

Kumaun University, Nainital
Curriculum Vitae

Name : Dr. Sushma Tamta
Designation : Professor
Department : Botany, D.S.B. Campus, Kumaun University, Nainital

Contact Information

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Vidwan ID :

Educational Qualification

Degree	University	Subjects	Year
B.Sc.	Kumaun University, Nainital	Zoology, Botany, Chemistry	1988
B.Sc. Link course	Kumaun University, Nainital	Zoology, Botany and Chemistry	1990
M.Sc.	Kumaun University, Nainital	Botany	1992
Ph.D.	Kumaun University, Nainital	Botany	2004

Work Experience

Position	Department	University/Organization	Year
Lecturer	Botany Department, D.S.B. Campus, KU, Nainital	Kumaun University, Nainital	13 July 2005 to 12 July 2009
Sr. Lecturer	Botany Department, D.S.B. Campus, KU, Nainital	Kumaun University, Nainital	13 July 2009 to 30 Nov 2010
Associate Professor	Biotechnology Department, Bhimtal Campus, Bhimtal, KU,	Kumaun University, Nainital	1 Dec 2010 to 31 May 2015

	Nainital		
Assistant Professor	Botany Department, D.S.B. Campus, KU, Nainital	Kumaun University, Nainital	1 June 2015 to 13 July 2017
Associate Professor	Botany Department, D.S.B. Campus, KU, Nainital	Kumaun University, Nainital	13 July 2017 to 13 July 2020
Professor	Botany Department, D.S.B. Campus, KU, Nainital	Kumaun University, Nainital	13 July 2020 to continuing

Administrative Responsibilities

Position	Nature of responsibility	University/Organization	Year
Assistant Proctor	As assigned	D.S.B. Campus	2019-2022
Assistant D S W	As assigned	D.S.B. Campus	2022-2023
Member, UBA	As assigned	Kumaun University	2021-continuing
Director, KU-IIC	As assigned	Kumaun University	2021-2023

Research Interests

Plant tissue culture techniques for conservation and sustainable use of medicinal plants, secondary metabolites, etc.

Publications

Research paper's Author's name	Title of the paper	Journal, Vol, page no	Year
Sharma P, Sharma V, Mathpal S, Tewari D, Chandra S and Tamta S	Identification of alpha-glucosidase enzyme inhibitors from phytochemicals <i>via</i> integrated deep learning, molecular docking, molecular dynamics simulation, and MMPBSA analysis	<i>South African Journal of Botany</i> .167:48-61	2024
Verma R K, Meenal B, Tamta S. , Chaudhary L B	<i>Astraea lobata</i> (L.) Klotzsch (Euphorbiaceae) -A new addition to the flora of Assam, India.	<i>Asian Journal of Conservation Biology</i> . (1):172–176	2023

