
PROFESSIONAL C.V. OF PROF. Y. VIMALA

1. **Full Name** : **VIMALA, Yerramilli**
2. **Date and Place of Birth** : **11 August, 1960 [at Meerut, U.P.]**
3. **Present Professional status** : **Professor of Botany, and Pro-Vice Chancellor**
4. **Field of Specialization** : **Plant Developmental Physiology, Phytochemistry, Tissue Culture, Ecotechnology**
5. **Address with telephone / Fax No. etc.:**

(a) Office

(b) Residence

Department of Botany
C. C. S. University,
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6. Academic Qualifications

S. No.	Diploma/ Degree	Subject	Year	Board/ University	Class/ Div.	Additional Particulars
1	High School	Biol. group	1975	UP Board	I	Awarded National Merit Scholarship
2	Intermediate	Biol. group	1977	UP Board	I	UP Board Merit Scholarship
3	B.Sc.	Bot., Zool., Chemistry	1979	Meerut Univ.	I	20 th Rank in the University
4	M.Sc.	Botany	1981	Meerut Univ. (Inst. Of Advanced Studies)	I	1st Rank Gold Medalist
5	M.Phil.	Botany	1982	Meerut Univ. (Inst. of Advanced Studies)	I	2nd Rank
6	Ph.D.	Botany	1985	Meerut Univ. (Inst. of Advanced Studies)		
7	International Training Course (UNESCO/ ICRO/ HAS)	Genetic Engineering	1986	Biol. Res. Center, Szeged, Hungary		
8.	Certificate of Proficiency	Russian Language	1982	Meerut University	1st	1 st Rank
9.	Diploma	Russian Language	1983	Meerut University	1st	1 st Rank

7. Academic honours / awards:

- National Merit Scholarship 1975 – 1979
- Meerut University “Prof. V. Puri Gold Medal” 1981 for securing First position in M.Sc. (Botany) Examination,
- Meerut University Merit Scholarship for M.Phil. studies 1981- 82
- Certificate of Merit 1983 and 1984 for best paper presentation in IBS Conferences,
- Professor MS Swaminathan Award 1985 of the Indian Botanical Society,
- Professor Iyengar – Sahni Award 1986 of the Indian Botanical Society,
- Professor YS Murty Medal 1998 of the Indian Botanical Society.
- Chief Editor, The Journal of the Indian Botanical Society – from 2007 ... onwards
- Executive Councillor (Plant Science Section), Indian Science Congress Association, 2012
- Scientist of the Year award, 2012 of the Society for Plant Research
- Recorder, Plant Science Section, Indian Science Congress Association 2016-18
- President, Plant Science Section, Indian Science Congress Association 2019-20
- Prof. P. Maheshwari Commemoration Medal, 2021 of the Indian Botanical Society

8. Elected Fellow of the Learned Societies:**(a) International**

- (i) ITC International Fellow of UNESCO / ICRO / HAS for Scientific work conducted in Hungary – 1985-1986
- (ii) Fellow of the Linnean Society, London (FLS) – 2012

(b) National

- (iii) Fellow of the Indian Botanical Society (FBS) - 1985
- (iv) Fellow of the Society of Plant Reproductive Biologists (FSPRB) - 2008
- (v) Member of National Academy of Sciences, Allahabad (MNASc) - 1992

9. Positions held (in reverse chronological order): [Professional Experience=39 years]

S. No.	Period	Place of Employment	Designation	Professional Experience (no. of Years)
Present	Aug. 2002-onwards	C. C. S. University, Meerut	Professor	Post Graduate Teaching and Research (>34 years)
1	Sept. 1998-Aug.2002	C. C. S. University, Meerut	Reader	
2	Dec.,1988- Sept. 1998	Jiwaji University, Gwalior	Lecturer and Sr. Lecturer	
3	Aug. 1987- Dec. 1988	Meerut University, Meerut	Lecturer	
4	Mar. – Aug.1987	Meerut University, Meerut	Res. Associate (CSIR)	Researches in Plant Physiology/ Biochemistry
5	Oct. 1985 Nov. -86	Biol. Res. Center, HAS, Hungary	ITC Fellow	

6	Feb. 1984 Oct.-85	Meerut University, Meerut	SRF (CSIR)	& Mol. Biology as a scholar (5 + 1 years)
7	Feb.1982- Jan.84	Meerut University, Meerut	JRF (CSIR)	
8	Jul.81 – Jan.82	Meerut University, Meerut	M.Phil. Scholar	

