


<b>NAME</b>	Dr(Mrs)Susmita Shukla	
<b>DESIGNATION</b>	Professor	
<b>EMAIL ID</b>	sshukla3@amity.edu	
<b>CONTACT NUMBER</b>	01204392721	

**RESEARCH INTERESTS**

Dr Shukla's broad research area is *in vitro* clonal propagation of elite medicinal and economic tree species, embryo rescue, secondary metabolite production, mass multiplication through tissue culture and transgenesis. She has developed robust micropropagation protocols of some rare and endangered tree species, medicinal starch yielding, horticultural crops such as *Olea europaea*, *Punica granatum*, *Stereospermum suaveolens*, *Stereospermum personatum*, *Citrus*, *Indigenous Musa varieties etc.* and also involved in establishment of *in vitro* regeneration via direct and indirect mediated genetic transformation Systems. Dr Shukla's Lab's focuses on production of quality planting material by altering the plant hormones for growth and developments and in development of transgenic plants specifically underlying biotic and abiotic stress tolerance. Her lab covers different research areas in plant biotechnology including plant tissue culture, gene transformation, plant biodiversity and conservation, DNA fingerprinting for assessing clonal uniformity, production of plant secondary metabolites etc. Dr Shukla's vision is to conduct innovative research, develop educational and outreach, skill development programmes etc for societal benefit and sustainable development.

**EDUCATIONAL QUALIFICATIONS:**

Name of College / University	Degree	Year
School of Biotechnology, UTD,GGU(Central University,C.G)	M.Sc(Biotechnology)	1999
Pt RaviShankar Shukla Univer Raipur(C.G)	PhD(Biotechnology)	2009

**Title of Ph.D. thesis:** Studies on *in vitro* propagation of *Stereospermum personatum* and *S. suaveolens*

**EXPERIENCE (in chronological order): Total 20 Years Research & Teaching**

Designation	Type of post held (teaching/ research)	Name of the Institute	Year (From – To)
Lecturer	Teaching	SLT institute of	From November

		pharmaceutical science, UTD, GG University, Bilaspur (C.G.)	1999 to April 2001
Lecturer	Teaching and Research	School of Biotechnology, UTD, GG University, Bilaspur (C.G)	From May 2001 to May 2005
Lecturer	Teaching	Department of Biochemistry & Centre for Genetic Diseases & Molecular Biology, Pt JNM Medical College, Raipur(C.G)	July 2006 to October 2006
Consultant	DBT project management and Implementation	Biotech Consortium India Ltd, company promoted by DBT, Govt. of India, New Delhi – 02	November 2006 to May 2007
Assistant Professor (I)			
Assistant Professor (II)			
Assistant Professor (III)	Teaching and Research	Amity Institute of Biotechnology, Amity University Uttar Pradesh Noida	From July 2010 to 2018
Associate Professor	Teaching and Research	Amity Institute of Biotechnology, Amity University Uttar Pradesh Noida	From Jan 2019 till 31 <sup>st</sup> December 2023
Professor	Teaching and Research	Amity Institute of Biotechnology, Amity University Uttar Pradesh Noida	From 1 <sup>st</sup> Jan 2024- Till date
<b>No. of Ph.D. students supervised</b>		4 (awarded)	
		3(ongoing)	
<b>No. of M.Tech. Students supervised:</b>		>50	
<b>No. of B.Tech. Students supervised:</b>		>100	
<b>PUBLICATIONS</b> ( total no: 48 Research Articles, 17 Book Chapters, 2 Books, > 50 abstracts)		<ol style="list-style-type: none"> <li>1. Shukla SK, Shukla Susmita, Koche V and Mishra SK (2007) <i>In Vitro</i> propagation of tikhur (<i>Curcuma angustifolia</i> Roxb.): a starch yielding plant”. Indian Journal of Biotechnology 6: 274 - 276</li> <li>2. Shukla SK, Shukla Susmita, Koche V and Mishra SK (2007) Plantlets and microtubers regenerated via shoot proliferation in <i>Dioscorea hispida</i>(Dennst.) Plant Cell Biotechnology and Molecular Biology 8(1&amp; 2): 61-66</li> <li>3. Susmita Shukla, S. K. Shukla and S. K. Mishra (2009) <i>In Vitro</i> Regeneration from seedling Explants of <i>Stereospermum</i></li> </ol>	

*personatum* D.C. – A Medicinal Tree. Trees – Structure and Function (23:409-413)