Agnihotri S, Dobhal P, Ashfaquallah S, Oli S. and Tamta S	Phytochemical screening of <i>Zanthoxylum armatum</i> roots and exploring its polyphenol and antioxidant activity	<i>Natural Product Research</i>	2023
Lodhiyal LS, Lodhiyal N, Gupta R, Tamta S, Siddiqui F and Chauhan HK	Vegetative propagation of <i>Berberis asiatica</i> Roxb. Ex DC., <i>Ginkgo biloba</i> L., <i>Rauvolfia serpentina</i> (L.) Benth ex Kurz, and <i>Rhododendron arboreum</i> Sm. through stem cuttings	<i>Journal of Applied Research on Medicinal and Aromatic Plants.</i>	2023
Dobhal P, Agnihotri S, and Tamta S	Effect of Salicylic acid elicitor on antioxidant potential and chemical composition of <i>in vitro</i> raised plants of <i>Berberis asiatica</i> Roxb. ex DC	<i>Natural Product Research</i>	2022
Pundir H, Chandra S, Pant M, Joshi T, Bhat S, Pathak R, Bajpai A B, and Tamta S	Identification of essential oil phytochemicals as natural inhibitors of Odorant-binding protein to prevent malaria through in silico approach	<i>Journal of Biomolecular Structure & Dynamics</i>	2022
Agnihotri S, Dobhal P, and Tamta S	Chemical composition, polyphenol contents and antioxidant activities of the 'Himalayan toothache relieving tree' (<i>Zanthoxylum armatum</i> DC.)	<i>Natural Product Research</i>	2022
Agnihotri S, Dobhal P, Ashfaquallah A, Chauhan H and Tamta S	Review of the botany, traditional uses, pharmacology, threats and conservation of <i>Zanthoxylum armatum</i> (Rutaceae)	<i>South African Journal of Botany</i> 150:920-927	2022
Pandey A, Belwal T, Tamta S, and Rawal R S	Optimized extraction of polyphenolic antioxidants from the leaves of Himalayan Oak species	<i>PLOS ONE</i> E16(11): e0259350	2021
Shukla R P, Tiwari G J, Joshi B, Song-Beng K, Tamta S, Boopathi N M and Jena S N	GBS-SNP and SSR based genetic mapping and QTL analysis for drought tolerance in upland cotton	<i>Physiology and Molecular Biology of Plants</i> 27(8):1731-1745	2021
Sharma P, Joshi T, Joshi T, Mathpal S, Maiti P, Nand M, Chandra S and Tamta S	In silico screening of natural compounds to inhibit interaction of human ACE2 receptor and spike protein of SARS-CoV-2 for the prevention of COVID-19	<i>Journal of Biomolecular Structure and Dynamics,</i>	2021
Sharma P, Joshi T, Mathpal S, Chandra S and Tamta S	<i>In silico</i> identification of antidiabetic target for phytochemicals of <i>A. marmelos</i> and mechanistic insights by molecular	<i>Journal of Biomolecular Structure and Dynamics</i>	2021

	dynamics simulations		
Dobhal P, Agnihotri S, Ashfaquallah S and Tamta S	A Review Study on Phytochemical and Pharmacological Aspects of <i>Berberis asiatica</i> Roxb. Ex DC	<i>A Journal of Pharmaceutical Science.11(2): 8-15</i>	2020
Pundir H, Joshi T, Joshi T, Sharma P, Mathpal S, Chandra S and Tamta S	Using Chou's 5-steps rule to study pharmacophore-based virtual screening of SARS-CoV-2 Mpro inhibitors	<i>Molecular Diversity</i>	2020
Sharma P, Joshi T, Mathpal S, Joshi T, Pundee H, Chandra S and Tamta S	Identification of natural inhibitors against Mpro of SARS-CoV-2 by molecular docking, molecular dynamics simulation, and MM/PBSA methods	<i>Journal of Biomolecular Structure and Dynamics,</i>	2020
Sharma P, Joshi T, Josh, T, Chandra S and Tamta S	<u>In silico screening of potential antidiabetic phytochemicals from <i>Phyllanthus emblica</i> against therapeutic targets of type 2 diabetes.</u>	<i>Journal of Ethnopharmacology</i> 248. 112268	2020
Sharma P, Joshi T, Josh, T, Chandra S and Tamta S	Molecular dynamics simulation for screening phytochemicals as α -amylase inhibitors from medicinal plants	<i>Journal of Biomolecular Structure and Dynamics,</i>	2020
Sharma, R. and Tamta S.	Genetic variation in sugarcane cultivars for red rot resistance revealed by resistant gene analog polymorphism markers	<i>Vegetos</i> ,33 (1): 92-99	2020
Ashfaquallah S, Agnihotri S., Dobhal P and Tamta S	<i>Origanum vulgare</i> - A high value medicinal plant	<i>Oaks</i> .11-14:42-46	2019
Pandey A and Tamta S	Synergistic Influence of Seed Scarification and Plant Growth Regulators on Prompt Multiplication of <i>Quercus serrata</i> Thunb	<i>Proceedings of the National Academy of Sciences, India Section B: Biological Sciences, 90(2), 447-453.</i>	2019
Pandey A, Belwal T, Tamta S, Bhatt ID, and Rawal R S	Phenolic compounds, antioxidant capacity and antimutagenic activity in different growth stages of in vitro raised plants of <i>Origanum vulgare</i> L	<i>Molecular Biology Reports</i> 46(2): 2231-2241	2019
Ashfaquallah S and Tamta S	Studies on high value medicinal plant- <i>Origanum vulgare</i> L. : a	<i>International Journal of Research and Analytical</i>	2019