10. International professional visits:

S. No.	From	To	Institute and the Country of visit	Purpose of visit
1.	4.10 1985	30.11.1986	Biological Research Center, Szeged, Hungary	Visited on an International Fellowship for Training and Researched in Plant Molecular Biology Delivered invited lecture: 'Leaf Senescence' at Jozsef Attila University Szeged
2.			Kecskemet, Hungary	Presented a research paper at the International Seminar
3.			Czechoslovakian Academy of Sciences, Czechoslovakia	Visited as an International Training Course Fellow
4.			University of Olszten, Poland	Visited Biophysics Department as an ITC Fellow
5.	4.10.2003	10.10.2003	Guangzhou Academy of Sciences, China	Presented a paper in an International Conference on Vetiver and Water

11. Significant Research Achievements :

Have made original contributions:

- (i) To resolve outstanding issues relating to differential response of plant organs to hormone-induced senescence at varying levels of growth and development and elucidation of metabolic basis of plant senescence,
- (ii) Chemotaxonomic delineation of flavonoid patterns in ornamental plants,
- (iii) Optimization of directional plantations and crop geometry for enhanced productivity,
- (iv) Development of micropropagation protocol for high value medicinal plants,
- (v) In vitro callus culture protocol for production / upscaling of secondary metabolites (drug principles) using stress or polyploidy inducing techniques for under-explored plants,
- (vi) Exploration of allelopathic interactions of crops with fence plants, and at several other levels to establish their physiological basis.
- (vii) Realization of Vetiver grass environmental model for ecological plantations in 'SSR' perspective.
- (viii) A detailed study of *in vivo* senescence in *Catharanthus roseus* has led to the identification of a lipid heterogeneous compound "lipofuscin like" that evince quantitative correlation to the degree of tissue damage during petal senescence and intact systems, in general. However, IAA and Spermine - induced (*in vitro*) senescence fails in accumulation of such compounds, although breakdown products of fatty acids

appear with senescence in them. The findings have value towards the development of biomarkers to elucidate occurrence and mechanism of senescence.

- (ix) A polypeptide molecule – supposed to be a breakdown product of RUBPCase, that marks the onset of senescence, has been identified and molecularly characterized from the pre-senescent leaf tissues.
- (x) Developed a common extraction-cum-assay buffer for comparative enzymatic analysis for hydrolases and oxidoreductases during development and senescence. This has helped to establish differential pattern of enzymatic activity of natural and induced loss of viability in the seeds.
- (xi) Identified and characterized salt tolerant varieties of spices; induced calli and somatic embryos under salt stress for regeneration of salt tolerant plants.
- (xii) Identified tree, shrub and herb species for reclamation of barren and saline lands, especially Vetiver, *Withania somnifera*, *Sesbania sesban*, *Jatropha curcas*, etc.
- (xiii) Detailed study on biodiesel plant *Jatropha curcas* and its allelopathic interaction with vetiver, *Ricinus communis* and crop plants establishing the utility of *J. curcas* to be grown near several croplands.
- (xiv) Developed protocols for ex-situ conservation of medicinal plants and enhancement of their medicinal principles (Diosgenin, L-Dopa, Asiaticoside, Ascorbic acid, rutin, withanolide, flavonoid, calotropin, calotoxin content) in calli of certain medicinal plants (*Centella asiatica*, *Mucuna pruriens*, *Gymnema*, *Cassia fistula*, *Vetiveria zizanioides*, *Withania somnifera*, *Costus*, *Curcuma*, *Trigonella*, *Capsicum*, *Physalis*, *Emblica*, *Tinospora*, *Calotropis procera* and *C. gigantea*, *Maytenus emarginata*, *Coccinia grandiflora*, *Argemone*, *Ammomum*, etc.) through application of salt stress, precursors or through induction of polyploidy.
- (xv) Developed protocols for micropropagation of tree species, eg. *Eucalyptus*, *Dalbergia*, *Callicarpa*, *Cissus* and *Mesua*.

12. MEMBERSHIP OF ACADEMIC BODIES / Technical Committees :

- (a) Life member: Indian Botanical Society. (F.B.S.)
Indian Society of Plant Physiologist.
Association of Gerontologists, India.
National Academy of Sciences, Allahabad. (M.N.A.Sc.)
Indian Science Congress Association
Forum of Scientists for Peace and Development
Society of Green World
International Society of Environmental Botanists
Indian Horticultural Society
International Society for Plant Research (Vegetos)
Society of Plant Reproduction Biologists (Rep. Biol.)
- (b) Elected member: Task Force for Science and Technology Inputs for Women, 1996.
- (c) Invited member : Preparation of Teacher's Guide for Secondary Stage, NCERT (New Delhi, 1990)
- (d) Honorary Advisor: Post Harvest Management Society (NGO), 2004-2006.
- (e) Executive Body member: Samaj Pragati Sahyog (SVO), 2008-2010.
- (f) Member Contributor of Satyakaam Manav Sewa Samiti (An organization helping HIV infected children), Asha Bhawan Centre, Kolkata (Supporting education of orphan children)
- (g) Expert Member: Research Advisory & Monitoring Committee, Botanical Survey of India, Kolkata (since August 2021 ... contd.)