4. Susmita Shukla, S. K. Shukla and S. K. Mishra (2012) " Micropropagation of *Stereospermum suaveolens* D.C. – A valuable medicinal tree in Ayurveda, International Journal of Applied Biotechnology and Biochemistry, Volume 2, Number 2 pp. 211-218
5. S. K. Shukla, Susmita Shukla and S. K. Mishra (2012)" Micropropagation of *Pueraria tuberosa* (Roxb. Ex Willd.) via nodal explants derived from *in vitro* germinated seedlings", International Journal of Applied Biotechnology and Biochemistry, volume 2, Number 3 pp. 241-248
6. Susmita Shukla, S. K. Shukla and S. K. Mishra (2012) "*In vitro* regeneration of multipurpose medicinal tree *Stereospermum suaveolens* – Factors controlling the *in vitro* regeneration", Journal of Biotechnology and Biomaterials (doi.org/10.4172/2155-952X.S13-001)
7. Susmita Shukla and Shiv Kant Shukla (2013) "Adjuvants and their influence on *In vitro* propagation of *Dioscorea hispida* – an important tuber crop," Journal of Biosciences, 3: 139-146
8. Susmita Shukla (2014) "Callus Induction of *Michelia champaca* L.through petiole - An aromatic tree of high economic value" International Journal of Enhanced Research in Science Technology & Engineering,. 3(1): 438-442
9. Susmita Shukla and S.K. Shukla (2014) "Influence of subculturing on *in vitro* shoot proliferation of *Dioscorea hispida* : source of many dietary minerals" The Journal of Bioprocess Technology. Photon 196:410-413
10. Susmita Shukla and S.K.Shukla (2014) "*In*

*in vitro* regeneration of *Dioscorea hispida* through nodal explants – a rich source of starch” Journal of Biosciences Vol 3 no. 1, pp 30-31 DOI: 10.5176/2251-3140\_3.1.48

11. Susmita Shukla, Taramla Raman and Shiv Kant Shukla (2015) A review on the scope for increasing *in vitro* production of Pomegranate (*Punica granatum L*) cultivars and its application in the Human Health sector with emphasis on the Indian Industry, Plant cell Biotechnology and Molecular Biology 16:58-71
12. Susmita Shukla (2015) “Callus induction of *Adenium obesum* through leaf explant – an ornamental tree of medicinal value” International Journal of Tropical Agriculture 33:2(III)1369-1372
13. Yash Sharma, Anshita Nagar and Susmita Shukla (2015) “Antimicrobial activity and Phytochemical Screening of *Adenium obesum* (Desert Rose) Leaf” International Journal of Pharma and Bio Sciences, 6(3): (P) 85 – 92
14. Yash, Nagar Anshita And Shukla Susmita\*(2015), Antimicrobial Activity And Phytochemical Screening Of *Adenium Obesum* (Desert Rose) Leaf Sharma, Int J Pharm Bio Sci; 6(3): (P) 85 - 92
15. Susmita Shukla(2016)"Embryo Rescue Technology: An approach for varietal development and *in vitro* germplasm conservation", International Journal of Tropical Agriculture,34(3): 841-847
16. Susmita Shukla (2017), “Influence of Subculturing on *Calotropis procera* (Willd.) R. Br. for Enhanced Shoot Proliferation: An *in vitro* Source of Secondary Metabolites”, International Journal of Tropical Agriculture, 35(3)435-440
17. Susmita Shukla and Taramla Raman (2017) “*Olea europaea L.*: A Multipurpose Tree And Solutions To Meet Demand”, Asian Journal of Microbiology and Biotechnology,

18. Shukla S\* and Tyagi B (2017) "Comparative Phytochemical Screening and Analysis of Different Vigna species in Organic Solvents", Austin Journal of Biotechnology & Bioengineering
19. Susmita Shukla\* and Ruchi Verma (2018) A Significant Footprint of *In-vitro* Micropropagation on Growing Opportunities of Endangered Citrus Species in India, Recent Trends in Agriculture, Food Science, Forestry, Horticulture, Aquaculture, Animal Sciences, Biodiversity, Ecological Sciences and Climate Change (AFHABEC-2018), ISBN: 978-93-85822-64-3
20. Nikhil Bhalla, Vijay Kumar and Susmita Shukla (2018) Study of *Dacus carota* ssp. *Sativus* and *Butea monosperma* to Analyse their applicability in Pharmaceutical Industry As Antimicrobial Agents, International Journal of Phytomedicine, 10(1):11-15
21. Taramla Raman and Susmita Shukla\* (2018) "Preliminary screening and comparative analysis of Leaf Samples from Ex-vitro and in-vitro grown cultures of *Olea europaea* L. Barnea" in International Conference on Innovations and Research in Agriculture, Food Science, Forestry, Horticulture, Aquaculture, Animal Sciences, Biodiversity, Ecology and Climate change (AFHABEC-2-18) ISBN 978-93-85822-67-4. pp 23-25."
22. Subhankar Das, Mohan Chandra Kalita and Susmita Shukla\*(2018) Rapid Biosynthesis of silver nanoparticles using leaf extract of *Brassica olearacea* var. *gongylodes* and their antimicrobial activity against bacteria, World Journal of Pharmacy and Pharmaceutical Sciences, 7(8):1135-1145 (scopus, web of science in process)
23. Ritupriya Singh, Taramla Raman & Susmita Shukla\*(2018) Parameters affecting the growth of *Vigna* species in Field: An important aspect for sustainable farming of Pulse crop, International Journal of

Biotechnology Research, 1(1):10-15(web of science)

