 (2015): 253-263. [Impact Factor: 1.846]

C. Research Articles

1. Chowdhary, A.A., Mishra, S., Singh, V. and **Srivastava, V.**, 2021. Elucidation of sub-cellular H₂S metabolism in *Solanum lycopersicum* L. and its assessment under development and biotic stress. bioRxiv.
2. Singh, S.K., Verma, S., Singh, K., Shree, A., Singh, R., **Srivastava, V.**, Kumar, K., Pandey, A. and Verma, P.K., 2021. The nuclear effector ArPEC25 from the necrotrophic fungus *Ascochyta rabiei* targets the chickpea transcription factor CaβLIM1a and negatively modulates lignin biosynthesis for host susceptibility. **The Plant Cell** (2023).
3. Kumar K, **Srivastava V**, Purayannur S, Kaladhar V, Cheruvu PJ, Verma PK. WRKY domain- encoding genes of a crop legume chickpea (*Cicer arietinum*): Comparative analysis with *Medicago truncatula* WRKY family and characterization of group-III gene(s). **DNA Research** (2016), 23(3); 225-239. [Impact Factor: 5.415]
4. **Srivastava V.** and Verma PK. Genome Wide Identification of LIM Genes in *Cicer arietinum* and Response of Ca-2LIMs in Development, Hormone and Pathogenic Stress. **PLoS one** (2015), 10(9); p.e0138719. [Impact Factor: 2.766]
5. Mehrotra S, **Srivastava V**, Rahman LU, Kukreja AK. Overexpression of a *Catharanthus* tryptophan decarboxylase (*tdc*) gene leads to enhanced terpenoid indole alkaloid (TIA) production in transgenic hairy root lines of *Rauwolfia serpentina*. **Plant Cell Tissue Organ Culture** 115 (2013); 377-384 [Impact Factor: 2.004]
6. **Srivastava V**, Kaur R, Chattopahyay SK, Banerjee S. Production of industrially important cosmaceutical and pharmaceutical derivatives of betuligenol by *Atropa belladonna* hairy root mediated biotransformation. **Industrial Crops and Products** 44 (2013); 171– 175. [Impact Factor: 3.849]
7. **Srivastava V**, Negi AS, Ajayakumar PV, Khan SA, Banerjee S. *Atropa belladonna* Hairy Roots: Orchestration of Concurrent Oxidation and Reduction Reactions for Biotransformation of Carbonyl Compounds. **Applied Biochemistry and Biotechnology** 166 (2012); 1401–1408. [Impact Factor: 1.797]
8. **Srivastava V**, Khan SA, Banerjee S. An evaluation of genetic fidelity of encapsulated microshoots of the medicinal plant: *Cineraria maritima* following six months of storage. **Plant Cell Tissue Organ Culture** 99 (2009); 193- 197. [Impact Factor: 2.004]