13. Research Projects handled / Generation of Extra Budgetary Resources

S. No.	Title of the Project / Workshop	Funding Agency	Amount
1.	Mechanism of Petal senescence in intact as well as excised systems as modified by senescence modifiers (1996-2000)	Department of Science and Technology (Govt. of India)	Rs. 16.55 lakhs
2.	National Workshop for Women Scientists on <i>in vitro</i> techniques and environmental toxicology (Feb.10-16,1996)	DOE, DST, DBT and HRD (all Govt. of India)	Rs. 01.20 lakhs
3.	Popular Lectures in Biotechnology (1996)	Department of Biotechnology	Rs. 00.22 lakhs
4.	Refresher Course in Botany: Developmental & Stress Physiology (Dec.1-28, 2001)	UGC	Rs. 1.75 lakhs
5.	<i>In vitro</i> culture for selection and characterization of salt tolerant lines in some umbellifers (2001-2004) – with Prof. C.M. Govil	UGC	Rs. 4,02,600
6.	Physiological studies on Plant-Plant Interaction amongst some crops and cropweeds (2005-onwards)	UGC	Rs. 6,17,600/-
7.	<i>Ex-situ</i> conservation and critical analysis of medicinal plants-Project Coordinator for Centre of Excellence in Botany, (2010)	UP Govt.	Rs. 77.00 lakhs
8.	Extended project: <i>Ex-situ</i> conservation and critical analysis of medicinal plants-Project Coordinator for Centre of Excellence in Botany, (2013)	UP Govt.	Rs. 26.84 lakhs

14. TRAINING PROGRAMMES UNDERTAKEN IN INDIA :

Orientation Programme, Organized by Academic Staff College, Lucknow University, Lucknow, 1989.

Refresher Course in Botany, Organized by Academic Staff College, Lucknow University, Lucknow, 1992.

Refresher Course in Botany, Organized by Academic Staff College, Lucknow University, Lucknow, 1994.

Academic leadership Programme organized by CCS University, Meerut , 2018.

15. TRAINING PROGRAMME UNDERTAKEN ABROAD:

International Training Course in Selected topics of Modern Biology, sponsored by UNESCO, ICRO, HAS at Biological Research Center, Szeged, Hungary. 1985-86

16. TRAINING/ SEMINAR ORGANIZED:

- One- day training in Plant tissue culture organized in our Laboratory for R.G. (PG) College teachers and students (Dec.10, 2007)
- National Education Day (2008).
- National Science Day (2009).
- Seminar-cum-Workshop on “Bioresource conservation & Utilization” (March 27- 29, 2009).
- National Seminar on “Challenges and opportunities in Evolutionary and Reproductive Biology of Plants” (Dec10-11, 2009)
- National Conference on “Traditional Conservation of Plant Biodiversity and Energy Resources vis-à-vis Biotechnological tools for sustainability” (NCBEB), (Dec. 25-26, 2010)
- National Workshop on “Techniques for *in vitro* Pharming, isolation and characterization of secondary metabolites for sustenance of medicinal plants” (March 7-12, 2011).
- Prof. C.M. Govil memorial Lecture, 2013 of Indian Botanical Society.
- National Seminar on “Challenges in Plant Sciences-Now and Then” during Dec. 8-10, 2015 along with Alumni Meet on the occasion of Golden Jubilee of the University.
- Workshop on “ PCR approaches in Molecular Biology”, (March 9-10, 2016) with technical support of Pioneer Centre of Biosciences, Ghaziabad
- National Workshop on “ hands on training in Plant Taxonomy: Tools and Techniques” (Feb. 15-21, 2018)
- National Workshop on “ Leadership Skills for teachers under Faculty Development programme” in collaboration with ICT Academy, Chennai (July 21, 2018).
- International Workshop on “Advanced Biological Techniques and Intellectual Property Rights” (July 27-28, 2018).
- Workshop on “Identification of Mushrooms and their Cultivation”(October 3, 2018).
- National Seminar on “Popular Science Writing: Why and How” and Alma-Meet (Feb 21, 2020).