24. Shukla S\* and Kapoor K (2018) In Vivo and In Vitro Phytochemical Screening, Comparative Analysis and Sub Culturing Effect of *Calotropis procera*, Austin Journal of Biotechnology & Bioengineering 5(2):1-5
25. Taramla Raman<sup>1</sup>, Shelly Praveen<sup>2</sup>, Susmita Shukla<sup>1\*</sup> (2019) Micropropagation of *Olea europaea* L. cv. Barnea, through nodal segment of adventitious shoot and assessment of its Genetic Fidelity through Molecular Markers”, Plant Cell Biotechnology and Molecular Biology 20(1&2):22-34
26. Raman Taramla, Gupta Vidya S, Shukla Susmita\*(2019) A Robust Micropropagation Protocol for genetically true to type plants of Phule Arakta Pomegranate, Indian Journal of Horticulture 76(1):23-3
27. Ritupriya Singh, Ruchi Verma and Susmita Shukla\*(2019)Phytochemical Screening of Secondary Metabolites present in Fruit peels, Ex-vitro and In-vitro leaf extract of *Citrus macroptera* montr.: An important crop with medicinal nutritional value, International Journal of Tropical Agriculture,37(2):127-131
28. Subhankar Das , Vishal Gupta , Manjula I. Kalyani , Mohan Chandra Kalita , Susmita Shukla\*(2019), Biological synthesis and characterization of silver nanoparticles using stem extract of *Langenaria siceraria* and their antibacterial activity against *Escherichia coli* and *Staphylococcus aureus*, Biomedicine: 2019; 39(4): 580- 586
29. Sagar Ruhel, Susmita Shukla\*,2020, *Impact of Chemicals in Human Health and Solution through Biotech Intervention*, Journal of Research in Forensic Medicines and Biotechnology,2(1):1-23
30. Ritambhara Bhutani<sup>1</sup>, Shiv Kant Shukla<sup>2</sup> and Susmita Shukla<sup>1\*</sup>(2020); Impact of Sterilants on Culture Establishment of Indigenous *Musa* L. Varieties: A Step forward for Conservation, Environmental Science and Pollution Research, 28:3913–

31. Shiv Kant Shukla, Anmol S. Verma, Manfred Miheso and Susmita Shukla (2020), Indo-Kenyan collaborative approach and potential for commercialization of plant tissue culture, *Bionature*, 40(2) 2020 : 52-65
32. Subhankar Das, Rantumoni Sharma, Manjula I. Kalyani, Namita Nath, M. C. Kalita, Susmita Shukla, 2020, Sunlight driven biosynthesis of silver nanoparticles using aqueous stem extract of *Tinospora sinensis* (Lour.) Merr. and evaluation of its catalytic and antibacterial activity, *Biomedicine*; 40(3): 301- 308
33. Sandhya Sharma and Susmita Shukla\*(2020), A Review on Regeneration Potential and Commercialization of *Azadirachta Indica*: A Multifunctional Tree Species, *Agrica* Vol. 9, Dec 2020 Page No. 101-111, DOI 10.5958/2394-448X.2020.00014.0
34. Ayushi Tripathi, Samir Debnath and Susmita Shukla\* (2021) Review on Biotechnological advances in *Vigna radiata* and their future prospects, *Journal of Crop Science and Biotechnology*, 24: 245–258  
<https://doi.org/10.1007/s12892-021-00086-5>
35. Ritupriya Singh, Shiv Kant Shukla and Susmita Shukla\* (2021). Efficient Callus Induction, Regeneration, and Uniformity Assessment of *Citrus macroptera* Montr- An Endangered Medicinal Tree Species Of Economical Value. *Plant Cell Biotechnology and Molecular Biology*, 22(71-72), 521-530.
36. Susmita Shukla, Sneha Thomas and Ritambhara Bhutani. 2021. Plant tissue culture, plant based products and prospects of commercialization: A drive from nature towards nature. *Int J Biotechnol Recent Adv*. 3(1): 68-73
37. Kesh, Monalisa., & Shukla, Susmita\*. (2022). Need of Biotechnological Strategies to Enhance the Quality and Quantity Production of *Nelumbo Nucifera*- An Ornamental Plant With High Nutritive and Therapeutic value. *Bionature*, 42(1), 58-