	review	<i>Reviews. 6(1):39-44</i>	
Pandey A, Sekar KC, Tamta S and Rawal R S	Assessment of phytochemicals, antioxidant and antimutagenic activity in micropropagated plants of <i>Quercus serrata</i> , a high value tree species of Himalaya	<i>Plant Biosystems</i> 152(5):929-936	2018
Pandey A, Ngashangva N and Tamta S	Effect of GA3 treatments and sowing conditions on ex situ seed germination of <i>Oroxylum indicum</i> (L) Benth. Ex Kurz: A threatened high value medicinal plant	<i>J App Biol Biotech.</i> 6(3):9-14	2018
Pandey N, Jain R, Pandey A and Tamta S	Optimisation and characterisation of the orange pigment produced by a cold adapted strain of <i>Penicillium</i> sp. (GBPI_P155) isolated from mountain ecosystem	<i>Mycology,</i>	2018
Singh N, Pal A K, Roy R K, Tamta S and Rana T S	Characterization of Gladiolus Germplasm Using Morphological, Physiological, and Molecular Markers	<i>Biochemical Genetics.</i> 56(1):128-148	2018
Sharma Rand Tamta S	Red rot resistant gene characterization using RGAP markers among sugarcane cultivars resistant and susceptible to the red rot disease	<i>3 Biotech</i> 7 (5), 306	2017
Singh N, Pal A K, Roy R K, Tewari SK, Tamta S and Rana T S	Development of cpSSR markers for analysis of genetic diversity in Gladiolus cultivars	<i>Plant Gene</i> 10:31-36	2017
Singh N, Meena B, Pal A K, Roy R K, Tewari S K, Tamta S and Rana T S	Nucleotide diversity and phylogenetic relationships among <i>Gladiolus</i> cultivars and related taxa of family Iridaceae	<i>Journal of Genetics</i> 96 (1): 135-145	2017
Singh N, Pal A K, Meena B, Roy R K, Tamta S and Rana T S	Development of ISSR and RAPD-derived SCAR markers for identification of Gladiolus germplasm	<i>Journal of Horticultural Science and Biotechnology.</i>	2017
Tiwari V, Meena B, Nair K.N., Upreti D.K., Tamta S. and Rana T.S	Assessment of genetic diversity and population structure of <i>Bergenia stracheyi</i> (Saxifragaceae) in the western Himalaya (India)	<i>Biochemical Systematics and Ecology.</i> 70:205-210	2017
Kumar V, Khulbe K, Tamta S, Srivastava R. and Sharma A. K.	Biochemical and Molecular identification Oxalate oxidizing bacteria isolating from rhizosphere of biomineralizing tree, <i>Termineliaalcata</i> from Kumaun Himalaya	<i>India. Int. J of Current Research.</i> 8(11):42179-42182	2016