17. Ph.D. / M.Phil. / M.Sc. Research Students supervised

S. No.	Name of the Student	Title of dissertation/ thesis	Year of award
Ph.D.			
1.	Renuka Jain	Certain studies on regulation of petal senescence	1998
2.	Pritee Sharma	Studies on certain biochemical changes during leaf Senescence	1998
3.	Anjum Khan	Studies on mechanism of petal senescence using senescence modifiers	2000
4.	Meena Kumari	Identification of critical morpho-physiological characters associated with drought tolerance in maize (<i>Zea mays</i> L.)	2002
5.	Amita Mohan	<i>In vitro</i> selection of salt tolerant lines in some Umbellifers	2004
6.	Gunjan Garg	Studies on relationship between leaf life span and nutrient conservation in some annuals and perennials	2005
7.	Sanjay K. Kataria	Certain physiological studies on salinity stress tolerance by saplings of some tree species	2005
8.	Alka Sharma	Studies on salinity tolerance in some cucurbits	2005
9.	Ramkrishna N. Khawale	Induction of <i>in vitro</i> mutagenesis and characterization of grape genotypes and developing micropropagation protocol for putative mutants	2006
10.	Vinita Jindal	Studies on influence of inorganic/organic rhizospheric carbon on carbon budget and yield of some winter and summer plants	2007
11.	Komal Gupta	Certain studies on plant-plant interaction with special emphasis on allelopathy	2007
12.	Shalini Sharma	<i>In vivo</i> and <i>in vitro</i> biochemical studies in some medicinal plants	2007
13.	Sushil Kumar	<i>In vitro</i> and <i>in vivo</i> studies on secondary metabolite production and associated biochemical changes in some medicinal plants	2009
14.	Maneesh Kumar Gupta	Certain physicochemical studies in plant systems with medicinal value to recover some wastelands of U.P.	2009
15.	Upendra Kumar	<i>In vitro</i> studies on bioactive metabolite production under salt stress in some less explored plants	2010
16.	Shalini	<i>In vivo</i> and <i>in vitro</i> comparative salt tolerance-protein studies in <i>Capsicum</i>	2011
17.	Anuj K. Ahalavat	Studies on allelopathic interaction of <i>Jatropha curcas</i> with other non-edible oil yielding fence plants	2011
18.	Divya Kaushik	<i>In vitro</i> and <i>in vivo</i> studies on bioactive metabolite-status in <i>Calotropis</i> species	2011
19.	Naresh Arora	Identification, characterization and evaluation of pest proteases for crop protection	2012

20.	Ishwar Singh	<i>In vitro</i> and <i>in vivo</i> screening of some less explored members of Zingiberaceae for production of bioactive metabolite	2013
21.	Dipti	Certain physico-chemical studies on lamiacean plants	2014
22.	Prabhat Singh	Studies on allelopathic interactions of some annuals and perennials for potential enrichment of soil and sustenance of green cover	2014
23.	Yogendra Kumar Gautam	<i>In vitro</i> studies on some medicinal plants showing antioxidant activity	2014
24.	Roma Rani	<i>In vitro</i> studies on <i>Dalbergia sissoo</i> Roxb. and <i>Eucalyptus camaldulensis</i> Dehnh.	2014
25.	Priyanka	<i>In vitro</i> studies in <i>Emblica officinalis</i> - Micropropagation and biochemical status under salt stress	2014
26.	Laxman Nagar	<i>In vitro</i> studies on chemical treatment induced modification in biochemical status of some legumes	2016
27.	Renu Rani	Studies on bioactive principle production in tissue culturally less explored plants	2016
28.	Sapna Saini	Tissue cultural studies on <i>Mesua ferrea</i> Linn.	2016
29.	Juhi Dhillon	Phytoscreening and <i>in vitro</i> culture for molecules showing effectiveness against arthritis and arthritis-associated bacterial cultures from some locally available and less explored plants	Registered in 2016
30.	Sandeep Kumar	Certain physio-chemical studies on salinity tolerance potential of <i>Solanum melongena</i> and <i>Capsicum annum</i>	-do-
31.	Mahendra Singh	Micropropagation and <i>in vitro</i> phytochemical screening of lesser explored medicinal plants for Hepatoprotective potential	-do-
32.	Shweta Dhariwal	Ecophysiological and biochemical studies on the effect of salicylic acid on <i>Vigna radiata</i> W. cultivars under abiotic (salt stress)	Registered in 2017
33.	Shivani Sangal	<i>In vitro</i> and <i>in vivo</i> phytochemical screening of ethnopharmacologically important <i>Thunbergia</i> spp.	-do-
34.	Farjana Ansari	Effect of Zn deficiency on phytochemical status and <i>in vitro</i> upscaling of bioactive phytochemicals in <i>Putranjiva roxburghii</i> W. and <i>Urena lobata</i> L.	-do-
35.	Pushpendra Kumar	Evaluation of antioxidant and anti-cancer potential of phenolic/polyphenolic compounds of certain Gymnosperms	Registered in 2018
36.	Everest Malik	Molecular characterization of mungbean (<i>Vigna radiata</i>) meiosis specific Recombinase – DMC 1	Registered in 2019
M.Phil.			
1.	Hari Shankar Tiwari	Studies on changes in certain pigments accompanying petal / bract development and senescence	1990
2.	Renuka Jain	Certain biochemical studies on varietal and orientational differences in wheat crop	1991
3.	Prabha Gupta	Mechanism of leaf senescence : a review	1992
4.	Bhawna Upadhyaya	Survey of automobile pollution in Lashkar (Gwalior)	1992
5.	Ashok Tomar	Role of crop geometry in increasing the yield : a review	1992
6.	Archana Bhadauria	Physicochemical characteristics of bathroom and kitchen effluents	1993