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38. Ayushi Tripathi, Neetu S Kushwah, Samir C Debnath, **Susmita Shukla\*** and Meenal Rathore\*, Investigating the *in vitro* regeneration potential of mungbean cultivar Samrat, **Journal of Food Legumes** **35(3): 198-206, 2022(ISSN: 0970-6380; Online ISSN: 0976-2434)**
39. Ayushi Tripathi, Neetu S Kushwah, Samir C Debnath, Susmita Shukla and Meenal Rathore (2023). Investigating the *in vitro* regeneration potential of mungbean cultivar Samrat. *s* 35(3), 2022 *Journal of Food Legumes* 35(3): 198-206, 2022
40. Bhutani, R., Shukla, S., Gupta, N., & Shukla, S. K. (2024). Impact of photoperiodism on *in vitro* propagation of Indigenous Musa. *International Journal of Horticultural Science and Technology*, 11(2), 257-268.
41. Shruti, Tripathi, A., & Shukla, S. (2023). Methods of Genetic Transformation: Major Emphasis to Crop Plants. *Journal of Microbiology, Biotechnology and Food Sciences*, DOI: <https://doi.org/10.55251/jmbfs.10276>
42. Ritupriya Singh, **Susmita Shukla\*** and Shiv Kant Shukla (2023) Impact of sterilant on *In vitro* seed germination of *Citrus macroptera* montr. : An important measure, *Indian journal of Agricultural Biochemist*,36(2):183-188 DOI: [10.5958/0974-4479.2023.00029.1](https://doi.org/10.5958/0974-4479.2023.00029.1)(online published on 20<sup>th</sup> January 2024)
43. Ritupriya Singh, Shiv Kant Shukla, Susmita Shukla. *Preliminary Screening of Phytoconstituents of various extracts of Citrus macroptera and its Antimicrobial impact. Research Journal of Pharmacy and Technology. 2024; 17(6):2895-0. doi: 10.52711/0974-360X.2024.00454.*
44. Ritupriya Singh, **Susmita Shukla\***, Shiv Kant Shukla, Deepshikha Pande Katare (2024). Chemical Profiling of Endangered Citrus macroptera Leaf Extracts and Evaluation of its Cytotoxic Activity. *Plant Science Today*; 11(2): 233–241 DOI: <https://doi.org/10.14719/pst.3044> (Online Published 26th February 2024)
45. Ayushi Tripathi, Susmita Shukla\*, Khushi



Vasudev, Tushar Bahukhandi, Naman Kapoor and Ayushi Mishra (2024). Impact assessment of abiotic stress on morphophysiological and biochemical attributes of mungbean (*Vigna Radiata* L. Wilczek), *The International Journal of Science, Mathematics and Technology Learning*, 31(1): 157-168

46. Shukla Shiv Kant and Shukla Susmita (2023) *Technology Transfer Offices and Life Sciences Based Innovations: An Indian Perspective*. *Asian Biotechnology and Development Review*. Vol. 25, No.3, pp 101-119

47. Tripathi, A., Rathore, M., Shukla, S. Das A and Debnath S(2024).. *Agrobacterium* and biolistic mediated genetic transformation of mungbean cultivar Samrat using embryogenic explant. *Plant Cell Tiss Organ Cult* **157**, 72. <https://doi.org/10.1007/s11240-024-02780-y>

48. Susmita Shukla, Ritambhara Bhutani, Nibha Gupta, Shiv Kant Shukla, Taramla Raman, Mohamed A. El-Sheikh, Hosam O. Elansary & Ihab Mohamed Moussa (2025) *Studies on banana for propagation, conservation and genome analysis*, *Cogent Food & Agriculture*, 11:1, 2447898, DOI: 10.1080/23311932.2024.244789

**Book:**

Shiv Kant Shukla and Susmita Shukla(2021) *Tissue Culture Raised Apple Rootstock in India- A Success Story* published by Asia-Pacific Consortium on Agricultural Biotechnology and Bioresources Asia-Pacific Association of Agricultural Research Institutions 182 Larn Luang Road, Klong Mahanak Sub-District Pomprab Sattrupai, Bangkok 10100, Thailand

**Susmita Shukla et al.,(2024) Futuristic Trends in Agriculture Engineering & Food Sciences Volume 3 Book 9**

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<https://www.iipseries.org/view-pub-book.php?bookid=114&bookname=futuristic-trends-in-agriculture-engineering-amp-food-sciences-volume-3-book-9>

Book Chapters:

1: Susmita Shukla<sup>1\*</sup>, Taramla Raman<sup>1</sup> and Shiv Kant Shukla<sup>2</sup> · (2020) Rapid Multiplication for Producing Quality Planting Material of Olive [*Olea europaea* L. cv. Barnea] through Plant Tissue Culture and It's Commercial Application, Modern Research in Botany 1, Page 22-36, Book Publisher International, Print ISBN: 978-93-89246-10-0, eBook ISBN: 978-93-89246-31-5, DOI: 10.9734/bpi/mrb/v1 (<https://youtu.be/dyXRtw3yCrg>), Published on 23 January 2020

2: Sneha V Thomas; Susmita Shukla\*(2020). An Important Measure to Combat Alzheimer Through Phytomedicine - A Way Forward Towards Nature Cure. Alzheimer's Disease & Treatment, MedDocs Publishers. Vol. 3, Chapter 1, pp. 1-12, ISBN : 978-81-936678-7-3 Published on 07 December 2020

3: Umme Abiha, Sparsh Phutela and Susmita Shukla\*(2021), Biodiversity Conservation: An imperial need in combatting pandemic and healthcare emergencies, Environmental sustainability for green societies, The impact of Covid – 19 Pandemic, Springer, ISBN: 978-3-030-66489-3 Published on 23<sup>rd</sup> March 2021