D. Book Chapters

1. Chowdhary AA, Mishra S, Mehrotra S, Upadhyay SK, Bagal D, **Srivastava V** (2022). Plant transcription factors: an overview of their role in plant life. In *Plant Transcription Factors* (Edited by V. Srivastava, S. Mishra, S. Mehrotra, S. Upadhyay), Elsevier (ISBN: 9780323906135).
2. Dwivedi, A., Mishra, S., **Srivastava, V.**, 2022. Sodium transporters in Plants. In *Cation Transporters in Plants* (Edited by Santosh Upadhyay), Elsevier (ISBN: 9780323857901)
3. **Srivastava, V.**, Mishra, S., Chowdhary, A.A., Lhamo, S. and Mehrotra, S., 2021. The γ -Aminobutyric Acid (GABA) towards abiotic stress tolerance. In *Compatible Solutes Engineering for Crop Plants Facing Climate Change*. Edited by Shabir Hussain Wani, Manu Pratap Gangola, Bharathi Raja Ramadoss, Springer (ISBN 978-3-030-80673-6)
4. **Srivastava, V.**, Chowdhary, A.A., Lhamo, S., Mishra, S. and Mehrotra, S., 2021. Therapeutic Lead Secondary Metabolites Production Using Plant In Vitro Cultures. In *Bioprospecting of Plant Biodiversity for Industrial Molecules* (ISBN: 978-1-119- 71721-8).
5. **Srivastava V**, Mishra S, Lhamo S, Chowdhary A, Mehrotra S (2021) Involvement of various biotechnological contrivances for tropane alkaloids biosynthesis and applications of tropane alkaloid bearing in vitro cultures. In *Tropane Alkaloids*. Edited by Vikas Srivastava, Shakti Mehrotra, Sonal Mishra, Springer (ISBN 978-981- 334-535-5)
6. Mehrotra S, Mishra S, **Srivastava V*** (2021) Plant tropane alkaloids: Commercial stature and production developments. In *Tropane Alkaloids*. Edited by Vikas Srivastava, Shakti Mehrotra, Sonal Mishra, Springer (ISBN 978-981-334-535-5)
7. Mishra S, Lhamo S, Chowdhary A, Mehrotra S, **Srivastava V*** (2021) The Na⁺/Ca²⁺ exchanger like proteins from plants: an overview. In *Calcium Transport Element in Plants*. Edited by Santosh K. Upadhyay, Elsevier. (ISBN: 9780128217924).
8. Mehrotra S, Mishra S, **Srivastava V***. (2020). Hairy root biotechnology unzipped: a journey of reality and Promises. In *Hairy Roots: An effective tool of biotechnology*. Edited by Vikas Srivastava, Shakti Mehrotra, Sonal Mishra, Springer
9. Mishra S, Bhardwaj M, Mehrotra S, Chowdhary A, **Srivastava V*** (2020). The contribution of phytohormones in thermotolerance. In *Heat Stress Tolerance in Plants: Physiological, Molecular, and Genetic Perspectives*, Edited by Vinay Kumar and Shabir Hussain Wani, John Wiley & Sons Ltd. (WILEY).
10. Mishra S, Chowdhary A, Mehrotra S, **Srivastava V*** (2019). Function of plant heat shock transcription factors in abiotic stress. In *Molecular Approaches in Plant Biology and Environmental Challenges*, Edited by Sudhir P Singh, Santosh K Upadhyay, Ashutosh Pandey and Sunil Kumar, Springer.
11. Mehrotra S, Mishra S, **Srivastava V*** (2018). Hairy Root Cultures for Monoterpene Indole Alkaloid Pathway: Investigation and Biotechnological Production. In *Hairy Roots: An effective tool of biotechnology*. Edited by Vikas Srivastava, Shakti Mehrotra, Sonal Mishra, Springer (ISBN 978-981-13-2562-5)
12. Mishra S, **Srivastava V***, Mehrotra S, Quadri N (2017). The Regulation of Plant Development: Cross-talk of Reactive Oxygen Species and Plant Hormones. In *Reactive Oxygen Species in Plants: Boon or Bane? Revisiting the Role of ROS*, First Edition. Edited by Vijay Pratap Singh, Samiksha Singh, Durgesh K. Tripathi, Sheo Mohan Prasad, and Devendra K. Chauhan. Wiley (ISBN-13: 978-1119287292)
13. Mehrotra S, **Srivastava V** (2017). Hairy root in-vitro systems: a suitable biological matrix for plant based remediation of environmental pollutants. In *Chemical pollution control with microorganisms*, Editor: Naser A. Anjum, Nova Science Publishers (ISBN: 978-1-53611-034-0).
14. Mehrotra S, Mishra S, **Srivastava V** (2016). Bioreactor technology for hairy root cultivation. In *Reference Series in Phytochemistry- Bioprocessing of Plant in vitro Systems*, Editor: Atanas Pavlov and Thomas Bley, Springer (ISBN 978-3-319- 32004-5).
15. **Srivastava V**, Mehrotra S, Mishra S (2016). Biotransformation through hairy roots: perspective, outcome and major challenges. *Reference Series in Phytochemistry- Transgenesis and Secondary Metabolism*, Editor: Sumita Jha, Springer (ISBN 978-3-319-28670-9).
16. **Srivastava V**, Mehrotra S, Verma PK (2016). Biotechnological Interventions for Production of Therapeutic Secondary Metabolites Using Hairy Root Cultures of Medicinal Plants. In *Biotechnological Interventions for Production of Therapeutic*

Secondary Metabolites Using Hairy Root Cultures of Medicinal Plants, Editor: Dubey, Sangwan and Pandey, Elsevier.

17. Mehrotra S, **Srivastava V**, Goel MK, Kukreja AK (2016). Scale up of *Agrobacterium Rhizogenes* Mediated Hairy Root Cultures of *Rauwolfia serpentina*: A persuasive Approach for Stable Reserpine Production. In Protocols for In Vitro Cultures and Secondary Metabolite Analysis of Aromatic and Medicinal Plants, Second Edition (Methods in Molecular Biology), Editors: Jain, S.Mohan (Ed.), Springer Protocol, Humana Press.