Singh N, Pal A.K., Roy R. K., Tewari S. K., Tamta S. and Rana T.S	Assessment of genetic variation and population structure in Indigenous <i>Gladiolus</i> cultivars inferred from molecular markers	<i>The Nucleus</i> (3):235–244	2016
Pandey A and Tamta S	Efficient micropropagation of <i>Citrus sinensis</i> (L.) Osbeck from cotyledonary explants suitable for the development of commercial variety	<i>African Journal of Biotechnology</i> .15(34): 1806-1812	2016
Umesh, Bisht P and Tamta S	Microbiological Profile in Urinary Tract Infections among children in a tertiary care center in Kumaun region, India	<i>Int.J.Curr. Microbiol.App. Sci.</i> 5(4):101-108	2016
Kumar V, Tamta S and Khulbe K	Plant growth Promoting Rhizobacterial Communities to Induce Suppressive Soils	<i>Indian Farmers Digest</i> 48(12):24-25.	2015
Megta A K and Tamta S	Regeneration of <i>Origanum vulgare</i> L. through nodal explants	<i>Oaks</i> .10:105-108	2015
Bisht P, Tamta S and Umesh	Bacteriological Profile and Antibiotic Resistance Pattern of Urinary Tract Infections in Kumaun Region	<i>Int.J.Curr. Microbiol.App. Sci.</i> 4(8): 874-883	2015
Brijwal L, Pandey A and Tamta S	<i>In vitro</i> propagation of the endangered species <i>Berberis aristata</i> DC. via leaf-derived callus	<i>In Vitro Cell.Dev.Biol.- Plant</i>	2015
Brijwal L., Tamta S	<i>Agrobacterium rhizogenes</i> mediated hairy root induction in endangered <i>Berberis aristata</i> DC	<i>SpringerPlus</i> .4:443	2015
Sharma Rand Tamta S	A Review on Red Rot: The “Cancer” of Sugarcane	<i>J Plant PatholMicrobiol</i> 51:637-647	2015
Pandey A and Tamta S	High-molecular-weight DNA extraction from six <i>Quercus</i> species of Kumaun Himalaya, India	<i>International Journal of Advanced Research</i> 3(7): 30-34	2015
Tiwari V, Mahar K S, Singh N, Meena B, Nair K N, Datt B, Upreti D K, Tamta S, Rana T S	Genetic variability and population structure of <i>Bergenia ciliate</i> (Saxifragaceae) in The Western Himalaya inferred from DAMD and ISSR markers	<i>Biochemical Systematics and Ecology</i> 60: 165-170	2015
Pandey A and Tamta S	<i>In Vitro</i> Propagation of the Important Tasar Oak (<i>Quercus serrata</i> Thunb) by Casein Hydrolysate Promoted High Frequency Shoot Proliferation	<i>J of Sus Forestry.</i> 33:590-603	2014
Bhatt N.C. Panwar A. Bisht T. S. and Tamta S	Coupling of algal biofuel production with wastewater	<i>The Scientific World Journal.</i> 2014: 10	2014