4: Ritambhara, Shiv Kant Shukla and Susmita Shukla\* (2021) Automation, Modern Tools and Technique for Sustainable Agriculture – An Important Parameter Toward Advance Plant Biotechnology, Green Technological Innovation for Sustainable Smart Societies, pp 281-300 Springer ISBN: 978-3-030-73295-0 <https://www.springerprofessional.de/en/automation-modern-tools-and-technique-for-sustainable-agricultur/19658322> Published on 14th September 2021

5: Susmita Shukla & Ritambhara Bhutani(2022) Development of Bioplastic Films from Neglected Crops and It's, Plant Waste with Potential Application in Food Packaging Industry, Proceedings of 12th Hanseatic India Colloquium, Germany, Solid Waste Management: an Indo-German Dialogue, pp 108-117 Published by Hanseatic India Forum e.V & Centre for Environment and Development, India, *Design & Pre-press* Godfrey's Graphics Thiruvananthapuram, Kerala ISBN: 978-81-962252-0-9

6: **Susmita Shukla\***, Ritupriya Singh, Ritambhara Bhutani, Ayushi Tripathi & Shiv Kant Shukla(2022), Restoration and Conservation of Plant Genetic Resources via Molecular Techniques: An important measure for sustainable Agriculture, Agro-

biodiversity and Agri-ecosystem Management pp 239–256 Springer ISBN: 978-981-19-0928 First Online: 16 July 2022, [-\(https://link.springer.com/book/10.1007/978-981-19-0928-3?sap-outbound](https://link.springer.com/book/10.1007/978-981-19-0928-3?sap-outbound) id=CC41047A059ECA9527CE9B097509D0DC21F6E485)

7: **Susmita Shukla\*** and Ritupriya Singh, Enhanced Production of *Citrus macroptera*: A Nutrition Rich Fruit Crop Plant, Proceedings of BIOSPECTRUM: The International Conference on Biotechnology and Biological Sciences: Biotechnological Intervention Towards Enhancing Food Value, Series: Food Science and Technology, Nova Publisher BISAC: TEC012010; TEC012020, DOI: <https://doi.org/10.52305/LAOH6077>, Publication Date: August 10, 2022

8. **Susmita Shukla**, Umme Aiba, Ritambhara Bhutani, Shiv Kant Shukla and Anagbogu Florence Chinyere, Biofuel production systems: adaptation of ecotechnology as a step toward sustainable energy, Advancement in Oxygenated Fuels for Sustainable Development (ISBN: 978-0-323-90875-7), Elsevier Publisher, Publication Date: November 12, 2022

9. **Shukla, S.**, Bhutani, R., Das, S., Kapoor, N., Raman, T. (2023). Secondary Metabolite Enhancement via In Vitro Techniques and Its Industrial Prospects. In: Singh, R., Kumar, N. (eds) Genetic Manipulation of Secondary Metabolites in Medicinal Plant. Interdisciplinary Biotechnological Advances. Springer, Singapore. <https://doi.org/10.1007/978-981-99-4939-7> 14, ISBN No. 978-981-99-4938-0

10. **Susmita Shukla** and Shiv Kant Shukla (2024), Micropropagation for Crop Improvement and its commercialization potential, IN: The Potential of Microbes for a Circular Economy, Paperback ISBN: 9780443159244 eBook ISBN: 9780443159251, Elsevier publishers, published online January 9, 2024

11. Ritambhara, **Susmita Shukla**, Taramla (2024), Biotechnological Advancements In Vaccine Development For Emerging Infectious Diseases: A Focus On Covid-19. Futuristic Trends In Agriculture Engineering & Food Sciences. E-ISBN: 978-93-5747-615-7. IIP Series, Volume 3, Book 9, Part 4, Chapter 3 <https://www.doi.org/10.58532/V3BIAG9P3CH3>

12. Ritambhara, **Susmita Shukla**, Brijesh Shivhare (2024) Harnessing Nature's Pharmacy: Investigating Traditional Herbal Remedies for Immune Enhancement And Health Promotion. Futuristic Trends In Agriculture Engineering &