7.	Chitra Navarange	A physicochemical study on polymorphic seeds of two varieties of Rajma	1993
8.	Anjum Khan	Studies on changes in the patterns of flavonoids during flower development and senescence	1995
9.	Sanjay Kataria	Certain physicochemical studies on cultivar-specific variations in salt tolerance of Barley	1999
10.	Gunjan Garg	Certain Physicochemical studies on seedling and foliage leaf response to organic and inorganic salts	1999
11.	Ritu Mittal	Some physicochemical studies on response of radicles of moong seedlings to inorganic and organic	1999
12.	Vinita Jindal	Some physicochemical studies on modification of salinity response by IAA in salt sensitive seeds and seedlings of <i>Coriandrum sativum</i>	2000
13.	Maneesh Gupta	Certain studies on salicylic acid mediated modifications of salinity response in two cultivars of <i>Brassica campestris</i> .	2000
14.	Dheeraj Kumar	Studies on cultivar specific variation in physicochemical status of some oil seeds treated and stored under different storage regimes.	2000
15.	Sushma Phurailatpan	Certain physicochemical and Tissue culture Studies on Some varieties of Manipuri aromatic rice	2002
16.	Komal Gupta	Allelopathic Interaction between <i>Tagetes</i> , <i>Parthenium</i> and <i>Lantana</i>	2002
17.	Jitender Giri	Certain studies on salicylic acid – mediated modification on salt and fungal stress response in <i>Brassica campestris</i> cv. Vardan	2003
18.	Mohd. Akmal	Certain physicochemical studies on crop-crop interaction upto seedling stage	2003
19.	Pooja Gulati	Certain physiochemical studies in <i>Trigonella foenum-graecum</i> L. varieties on recovery of salt stress using calcium chloride, GA and vernalization	2003
20.	Sangeeta Yadav	<i>In vitro</i> callus induction and biochemical studies on <i>Capsicum</i> sp.	2004
21.	Sahadev	<i>In vitro</i> studies in <i>Cassia fistula</i>	2004
22.	Prabhat	Influence of organic and inorganic soil carbon on nitrogen dynamics of CAM plant (<i>Bryophyllum daigremontianum</i>)	2004
23.	Upendra Kumar	Comparative hysic-chemical and tissue cultural studies on <i>Moringa oleifera</i>	2005
24.	Priyanka	Comparative hysic-chemical and tissue cultural studies on <i>Emblica officinalis</i>	2005
25.	Anuj Ahalavat	Petroplants in Soil enrichment and biofuel extraction	2005
26.	Nitisha	<i>In vitro</i> studies on biochemical content modification by <i>Trigonella foenum graecum</i> L.	2006
27.	Era Verma	Comparative physico-chemical and tissue cultural studies on <i>Barleria lupulina</i>	2007
28.	Shilpi Chauhan	<i>In vitro</i> callus induction and biochemical studies on <i>Adhatoda vasica</i>	2007
29.	Poonam	<i>In vitro</i> studies on some biochemical attributes of two medicinally important weed species of <i>Solanum xanthocarpum</i> .	2007
30.	Yogendra K. Gautam	<i>In vitro</i> studies on some medicinal plants showing antioxidant activity	2008

