NAME	Dr(Mrs)Susmita Shukla	
DESIGNATION	Associate Professor	
EMAIL ID	sshukla3@amity.edu	
CONTACT NUMBER	011204392721	
RESEARCH INTERESTS	Dr Shukla's broad research area is *in vitro* clonal propogation 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 europeae*, *Punica granatum*, *Stereospermum suaveolens*, *Sterespermum 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 pharmaceutical science, UTD, GG University, Bilaspur (C.G.)	From November 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 Professsor (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 date

No. of Ph.D. students supervised	1(awarded) 3(ongoing)
No. of M.Tech. Students supervised:	>50
No. of B.Tech. Students supervised:	>100
PUBLICATIONS ***(total no: 40.)***	1. Shukla SK, Shukla Susmita, Koche V and Mishra SK (2007) *In Vitro* propagation of tikhur (*Curcuma angustifolia* Roxb.): a starch yielding plant". Indian Journal of Biotechnology 6: 274 - 276 2. Shukla SK, Shukla Susmita, Koche V and Mishra SK (2007) Plantlets and microtubers regenerated via shoot proliferation in *Dioscorea hispida*(Dennst.) Plant Cell Biotechnology and Molecular Biology 8(1& 2): 61-66 3. Susmita Shukla, S. K. Shukla and S. K. Mishra (2009) *In Vitro* Regeneration from

	seedling Explants of *Stereospermum 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 vitro* regeneration of *Dioscorea hispida* through nodal explants – a rich source of starch" Journal of Biosciences Vol 3 no. 1,pp 30-31
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, 2(2): 37-49 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[1], Shelly Praveen[2], Susmita Shukla[1*] (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 Ruhal, 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[1], Shiv Kant Shukla[2]

and Susmita Shukla[1]*(2020); Impact of Sterilants on Culture Establishment of Indigenous Musa L. Varieties: A Step forward for Conservation, Environmental Science and Pollution Research, 28:3913–3919 (https://rdcu.be/b5H2k)

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 36.

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- 79. https://Doi.Org/10.56557/Bn/2022/V42i11646

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)

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

Book Chapters:

1: Susmita Shukla[1]*, Taramla Raman[1] and Shiv Kant Shukla[2] , [(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 sustainailibilty for green societies, The impact of Covid – 19 Pandemic, Springer, ISBN: 978-3-030-66489-3 Published on 23rd 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*, 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?sapoutbound id=CC41047A059ECA9527CE9B097509D0DC21F6E485) 6: 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 7: 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

PATENTS ***(total no: 4)***	**201811033955, 201911000828, 201911013833, 202111033634**
RESEARCH PROJECTS Completed: ***(total no.): 2***	• "Embryo rescue culture as an aid to raise interspecific hybrids of *Vigna* species" (Under BioCARe Scheme of Department of Biotechnology (**DBT**),Govt. of India) • *In Vitro* mass multiplication and conservation of some endangered Citrus species of NEH region of India (Under DBT Twinning Scheme for North East)

AWARDS & HONOURS/ DISTINCTIONS	• Received **merit certificate** in MSc. Biotechnology • Qualified MP (SLET) (Accredited by UGC) • **DBT Travel Grant for Singapore(2013)** for paper presentation in an International Conference • Recipient of **IASc – NASI-INSA Summer Research Teacher Fellowship (2014)** worked at Molecular Plant Biology Lab, Delhi University, South Campus. • Women Scientist Award under **BioCARe scheme of DBT(2015)** • Best Young Scientist Award (2016) on IJTA 3rd International Conference on Agriculture, Horticulture & Plant Sciences, New Delhi • Scientist of the year Award (2017) on 5th International Conference on Agriculture, Horticulture & Plant Sciences, Rishikesh (U.K) India • 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, 3oth October to 3rd November, 2017 • 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, 10th February 2018 • Received "Bharat Ratna Dr Abdulkalam gold Medal Award" for Individual Achievement And National Economic Growth by Global Economic Progress & Research Association, New Delhi, 27th 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 2nd International conference on Entrepreneurship, Innovation and Leadership (ICEIL-2018),19th -21st 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 3rd International Biotechnology and Research Conference held on 23rd October 2020 as a virtual conference organized by Madridge Group. • National Eminent Educator Award,28th septtember,2020 awarded by International Institute of Organized Research(I2OR) • International Institute of Organized Research(I2OR) awarded Fellow Member on 17th Jan. 2021 • Special recognition and appreciation received for organizing of 5th world congress on advance biotechnology held on 8th 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, Innovation & Leadership (ICEIL,2022) organized by Amity University Uttar Pradesh, Noida,20th – 22nd January 2022.

	• International Academic Excellence Award during Global Edu Conclave Organized by I2OR and Mendley, 25th December 2022

MEMBERSHIP with Professional/ Academic bodies	• Indian Society of Agricultural Biochemists. • Association of Microbiologists of India. • Indian Science Congress Association • Society for Plant Biochemistry and Biotechnology • The Horticultural Society of India.