	<p>Food Sciences. E-ISBN: 978-93-5747-615-7. IIP Series, Volume 3, Book 9  <a href="https://www.doi.org/10.58532/V3BIAG9P3CH4">https://www.doi.org/10.58532/V3BIAG9P3CH4</a></p> <p>13. Aryan Prajapati and <b>Susmita Shukla</b>(2024) Pathways for the Bioremediation of Vanadium from The Soil-Plant Ecosystem Futuristic Trends In Agriculture Engineering &amp; Food Sciences. E-ISBN: 978-93-5747-615-7. IIP Series, Volume 3, Book 9  <a href="https://www.doi.org/10.58532/V3BIAG9P3CH5">https://www.doi.org/10.58532/V3BIAG9P3CH5</a></p> <p>14: <u>Subhankar Das</u>, <b>Susmita Shukla</b>, Samir Debnath and Ik Manjula (2024). Synergistic Role of Plant Tissue Culture and Plant Growth-Promoting Micro-Organisms as Conservation Strategies for Himalayan Medicinal Plants Amidst Climate Change. In: Mishra, A.P., Kumar, A., Chandra, N., Singh, G., Pande, C.B. (eds) Threatened Medicinal Plants in the Indian Himalayan Region. World Sustainability Series. Springer, Cham.  <a href="https://doi.org/10.1007/978-3-031-73687-2_8">https://doi.org/10.1007/978-3-031-73687-2_8</a> (online published in 31st December 2024)</p> <p>15: <b>Shukla, S.</b>, Vaishnav, V.H.S., Dedha, A., Phutela, S., Shukla, S.K. (2025). Role of Plants in Remediation of Radioactive Pollutant from the Environment. In: Kumar, N. (eds) Radioactive Pollutant. Environmental Science and Engineering. Springer, Cham. <a href="https://doi.org/10.1007/978-3-031-73796-1_5">https://doi.org/10.1007/978-3-031-73796-1_5</a> (Online published on 11th December 2024)</p> <p>16: <u>Umme Abiha</u> and <b>Susmita Shukla</b> (2024), Postharvest Loss of Indigenous Fruits Cops and Its Management Through Interventions of Advanced Technologies, In: <u>Plant Diseases and Their Management</u>, Apple Academic Press. DOI: <a href="https://doi.org/10.1201/9781032722856-17">10.1201/9781032722856-17</a></p> <p>17. <b>Susmita Shukla</b>, Shivani Katoch, Sparsh Phutela and Shiv Kant Shukla, Nanoparticle-driven microbial synergy for quality plant production for human health, In Plant and Soil Microbiome, Nanoparticles Synthesis by Soil Microbes, Academic Press, 2025, Pages 349-380 ISBN 9780443216923, <a href="https://doi.org/10.1016/B978-0-443-21692-3.00011-2">https://doi.org/10.1016/B978-0-443-21692-3.00011-2</a>.</p>
<p><b>PATENTS</b> (total no: 5)</p>	<p>201811033955, 201911000828, 201911013833, 202111033634, 202411045062</p>

<p><b>RESEARCH PROJECTS</b> Completed: (<i>total no.</i>): 2</p>	<ul style="list-style-type: none"> <li>• “Embryo rescue culture as an aid to raise interspecific hybrids of <i>Vigna</i> species” (Under BioCARE Scheme of Department of Biotechnology (<b>DBT</b>),Govt. of India)</li> <li>• <i>In Vitro</i> mass multiplication and conservation of some endangered Citrus species of NEH region of India (Under DBT Twinning Scheme for North East)</li> </ul>
<p><b>AWARDS &amp; HONOURS/ DISTINCTIONS</b></p>	<ul style="list-style-type: none"> <li>• Received <b>merit certificate</b> in MSc. Biotechnology</li> <li>• Qualified MP (SLET) (Accredited by UGC)</li> <li>• <b>DBT Travel Grant for Singapore(2013)</b> for paper presentation in an International Conference</li> <li>• Recipient of <b>IASc – NASI-INSA Summer Research Teacher Fellowship (2014)</b> worked at Molecular Plant Biology Lab, Delhi University, South Campus.</li> <li>• Women Scientist Award under <b>BioCARE scheme of DBT(2015)</b></li> <li>• Best Young Scientist Award (2016) on IJTA 3<sup>rd</sup> International Conference on Agriculture, Horticulture &amp; Plant Sciences, New Delhi</li> <li>• Scientist of the year Award (2017) on 5<sup>th</sup> International Conference on Agriculture, Horticulture &amp; Plant Sciences, Rishikesh (U.K) India</li> <li>• Certificate of Appreciation from Biotech Consortium India Limited, New Delhi for Successfully Organizing Training Program on Virus Indexing and Genetic Fidelity of Tissue Culture Plants for African Candidates, 30<sup>th</sup> October to 3<sup>rd</sup> November, 2017</li> <li>• Best Paper Presentation Award(Oral Categories) certificate for presenting research work in an International Conference on Recent Trends in Agriculture, Food Science, Forestry, Horticulture,Aquaculture,Animal Sciences, Biodiversity,Ecological Sciences and Climate Change(AFHABEC – 2018) organized by Krishi Sanskriti, Jawaharlal Nehru University, New Delhi, 10<sup>th</sup> February 2018</li> <li>• Received “Bharat Ratna Dr Abdulkalam gold Medal</li> </ul>

Award” for Individual Achievement And National Economic Growth by Global Economic Progress & Research Association, New Delhi, 27<sup>th</sup> October 2018