Dhakar K. Jain R., Tamta S. and Pandey A	Prolonged Laccase Production by a cold and pH tolerant strain of <i>Penicillium pinophilum</i> (MCC 1049) isolated from a low temperature environment	<i>Enzyme Research.</i> 2014:6	2014
Giri D and Tamta S	Induction of somatic embryogenesis in vulnerable medicinal plant <i>Hedychium spicatum</i> Buch-Ham ex Smith	<i>Plant Tissue Cult. & Biotech.</i> 23(2): 147-155	2013
Pandey A, Tamta S	Effect of pre-sowing treatments on seed germination in <i>Quercus serrata</i> Thunb. and <i>Quercus semecarpifolia</i> Sm	<i>International Journal of Biodiversity and Conservation.</i> 5(12):791-795	2013
Pandey A, Brijwal L., Tamta S) <i>In vitro</i> propagation and phytochemical assessment of <i>Berberis chitria</i> : An important medicinal shrub of Kumaun Himalaya, India	<i>Journal of Medicinal Plants Research</i> 7(15): 930-937	2013
Giri D and Tamta S	Effect of Plant Growth Substances on Rooting of <i>Hedychium spicatum</i> under Different Temperature Regimes	<i>Pakistan Journal of Biological Sciences.</i> 16(5): 226-232	2013
Brijwal L., Pandey A, Tamta S	An overview on phytomedicinal approaches of <i>Zanthoxylum armatum</i> DC.: An important magical medicinal plant	<i>Journal of Medicinal Plants Research</i> 7(8): 366-370	2013
Sharma R. and Tamta S	Nutritive value of Sugarcane leaves for cattles	<i>Oaks.</i> 9: 29-31	2013
Bhatt N.C. and Tamta S	Integration of microalgae cultivation with wastewater for sustainable biofuel production	<i>Current Science.</i> 105(6): 749	2013
Giri D and Tamta S	Effect of pre-sowing treatments on seed germination in <i>Hedychium spicatum</i> : An important vulnerable medicinal plant of Indian Himalayan region	<i>Scientific Research and Essays</i> 7(19):1835-1839	2012
Pandey A and Tamta S	Influence of kinetin on <i>in vitro</i> rooting and survival of banj oak (<i>Quercus leucotrichophora</i> L.)	<i>African Journal of Biotechnology.</i> 11(62):12538-12545	2012
Giri D and Tamta S	Propagation and Conservation of <i>Dactylorhiza hatagirea</i> (D. Don) Soo, an endangered alpine orchid	<i>African Journal of Biotechnology.</i> 11(62):12586-12594	2012
Giri D and Tamta S	Effect of plant growth regulators (PGRs) on micropropagation of a vulnerable and high value medicinal plant <i>Hedychium spicatum</i>	<i>African Journal of Biotechnology</i> 10(20): 4040-4045	2011
Pandey A, Tamta S and Giri D	Role of auxin on adventitious root formation and subsequent growth of cutting raised plantlets of <i>Ginkgo</i>	<i>International Journal of Biodiversity and Conservation.</i> 3(4):142-	2011

	<i>biloba</i> L	146	
Giri D., Pandey A. and Tamta S	Major milestones in plant tissue culture	<i>Oaks.7: 58-60</i>	2011
Pandey A, Negi D, Giri D and Tamta S	<i>In vitro</i> seed germination study in <i>Citrus sinensis</i>	<i>Oaks.7:52-55</i>	2011
Giri Dand Tamta S and Pandey A	A review account on medicinal value of <i>Hedychium spicatum</i> Buch ex Sm: Vulnerable medicinal plant	<i>Journal of Medicinal Plants Research.4(25):2773-2777</i>	2010
Giri Dand Tamta S	A General Account on Traditional Medicinal Uses of <i>Dactylorhizahatagirea</i> (D. Don) Soo	<i>New York Science Journal 3 (2): 78-79</i>	2010
Pandey A, Tamta S and Giri D	Oak (<i>Quercus</i>): An important tree species of Himalaya	<i>Oaks. 6:20-22.</i>	2010
Manhas S, Tamta S, Giri D and Pandey A	<i>In vitro</i> seed germination study in <i>Berberis chitria</i>	<i>Oaks.6:8-11.</i>	2010
Giri Dand Tamta S	Combined effect of PGRs and soil facilitate early flowering of an endangered alpine orchid <i>Dactylorhizahatagirea</i> at lower elevation	<i>Current Science 99(1):21-23</i>	2010
Tamta S., Palni L.M.S., Vyas P. and Bisht M.S.	Conservation through <i>in vitro</i> method: A case of plant regeneration through somatic embryogenesis in <i>Q. Semecarpifolia</i> Sm	<i>Journal of American Science 5(1):70-76</i>	2009
Giri Dand Tamta S	Plant tissue culture for conservation of medicinal plants	<i>Oaks.4:18-19</i>	2008
Giri,D; L.M.Tewari and S.Tamta	Quantative analysis of tree species in Oak dominant forest of Uttarakhand, Central Himalaya	<i>Indian Journal of Botanical Research 4(2):313-318</i>	2008
Giri,D; D.Arya; Tamta S. and L.M.Tewari	Dwindling of an endangered orchid <i>Dactylorhizahatagirea</i> (D.Don) Soo: A case study from Tungnath Alpine meadows of Garhwal Himalaya, India	<i>Nature and Science 6(3): 6-9</i>	2008
Tamta S., Palni L.M.S., Purohit V.K, and Nandi S.K	<i>In vitro</i> propagation of brown oak (<i>Quercus semecarpifolia</i> Sm.) from seedling explants	<i>In Vitro Cell.Dev.Biol.- Plant. 44:136-141</i>	2008
Tamta S., Palni L.M.S., and Pandey A	Use of rhizosphere soil for raising <i>Cedrus deodara</i> and <i>Quercus semecarpifolia</i> seedlings	<i>Journal of Tropical Forest Science 20(2): 82-90</i>	2008
Giri Dand Tamta S	<i>Dactylorhizahatagirea</i> (D.Don) Soo. (Orchidaceae)- Requires ex-situ conservation efforts	<i>Oaks.3:13-14</i>	2007
Tamta S., Palni L.M.S., and Nandi S.K.	Adventitious root formation in shoot cuttings of Himalayan cedar (<i>Cedrusdeodara</i> Roxb. ex-Lamb.)	<i>Journal of Nontimber Forest Products .14(3): 231-238</i>	2007