Expert Lectures/ Invited talks

- ✚ Invited Lecture on “Potential of Plant Biotechnology against SARS-COV2” organized by Ewing Christian College, University of Allahabad (16-18 June, 2020)
- ✚ Expert Lecture on “Success stories including clonal propagation of potato, sugarcane, banana, strawberry etc.”. In a short training course on “Plant tissue culture techniques in quality planting material production (18-22 Nov, 2019)” organized by SAMATI, Directorate of extension and School of Biotechnology, Sher-e- Kashmir University of Agricultural Sciences and Technology, Jammu.
- ✚ Invited talk on “Plant hairy root cultures: Unlocking the hidden attractions”. International Conference on Applied Biology (ICAB-2019), at SMVDU, Katra (4-6 Nov 2019).
- ✚ Invited talk on “Biotechnological interventions of plant hairy root cultures”. Post Graduate Department of Botany, Ewing Christian College, Allahabad (February 8, 2017).
- ✚ Expert Lecture on “Plant Hairy Roots: Progress and Prospects”. ICAR sponsored short training course on “Advance techniques and tools of functional genomics in crops (4-13 Oct, 2017)” organized by School of Biotechnology, Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu (on 6th Oct, 2017).





Oral Presentation in Conferences

- ✚ Intervention of *Atropa belladonna* hairy root cultures for biotransformation of exogenous molecules. International Conference on Recent Advances in Inter- disciplinary Sciences, 11-12 Jan, 19 (Organized by Dept. of Electronics, University of Jammu).
- ✚ Biotransformation of exogenous molecules using hairy root cultures of medicinal plants. National Conference on Interdisciplinary Aspects of Plant Sciences, 2-4 Nov, 2017 (Organized by Department of Biotechnology, Shri Mata Vaishno Devi University, Katra).
- ✚ Exploration of genes coding for LIM (LIN11, ISL1, and MEC3) protein in plant. International Conference on {Recent Trends in Bioinformatics and Biotechnology for Sustainable Development (Organized by SKUAST, Jammu (12-10-2017 to 13-10-2017).
- ✚ Investigation of genes coding for LIM domain containing protein in chickpea. National Symposium on Recent Trends in Biotechnology and Drug Discovery (RTBDD-17), 30-31 March, 2017 (Organized by Department of Biotechnology, Shri Mata Vaishno Devi University, Katra).
- ✚ Investigation of interaction and modulation of chickpea WRKYs in development and stress. 12th JK Science Congress 2017 (Science and Technology: Emerging Trends and Innovations), March 2-4, 2017 (Organized by University of Jammu, Jammu and J & K State Science, Technology and Innovation Council).







Poster Presentations in Conferences/Symposium

- ✚ A Chowdhary, **V. Srivastava***. Investigation of effect of different chemicals in tomato plants under normal and stress conditions. International Conference on Applied Biology (ICAB-2019), at SMVDU, Katra (4-6 Nov, 2019).
- ✚ M. Kumar, Yogeshwar...A Chowdhary, **V. Srivastava***. Effect of salinity stress on different wheat varieties. International Conference on Applied Biology (ICAB-2019), at SMVDU, Katra (4-6 Nov, 2019).
- ✚ R. Raina, Abhinandan...A Chowdhary, **V. Srivastava***. Effect of certain chemicals to mitigate salt stress response in wheat varieties. International Conference on Applied Biology (ICAB-2019), at SMVDU, Katra (4-6 Nov, 2019).









- ✚ **V. Srivastava**, K. Kumar, P.K. Verma. Investigation of chickpea WRKY-IIa dimerization and expression in response to stress. Recent Development in Plant Stress Biology: Translating Laboratory Research for Human Welfare (RDPSB-2018), December 7-8, 2018, Dept. of Botany, Central University of Jammu, Jammu, India.
- ✚ A. Kumar*, **V. Srivastava***. Hairy root cultures for secondary metabolite. Recent Development in Plant Stress Biology: Translating Laboratory Research for Human Welfare (RDPSB-2018), December 7-8, 2018, Dept. of Botany, Central University of Jammu, Jammu, India.
- ✚ **V. Srivastava**, K. Kumar, S. Purayannur, B. Tiwari, P.K. Verma. Identification and modulation of chickpea WRKYs in development and stress. 3 International Plant Physiology Congress Challenges and Strategies in Plant Biology Research, December 11-14, 2015, Convention Centre, JNU, New Delhi, India
- ✚ S. Purayannur, K. Kumar, **V. Srivastava**, Shreenivas K. Singh, P.K. Verma. Interactome analyses in the stress associated signaling cascade: A case for the legume crop chickpea (*Cicer arietinum* L.). 3 International Plant Physiology Congress Challenges and Strategies in Plant Biology Research, December 11-14, 2015, Convention Centre, JNU, New Delhi, India