- Certificate of Appreciation for organizing sectoral session: Innovation and Entrepreneurial Ventures in Biotechnology and Life Sciences- Challenges and Opportunities as Faculty Coordinator during the 2<sup>nd</sup> International conference on Entrepreneurship, Innovation and Leadership (ICEIL-2018),19<sup>th</sup> -21<sup>st</sup> December 2018
- Outstanding Scientist Award in International Conference organized by the Society of Tropical Agriculture at Dharmshala(H.P)India,27-28 June 2019
- Certificate of Appreciation for presenting poster in International Summit on Women in STEM-“Visualizing the Future: New Skylines” organized by DBT and ICGEB at India Habitat Centre, Lodhi Road, New Delhi, Jan 23-24,2020
- Certificate of recognition on contributing as Keynote speaker “*In vitro* flowering of Vigna species from immature hybrid seed” in 3<sup>rd</sup> International Biotechnology and Research Conference held on 23<sup>rd</sup> October 2020 as a virtual conference organized by Madridge Group.
- National Eminent Educator Award,28<sup>th</sup> september,2020 awarded by International Institute of Organized Research(I2OR)
- International Institute of Organized Research(I2OR) awarded Fellow Member on 17<sup>th</sup> Jan. 2021
- Special recognition and appreciation received for organizing of 5<sup>th</sup> world congress on advance biotechnology held on 8<sup>th</sup> December 2020 by Allied Academies, 47 Churchfield Road, London, W3 6AY, United Kingdom
- Best Entries (Winner) in Green Diwali Celebration Competition organized by World Wild Fund For Nature, Environmental Information System (WWF ENVIS), 1st -5th Nov., 2021
- Book Author Recognition received during 4th International Conference on Entrepreneurship,

	<p>Innovation &amp; Leadership (ICEIL,2022) organized by Amity University Uttar Pradesh, Noida,20th – 22nd January 2022.</p>
<p><b>MEMBERSHIP</b> with Professional/ Academic bodies</p>	<ul style="list-style-type: none"> <li>• Indian Society of Agricultural Biochemists.</li> <li>• Association of Microbiologists of India.</li> <li>• Indian Science Congress Association</li> <li>• Society for Plant Biochemistry and Biotechnology</li> <li>• The Horticultural Society of India.</li> </ul>
<p><b><u>Workshop/Conference organized</u></b></p>	<ul style="list-style-type: none"> <li>• Joint Secretary in National workshop on Bioinformatics, sponsored by DBT and cosponsored by CGCST (14-19 July 03)</li> <li>• Co organized one day seminar on 50 years journey of DNA: A blue print of life and 25 years of <i>in vitro</i> fertilization, sponsored by Chhattisgarh Council of Science and Technology.</li> <li>• Co- organized one day seminar: Sal forest and Its conservation, National Conference on field biology of Sal Forest, GG University, Bilaspur (Oct-26-28)</li> <li>• Co – organized National Symposium on Biodiversity: Current Status and Prospects, School of Life Sciences, Pt. Ravishankar University, Raipur (17-19 October 2005).</li> <li>• Organizing Secretary: One day International Seminar on Biosafety and Regulatory Affairs on GMOs and GE plants, Amity Institute of Biotechnology, Amity University, Noida (U.P)(9<sup>th</sup> september 2016) in collaboration with Biotech Consortium India Ltd, New Delhi.</li> <li>• Organizing Secretary: 5 days International Training program “Virus Indexing and Genetic Fidelity Testing of Tissue Culture Plants for African Candidates” from 30th October to 4th November, 2017 at Amity University Uttar Pradesh, Noida campus</li> <li>• Organizing Secretary: 4 days “Indo African International Training Program on Quality Management of Tissue Culture Raised Plants” from 11<sup>th</sup> - 14<sup>th</sup> December 2017 at Amity University Uttar Pradesh, Noida campus</li> <li>• Organized Popular lecture on “Genetically Modified Crops” 22<sup>nd</sup> February 2018</li> <li>• Organizing Secretary: 6 days International Training Program on “Entrepreneurship Development in Plant Tissue culture for African Candidates” 5<sup>th</sup> March -9<sup>th</sup> March 2018 and 28<sup>th</sup> March 2018 at Amity University Uttar Pradesh, Noida campus.</li> <li>• Organized “Quality Management of Tissue Culture Raised Plants for African Candidates”,1st - 5th October 2018 at Amity University Uttar Pradesh, Noida campus</li> </ul>

	<ul style="list-style-type: none"> <li>• Faculty Coordinator of 2<sup>nd</sup> International Conference on Entrepreneurship, Innovation and Leadership (ICEIL, 2018), 19<sup>th</sup> – 21<sup>st</sup> December 2018</li> <li>• Organized Guest Lecture on scope of Entrepreneurship in Plant Biotechnology on 29<sup>th</sup> October 2020</li> <li>• Organizing Secretary, Organized International webinar on Agribiotechnology, Innovation and Commercialization for sustainable Development on 4<sup>th</sup> December 2020.</li> <li>• Programme Director, Organized Pre-Conference workshop of 4<sup>th</sup> International Conference on Entrepreneurship, Innovation &amp; Leadership (ICEIL, 2022) on Bio-Entrepreneurship Via 3s (Startups, Scaling up and Sustenance) aligned with SDGs, 19<sup>th</sup> January 2022</li> <li>• Organizing Secretary, Organized Seminar cum Extension Activities on “Women Leaders and EcosySTEM” 2<sup>nd</sup> March, 2023 to celebrate International Women’s Day.</li> <li>• Symposium Chair, Organized Symposium on Technopreneurship in Life Sciences for \$5 Trillion Economy, 14<sup>th</sup> September 2023</li> <li>• Organized Guest Lecture on “Fermentation as a Tool for eco-friendly Manufacturing” By Dr. Amal Mukhopadhyay Founder and Director of ElGa Biotech *, Baumschulenweg 26, 22609 Hamburg, Germany and Co-Founder and Managing Director of Lorven Biologics Germany GmbH, Hamburg (The Pravasi Bharatiya Samman Awardee 2023).</li> <li>• Organized Awareness program on <b>Mission LiFE (Lifestyle for Environment) - Mapping Minds, Shaping the World in collaboration with WWF</b> Programme Centre-Resource Partner and the Ministry of Environment, Forest, and Climate Change, Government of India (MoEF&amp;CC) on 19<sup>th</sup> December 2024</li> </ul>
<p><u>Invited Speaker/Keynote Speech</u></p>	<ul style="list-style-type: none"> <li>• Delivered lecture on “<b>Selection of mother plants, explants preparation and aseptic techniques</b>” and trained the International Participants on Plant Tissue Culture in an Training of laboratory staff of African tissue culture companies and scientists from African research institutions on effective</li> </ul>