31.	Vikas Kumar	Allelopathic interactions between <i>Amaranthus viridis</i> , <i>T.aestivum</i> and <i>Brassica</i> species	2008
32.	Renu	<i>In vitro</i> studies on some leguminous plants	2008
33.	Pooja Bhardwaj	Allelopathic interactions between <i>Brassica napus</i> and <i>Jatropha curcas</i>	2008
34.	Farzana	Allelopathic interactions between <i>Triticum aestivum</i>	2008
35.	Sarita	<i>In vitro</i> studies on two anti-diabetic plants	2008
36.	Priyanka	<i>In vitro</i> salt stress tolerance studies on <i>Emblica</i>	2009
37.	Sunil Kumar	Antimicrobial activity of <i>Cassia fistula</i> calli and influence of salt stress	2009
38.	Roma Rani	Micropropagation and biochemical status of some woody plants	2009
39.	Kanchan Khari	A comparative biochemical profile of some important members of Zingiberaceae with special reference diosgenin and <i>in vitro</i> regeneration	2010
40.	Veenita Tomar	<i>In vivo</i> physico-chemical studies in <i>Mucuna pruriens</i>	2010
41.	Arti Chaudhary	Response of allelochemicals of <i>Jatropha curcas</i> on seedling growth of crop plants	2010
42.	Vivek Chandia	Specific biochemical profiling of <i>Costus speciosus</i> callus raised under salt supplementation	2011
43.	Sapna Saini	Preliminary tissue culture studies in <i>Mesua ferrea</i> L.	2011
44.	Mohd. Ishaq	<i>In vitro</i> screening of salt raised <i>Emblica officinalis</i> calli for antioxidant activity	2012
45.	Nelofer Jan	Preliminary screening of biochemical principles of <i>Physalis peruviana</i> L. shoot callus and seedling explants under salt stress	2012
46.	Rajni Yadav	Chemotaxonomic relationship between family Apocynaceae and Asclepiadaceae	2012
47.	Mohd. Tahir	Comparative allelopathic interaction of two cultivars of <i>Triticum aestivum</i> with <i>Solanum torvum</i> leaf leachates	2013
48.	Farjana	Comparative influence of salt, PGRs and calliterpenone on seedling growth of <i>Zea mays</i> cultivars	2013
49.	Yogesh Kumar	Qualitative carbonic phytopharmaceutical screening of plant parts of some local weeds	2013
50.	Archasvi tyagi	Chemotaxonomic relationship between some selected plants of family Verbenaceae and Lamiaceae	2014
51.	Sumit kumar	Antioxidant potential of some important medicinal plants of C.C.S. University campus	2014
52.	Priyanka Rathi	Phytochemical screening of different plant parts of some weeds for alternative source of medicinal principles	2014
53.	Shivani Sangal	Phytochemical screening of some locally available plants of family Acanthaceae for antioxidant activity	2015
54.	Shweta Dhariwal	Effect of abiotic elicitors (Sodium Chloride and Salicylic acid) on physiochemical status of two cultivars of <i>Vigna radiata</i> (L.) Wilczek	2015
55.	Babli Gaur	Physio-chemical studies on allelopathic interaction of <i>Mucuna pruriens</i> L. with different varieties of <i>Oryza sativa</i> L.	2016

56.	Gaurav Chaudhir	Optimization of plant part and developmental stage of <i>Amaranthus viridis</i> L. and <i>Euphorbia hirta</i> L. for antioxidant potential	2016
57.	Nitin Dhaka	<i>Ex situ</i> and <i>in vitro</i> variation in bioactive metabolites of two accessions of <i>Eclipta alba</i> L.	2017
58.	Saksham	Screening of local plants of Asteraceae for antioxidant potential	2017
59.	Anjali	Screening of total phenolics, other oxidant and free radical scavenging activity of <i>Morinda citrifolia</i>	2018
60.	Sajad Hussain Shah	A study on allelopathic interaction of <i>Terminalia arjuna</i> plant on seedling growth of <i>Triticum aestivum</i>	2018
61.	Akanksha	Phytochemical evaluation of selected flowers of family Asteraceae	2020
M.Sc.(Env. Science)			
1.	Pritee Sharma	Environmental impact analysis of Audhyogic Oxygen	1992
2.	Abha Goswami	Studies on microbial degradation of bio-wastes into bio-fuels	1993
3.	Vinod Kumar Dubey	A study on sewage water irrigation affected growth characteristics of some common plants	1993
4.	Rajkumar	Variation in Capsaicin content in chillies and optimization of tissue culture techniques	2010
5.	Pawan	Variations in solasodine content in <i>Solanum melongena</i> and optimization of tissue culture techniques	2010
6.	Prachi	Biochemical profiling of different accessions of a medicinal plant- <i>Stevia rebaudiana</i>	2012
7.	Shipra	Biochemical profiling of different developmental stages of a medicinal plant- <i>Andrographis paniculata</i>	2012

18. Contribution / participation to Academic and Corporate activities of the Botanical Sciences

(a) Special Invited Lectures delivered including UGC Extension Lectures

- Leaf Senescence (1986) Jozsef Attila University, Szeged, Hungary
- Plant Senescence (1995) KRG (PG) College, Gwalior
- Experimental anatomy (1996) KRG (PG) College, Gwalior
- Immobilization of enzymes (1997) KRG (PG) College, Gwalior
- Contemporary Plant Anatomy (1998) KRG (PG) College, Gwalior
- Bioenergetics (2006, 2007, 2008) Gurukul Kangri University, Haridwar
- Biodiesel : Problems and Perspectives (2009) DPS and GKVV, Haridwar
- Fundamentals of Tissue Culture Technology (2009) GKVV, Haridwar
- *Ex-situ* biodiversity conservation, (2011) on International Biodiversity Day, GKVV, Haridwar