	G. Don under mist chamber conditions		
Tamta S. and Palni L.M.S.	Studies on <i>in vitro</i> propagation of Himalayan cedar (<i>Cedrus deodara</i>) using zygotic embryos and stem segments	<i>Indian J Biotech</i> .3:209-215	2004
Purohit V.K, Tamta S., Nandi S.K., Rikhari H.C., and Palni L.M.S	Does acorn weight influence germination and subsequent seedling growth of Central Himalayan oaks?	<i>Journal of Tropical Forest Science</i> . 15 (3): 483-492	2003
Nandi S.K., Tamta S. and Palni L.M.S.	Adventitious root formation in young shoots of <i>Cedrus deodara</i> L	<i>Biologia Plantarum</i> 45(3): 473-476	2002
Purohit V.K, Tamta S., Chandra S., Vyas P., Palni L.M.S. and Nandi S.K	<i>In vitro</i> multiplication of <i>Quercus leucotrichophora</i> L. and <i>Q. Glauca</i> Thunb.: Important Himalayan oaks	<i>Plant Cell, Tissue and Organ Culture</i> 69(2):121-133	2002
Tamta S., Purohit V.K., Nandi S.K. and Palni L.M.S.	Chemical induction of root formation in <i>Quercus leucotrichophora</i> L. stem cuttings	<i>Indian Journal of Forestry</i> , 23(2): 135-138	2000
Sah R., Shail S.* and Dubey R. C	Fungistasis and Community dynamics of microfungi in soils of banj oak, chir pine and cypress forests of Kumaun Central Himalaya	<i>Int. J. Tropical Plant Diseases</i> , 12:159-169	1997

- a) Patents (start from recent publications} NA
- b) Books (start from recent publications) NA
- c) Book chapters (start from recent publications)

Authors name	Title of Chapter	Title of the book	Publisher	ISBN	Year
Agnihotri S, Dobhal P, Ashfaquallah S and Tamta S	Availability and Distribution of Economically Important Plants from Alpine Region of Kumaun Himalaya, Uttarakhand	Natural Products and Their Utilization Pattern	Nova Science Publishers, Inc. New York	9781536182118	2020
Sharma P., Maiti P., Nand M.	Status of Air Pollution in Uttarakhand	Interdisciplinary avenues in environmental	Lambert Academic Publishing,	10:6202026413	2017