management of operations, disease diagnosis (virus indexing) and true to type (genetic fidelity) testing organized by Biotech consortium India Limited in Association with Ministry of External Affairs, 23<sup>rd</sup> January 2017

- Delivered a lecture on ‘**Opportunities in the area of Applied Plant Tissue Culture**’ on **March 07, 2019** at Sheel Biotech Pvt. Ltd., Manesar, Gurugram in an International Training organized by Biotech Consortium India Ltd., New Delhi for candidates from plant tissue culture industry/Institutes of African countries by Ministry of External Affairs, Govt. of India.
- Delivered Key note speech on “***In vitro* flowering of Vigna species from immature hybrid seed**” in 3<sup>rd</sup> International Biotechnology and Research Conference held on 23<sup>rd</sup> October 2020 as a virtual conference. (Susmita Shukla, Int J Biotechnol Recent Adv. 2020(ISSN: 2639-4529)DOI: [dx.doi.org/10.18689/2639-4529.a3.001](https://doi.org/10.18689/2639-4529.a3.001))
- Delivered lecture on Establishment and *in vitro* regeneration of some horticultural crops through micropropagation, Archives of Industrial Biotechnology, organized by allied academies, 4th World Congress on Advanced Biotechnology September 25, 2020
- Keynote Speech on “Potential of Applied Plant Biotechnology for Sustainable Development” during Global Edu-Conclave 2021 held virtually on 27 June 2021 organized by International Institute of Organized Research.
- Special Address on “Application of Plant Tissue

Culture for Biodiversity and Conservation” on occasion of Lets Help Our Planet Breathe - Celebration of World Environment Day 5<sup>th</sup> June, 2021 organized by World Wide Fund For Nature Envis Resource Partner (Wwf Envis Rp), WWF – India, New Delhi Supported By MOEF & CC

- Invited speech on “Development of Robust *In Vitro* Regeneration Protocol of Horticultural Crops for Sustainable Agriculture” in Global Webinar on Plant Biology and Plant Science & Global Webinar on Agriculture and Food Science April 11 &12, 2022 organized by SHC (Science Horizon Conferences),Hyderabad
- Resource person and Invited speech on “Potential role of tissue culture in scaling up and sustainable agriculture” One Day National Webinar on Integrated Microbiological and Biotechnological Approaches for Scientific advancement-2022 organized by Department of Microbiology, Jnana Kaveri, Kodagu, Karnataka, India,7<sup>th</sup> March 2022
- Oral Paper Presenter *In Vitro* Raised Rootstocks of Horticultural Crops and It’s Commercial Aspects in National Seminar on Fruit Production in North Eastern Region of India, March 22-24<sup>th</sup> 2022 organized by Central Horticultural Experiment Station in collaboration with Society for promotion of Horticultural crops, ICAR-IIHR, Bengaluru
- Invited Speech on “Tree/woody Plant Tissue Culture” in an International Webinar on Tissue Culture of Tree/Woody Plants (Bamboo & Teak): Significance, Best Practices, and Way Forward 29<sup>th</sup> July 2022 organized by Biotech Consortium India Limited in collaboration with Asia-Pacific Association of Agricultural Research Institutions (APAARI)

	<ul style="list-style-type: none"><li data-bbox="669 128 1395 653">• Invited Speech on “Qualitative Analysis of Bioactive Compounds of <i>Citrus macroptera</i> and its Antimicrobial Activity” in an International Conference on Recent Advances In Horticulture Research 8<sup>th</sup> -9<sup>th</sup> August 2022. Organized by Institute of Horticulture Studies and Research in collaboration with Amity Institute of Organic Agriculture under aegis of Amity Food and Agriculture Foundation, Amity University Uttar Pradesh, Noida U.P.</li><li data-bbox="669 716 1395 968">• Convenor: Susmita Shukla, Tanya Rana. Impact of different sterilants on the successful initiation of pure culture of <i>Azadirachta indica</i>. (ICRAHOR-2024-15th). 15 Feb to 16 Feb,2024. Amity University Uttar Pradesh</li></ul>
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