(b) Invited lectures delivered in National Symposia / seminar

- Salinity Stress: Problems and Perspectives (2005), Gujarat University, Ahmedabad
- Petroplants (2005) Botanical Survey of India, Dehradun

- Emerging areas in green fuel production and protection of green cover (2006) IILM, Greater Noida
- Tissue culture technology for protection of green cover (2008) Sahu Jain College, Najibabad
- Future prospects of Nanotechnology for plants, Annual Conference of Society of Plant Reproduction Biologists, 2009
- Futuristic trends in Biotechnology, IAMR, 2010
- Molecular Pharming and Tissue Culture Technology, Kissan PG College, Simbhaoli, 2010
- Emerging trends in technology: Risks and Prospects, National Seminar on Global warming or global warning, RG PG College, Meerut, 2010
- Emerging trends in biotechnology: Prospects and risks, DN (PG) College, Meerut, 2011.
- Research and Higher Education: Problems and solutions, Shaheed Mangal Pandey Girls' PG College, Meerut, 2011.
- *In vivo/in vitro* salt stress: Yield loss or pharmacofarming, at 99th Indian Science Congress, Bhubaneswar, 2012
- Molecular Pharming and Fundamentals of Tissue Culture Technology, at National Seminar on Modern Trends in Botany, R.G. (PG) College, Meerut, 2012
- *In vivo/in vitro* salt stress: Soil reclamation and pharmacofarming, a Prof. Das Memorial Lecture at Jiwaji University, Gwalior, 2012
- *Ex-situ/In vitro* conservation of some endangered medicinal plants *vis-à-vis* Molecular Pharming for Sustainable Development, National Seminar organized by Society for Plant Research, NASComplex, Delhi, 2012
- Soil reclamation strategies for Soil- Plant- Human Ecobalance, at National Seminar organized by BSA College, Mathura, 2013
- Alternate energy sources: Choices and challenges, at National Seminar organized by Ramjas College, Delhi, 2013
- Modern Trends in Classical Botany, at a National Seminar organized by DAV College, Muzaffarnagar, 2013
- “Women Empowerment” at a National Workshop in Social Works Department of SVBP University, Modipuram, Meerut 2014
- ‘Interest, Aptitude and Passion for teaching’ in National Workshop for teacher education at SVBP University, Modipuram, Meerut 2014
- “Ozone layer: Our protection needs protection” at MIET College and D.N. College on World Ozone Day- Sept 18, 2014.
- Delivered MPCST sponsored invited lecture on Global climate change affecting biodiversity, at Jiwaji University, Gwalior, Sept 27, 2014.
- Delivered an invited lecture in UGC/DST sponsored 2nd National Conference of Women Scientists on “Ex-situ/In vitro conservation of some endangered medicinal plant *vis-à-vis* Molecular Pharming for Sustainable Development”, at Jiwaji University, Gwalior, March 25, 2015.

(c) Invited lectures delivered in International Symposia / Conferences

- A novel rapid senescence system. International Symposium on Viticulture, Enology, Economy and related basic subjects for young researchers, at Kecskemét, Hungary, Sept. 1986.
- Physico-chemical study of vetiver in wet land soil reclamation, Proceedings of 3rd International Conference on Vetiver and Water, Guangzhou, China. October 2003.

- Enhanced reclamation efficiency of *Vetiveria zizanioides* at polluted sites compared to experimental pots. 5th International Conference on Vetiver and Climate Change, held at CIMAP, Lucknow, Oct. 28-30, 2011. (**Acted as rapporteur in oral presentation session**)
- Ancient knowledge of Ethnic races and its relevance today. International Conference on Antiquities and ancient knowledge, held at Gautam Buddha University, Greater Noida on Feb 1, 2020.
- Keynote speaker – Innovative techniques in biology. International Webinar on Innovative techniques in Biology, organized by RG College, Meerut, July 8, 2020

(d) Lectures delivered as resource person in Refresher courses/ Training programmes / Workshops / Webinars