Tamta S. and Chandra S		and health challenges of Uttarakhand			
Sharma R., Singh M.K. and Tamta S	Biodiversity of Uttarakhand: Major issues and Conservation Strategies	Interdisciplinary avenues in environmental and health challenges of Uttarakhand	Lambert Academic Publishing	10: 6202026413	2017
Pandey A and Tamta S	Clonal propagation of a high value multipurpose timberline tree species <i>Quercus semecarpifolia</i> Sm. of West Himalaya, India	Biotechnology for Sustainability – Achievements, Challenges and Perspectives	Bhore S., Marimuthu K. & Ravichandran M.- Publisher, AIMST University	978-967-14475-3-6	2017
Pandey A and Tamta S	Conservation of banj and kharsu oak	Agroforestry and Climate Change Management	Arunachalam A., Dagar J.C. and Singh A.K.. Pointer Publishers, Jaipur (Raj.) India	978-81-7132-756-0	2013
Pandey A and Tamta S	Effect of different light conditions on <i>in vitro</i> seed germination in <i>Quercus serrata</i> Thunb	Assessment and conservation of forest genetic resources through biotechnological interventions.	Institute of Forest Productivity (ICFRE), Aranyodaya,		2013
Pandey A, Tamta S	Oaks of Central Himalaya: A Source of Tasar Silk. Glimpses of Forestry Research in the Indian Himalayan Region	Glimpses of Forestry Research in the Indian Himalayan Region.	Bishan Singh Mahendra Pal Singh		2012
Purohit V.K., Palni L.M.S., Nandi	Somatic embryogenesis in <i>Quercus floribunda</i> , an important	Role of plant tissue culture in biodiversity conservation and economic	Gyanodaya Prakashan, Nainital		2002

S.K. Vyas P. and Tamta S	Central Himalayan oak.	development.			
Palni L.M.S., Bag N., Nadeem M., Tamta S., Vyas P., Bisht M.S., Purohit V.K., Kumar A., Nandi S.K., Pandey A. and Purohit A.N	Micropropagation: Conservation through tissue culture of selected Himalayan plants	Research for mountain development: some initiatives and accomplishments	GyanodayaPrakashan, Nainital		1998
Shail S. * and Dubey R. C.	Seasonal changes in microbial community in relation to edaphic factors in two forests soils of Kumaun Himalaya	Recent researchs in Ecology, Environment and Pollution	Today's and Tomorrow's Printers and Publishers, New Delhi		1997

d) Conference Publications/Proceedings

Authors name	Title of the paper	Conference name	Year
Agnihotri S., Dobhal P and Tamta S.	Attempt to generate medicinally important plants <i>in vitro</i> for rapid multiplication.	The International Conference Advancement in Technologies & its applications in Current Era	2018
Sharma P., Chandra S. and Tamta S.	Virtual screening of anti inflammatory compounds from <i>Aegle marmelos</i> against COX-2 receptor.	The International Conference Advancement in Technologies & its applications in Current Era	2018

Projects

Title of the project	Funding agency	Amount (Rs)	Year
Propagation and improvement of a therapeutically important orchid, <i>Dactylorhiza hatagirea</i> , using conventional and biotech	Uttarakhand State Council For Science & Technology (Govt. of Uttarakhand)	Rs. 7,25,000.00	2007-2010

approaches”	Dehradun		
“Propagation and Conservation of Oaksof Central Himalaya through <i>in vitro</i> methods”.	GBPIHED, Kosi-Katarmal, Almora	8,49,450.00	2009-2012
Macro and Micropropagation with Biochemical and Molecular Characterization of <i>Aconitum balfourii</i> Stapf, and <i>Prunella vulgaris</i> L. Important medicinal plant species of Utrakhand	USBD, Dehradun	10.00 lakhs	2012-2015
“Genetic transformation through <i>Agrobacterium rhizogenes</i> for enhanced production of potential alkaloids in <i>Berberis spp.</i> of Kumaun Himalayan region ”	USBD, Dehradun	5.35 lakhs	2012-2015
“Isolation and optimization of growth conditions of microalgal isolates for biodiesel productionfrom waste water resources of Nainital district”,	Innovative Research Activities Scheme (U.G.C.), Kumaun University, Nainital	1.00 lakh	2016
“Hydroponics, supplementary livelihood option for vegetables/fruits cultivation”	UCB, Haldi	9.92 lakh	2022-
“Propagationand conservation of <i>Rauwolfia serpentina</i> (L.) Benth. Ex Kurz”	Kumaun University Internal Research Grant (KUIFR)	2,00,000/- (Rupees Two lakh Only)	2024