-  K. Kumar, V. Srivastava, S. Purayannur, B. Tiwari, P.K. Verma. The analysis of WRKY superfamily genes in the non-model crop chickpea (*Cicer arietinum*). 7th Annual Convention of ABAP & International Conference on Plant Biotechnology, Molecular Medicine & Human Health (ICPMH-2013), South Campus Delhi University, New Delhi.
-  V. Srivastava, A.S. Negi, P.V. Ajayakumar, S. A. Khan, S. Banerjee. *Atropa belladonna* hairy root: oxido-reductive potential in biotransformation. International conference on current status of aromatic and medicinal plants (AroMed-2010) 21-24 Feb, CSIR-CIMAP, Lucknow.
-  V. Srivastava, A.S. Negi, P. Trivedi, D.U. Bawankule, K. Shankar, F. Khan, S. Banerjee. Biotransformation of vanillin using hairy roots of medicinal plants. 80th meeting of Society of Biological Chemists (SBC-2011), CSIR-CIMAP, Lucknow.
-  V. Srivastava, S.A. Khan, S. Banerjee. Plant regeneration from callus cultures in *Aristolochia indica* through organogenesis. National Interactive Meet-2008 (November 29-30), CSIR-CIMAP, Lucknow.

Orientation course and FDP

-  Completed the ARPIT course for Career Advancement Scheme(CAS) promotion on ‘History of Indian Science and Technology’ From 1st Dec 2020 to 31st March 2021 With a Grade “A” in the proctored examination held on 21/08/2021 by Jawaharlal Nehru University New Delhi
-  Attended ‘Faculty Development Programme’ on ‘Emerging trends in Assessment and Evaluation for Teaching and Learning’ organized by the School of Education, Central University of Jammu, under the aegis of PMMMNMTT Scheme, Department of Higher Education, Govt. of India, from 16th to 22nd March, 2021.
-  Attended FDP on “Teaching, Research and Innovation in India: A Biologist's View” organized by Amity Institute of Biotechnology (4th to 8th July, 2020)
-  Attended training on “MOOCs” organized by Central University of Jammu, Jammu, Jammu and Kashmir, India. (3rd Jan, 2020 to 9th Jan, 2020)
-  Attended Interdisciplinary Refresher Course on “Online Teaching, Learning and Assessment” organized by Central University of Jammu, Jammu, Jammu and Kashmir, India. (25th May, 2018 to 8th June, 2018)
-  Attended “General Orientation Program” organized by Central University of Jammu, Jammu, Jammu and Kashmir, India. (6 Dec, 2017 to 8 Jan, 2018)

Trainings and workshops (Others)

-  Participated in ‘Royal Society Leadership Effectiveness Course’ organized in partnership with Imperial College Business School at Royal Society (7-9 June, 2023)
-  Participated in Royal Society Newton International Fellow Induction Day at Royal Society, London (31 May, 2023)
-  Training microscopy
-  Participated in ‘Royal Society Science Policy Primer organized’ by organized in partnership with King’s College London (27 – 29 September 2022 at The De Vere Horsley Estate, Surrey, UK)
-  Participated in workshop on “Transacting Students’ Engagement for Rural Community Development” organized by 26-27 April, 2017 at Central University of Jammu, Jammu, Jammu and Kashmir, India.
-  Participated in workshop on “Intellectual Property Rights”- 28-29 March, 2017 organised by University Bussiness Incubation Centre (UBIC), Central University of Jammu, Jammu and Kashmir, India.
-  Participated in CIMAP Training School on Advanced Instrumentation and Analytical Techniques for Natural products (10th – 16th June, 2009), CSIR-CIMAP, Lucknow, India.
-  Participated in CSIR sponsored CIMAP’s Winter School – 2008 on “Recent Techniques in Gene cloning, DNA Analysis and Functional Genomics” held at Central Institute of Medicinal and Aromatic Plants during 3-12 December 2008, Lucknow, India.

Member in Scientific Societies

- Life member in Society of Biological Chemists, India (Life membership).

Organizing Secretary/Co-chair/ Committee Convener/Member of Conference

- Organizing Secretary of National Conference on “Recent Development in Plant Stress Biology: Translating Laboratory Research for Human Welfare (RDPSB-2018)”, December 7-8, 2018, Dept. of Botany, Central University of Jammu, Jammu, India. Convener/Member in University Committees
- Co-Chair in the Session IV of RDPSB-2018.
- Committee convener of “Travel and Transport” and “Registration” committee of RDPSB- 2018.
- Member of “Scientific Session” and “Abstract Selection” committee of RDPSB-2018.

Editorial Role (Journal)

- Frontiers in Plant Science (Review Editor, Section: Plant Abiotic Stress)
- Frontiers in Plant Science (Guest Associate Editor, Section: Plant Biotechnology)
- Frontiers in Bioengineering and Biotechnology (Guest Associate Editor, Section: Bioprocess Engineering)
- Advances in Agriculture (Academic Editor)

Reviwers (Journals)

- Frontiers in Microbiology,
 - Frontiers in Plant Sciences
 - Natural Product Research
 - BioProtocol
 - Plant Cell Tissue Organ Culture
 - 3 Biotech
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