Teaching details (add row if required)

Name of the course/paper	Department	University	Year
B.Sc.			
Gymnosperms	Botany	KU	2005-2010
Microbiology (Bacteria, Viruses and Lichens)	Botany	KU	2015-
Embryology and Morphogenesis	Botany	KU	2015-
Plant Biotechnology and Immunology	Biotechnology	KU	2011-15
M. Sc.			
Gymnosperms	Botany	KU	2005-2010
Cell and Molecular Biology			
Microbiology (Bacteria, Viruses and Lichens)	Botany	KU	2015-
Plant Morphology, Anatomy and Embryology/ Plant Development & Reproductive Biology	Botany	KU	2015-
Plant Biotechnology	Botany	KU	2015-

Genetic engineering	Biotechnology	KU	2011-2015
Plant Biotechnology	Biotechnology	KU	2011-2015

Professional Memberships

Organization	Position	Year
Member of Organization for Women in Science for the Developing World (OWSD) [formerly Third World Organization for Women in Science (TWOWS)]	Member	Since 2008
Member of Oaks News Letter	Member	Since 2007
Member of International Society for Development and Sustainability (ISDS Society) in Japan Membership ID: M170825	Member	Since 2017
Life member of The Indian Science Congress Association	Member	Since 2016

Honours and Awards

Award	Awarding Organization	Year
1 st prize in poster presentation (Title “Propagation of <i>Cedrus deodara</i> by means of Conventional and Tissue Culture Techniques”) in International Symposium on breeding and improvement of Asian Conifers during 20 th century	Forest Research Institute, Dehradun, UA, India	2006
Prof. K.S. Valdiya Research Award 2022	Research and Development Cell (RDC), Kumaun University, Nainital.	2022
Prof. K.S. Valdiya Research Award 2023	Research and Development Cell (RDC), Kumaun University, Nainital.	2023

Conference Presentations

Title of presentation	Conference name	Name of the institution	Year
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Biotechnological methods for multiplication and conservation of Timur	International conference on Global perspective in Agricultural and applied sciences for food and env security (GAAFES 2019)	Agricultural & Environmental Technology Development Society, US Nagar, Uttarakhand, India	2019
Citrus species- good source of antioxidants	National seminar on Century of Asians: Role & impact of Asian countries (with special reference to BRICS & UN)	UPSA & UGC, HRDC, Kumaun University, Nainital	2018
Biofuel and Microalgae from waste water	International seminar on Environmental governance and Sustainable Development in 21 st Century India: Challenges for the Mountain Regions in the Anthropocene,	Uttarakhand Political Science Association (UPSA) in conjunction with UGC-HRDC, Kumaun University, Nainital	2017
<i>In Vitro</i> Approach for Multiplication and Conservation of Important Himalayan Medicinal Plant Species	International Conference on Women in Science and Technology for the Developing World,	OWSD and Kuwait Institute for Scientific Research (KISR), Kuwait	2016
Propagation of Quercus sp. by means of conventional and tissue culture techniques	International Conference: Women Scientist in changing world	Chinese Academy of Sciences and TWOWS Beijing, China	2010
Conservation through <i>in vitro</i> methods: A case of plant regeneration through somatic embryogenesis in <i>Quercus semecarpifolia</i> Sm	2 nd World Scientific Congress: Challenges in Botanical Research and Climate Change	Delft University of Technology, Netherlands.	2008

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Last Printed On: 4/23/2024 10:01:00 PM
As of Last Complete Printing
Number of Pages: 14
Number of Words: 3,928 (approx.)
Number of Characters: 22,391 (approx.)