- Hormonal regulation of cell differentiation (1988)
- Pollen stigma interaction (1988)
- Double fertilization (1988)
- Senescence and Ageing (1996)
- Abiotic stresses and crop improvement (2000)
- Gene expression during abiotic stresses (2000)
- Biodiesel (2005)
- Petroplants (2005)
- Biodiesel : Problems and Perspectives (2008) DBT sponsored Workshop, Haridwar
- Fundamentals of Tissue Culture Technology (2008) DBT sponsored Workshop, Haridwar
- Concepts of Thermodynamics (2009) and
- Nanobiotechnology (2009) at Refresher Course in Botany, Jabalpur University, Jabalpur
- Thermodynamics and Bioenergetics (2010, 2011) UGC sponsored Lecture series, GKVV, Haridwar.
- Advanced Botany- P to T at Kumaon University, Nainital, Nov 21, 2017.
- Carbon budgeting , MSM College, Meerut (Hapur Bypass), April 2018.
- Herbarium Technology (web lecture), FDP-Panjab University, Chandigarh, June 2020
- Plant Science and Women Empowerment (webinar), Jayoti Vidyapeeth, Jaipur, 20 Jan. 2021.
- Empowered Legendary Indian Women Scientists (webinar), Distinguished Scientist web-series, Central University, Motihari, 27 Feb. 2021.
- Biotechnological tools in improvement of endurance in crops against environmental stress and climate change. International web conference on Research Initiative for Agricultural Biotechnology and Allied Sciences, SVBP Univ. of Agriculture & Technology, Modipuram, Meerut. 24 April 2021.
- Climate Change and phytodiversity (web lecture), FDP-Panjab University, Chandigarh, May 2021
- Climate, COVID and Biodiversity (web lecture), FDP-Kumaon Univ, Nainital, 28 Dec 2021
- Academic Leadership (web lecture), FDP- JNU, New Delhi, 11 March 2022

**(e) Seminar / Symposium / Conferences attended / participated:
National : >80; International : 15**

**19. Academic/Administrative/Cultural Contributions to the University
(a) at the Jiwaji University, Gwalior :**

As a member of **Editorial Committee** of :

- Proceedings of National Seminar on Sustained Development, 1989.
- Souvenirs and Viswavidyalaya – Darpan, 1991.
- Proceedings of West Zone Vice-Chancellor’s meeting, 1991.
- Proceedings of National Seminar on Taxonomy, 1992.
- Proceedings of National Conference on Aerobiology, 1993.
- Proceedings of Tansen Academy of Performing Arts, 1993.
- Ordinances and Statutes of the University
- Proceedings of National Workshop for Woman Scientists on in vitro Techniques & Environmental Toxicology, 1996.
- Study material for Refresher course in Botany, 1996.
- Souvenir & Abstract Volume of National Conference on Gerontology & Symposium on Molecular Markers of Aging, 1997.
- Study material for Refresher course in Botany, 1998.
- Contact person (Organizer) for Popular Lectures by Experts under the DBT Programme, 1997-1998.

Besides above, helped in the internal management of the University by way of participation in several other jobs assigned from time to time.

(b) Academic / Cultural / Administrative contributions to Ch. Charan Singh University, Meerut:

- Assistant Dean Students’ Welfare, 2001-04, 2006-13
- Head of the Department of Botany, 2009-2012 and 2015-2018.
- Head, Department of Microbiology, 2016-onwards, Head, Department of Chemistry, 2018-onwards, Head, Department of Toxicology, Aug., 2018-onwards
- Dean, Students’ Welfare, Aug. 2013-Jan. 2019.
- Refresher Course Coordinator, 2001
- Chief Editor, University Bulletin, 2002
- Nodal Officer, UGC Team Visit, 2002.
- Chief Warden, Durga Bhabhi and New Girls’ Hostel, 2004 –Jan. 2006
- Chief, University Employment Information and Career Guidance Bureau, C.C.S. University, Meerut, Nov. 2006- Feb. 2018
- Coordinator, UGC (2007--)
- Chief, Cultural Council, 2010, 2017-18)
- Online admission Coordinator for combined College/Campus admissions, 2012-2019.
- Dean, Faculty of Science, Sept. 2016-2019
- Coordinator, RUSA (2013-continuing), SWAYAM (2018)
- Finance Officer (March 1-22, 2018)
- Acted as Vice-Chancellor on several occasions in the absence of Honourable Vice-Chancellor
- Member of several committees including Examination Committee, Academic Council, Executive Council
- Pro-Vice-Chancellor, CCS University, Meerut (Since Dec. 29, 2018continuing)
- Chairperson, IQAC, CCS University, Meerut (Since June, 2019 continuing).

20. Publications

(i) Research papers:

1. **Vimala Y** (1984) Changes in the activities of certain enzymes during natural and induced loss of seed viability, *J. Indian bot. Soc.* **63** : 61-68b.
2. **Vimala Y** (1985) Senescence acceleration and retardation by the same growth regulator in the same species, *J. Indian bot. Soc.* **64** : 73-79.
3. **Vimala Y** (1990) Acceleration of high temperature – high moisture induced seed deterioration by chemical replenishment, *J. Indian bot. Soc.* **69** : 15-18.
4. **Vimala Y** (1990) Different patterns of hormonal regulation of foliaceous and cotyledonary leaves, *J. Indian bot. Soc.* **69** : 99-102.
5. **Vimala Y** (1991) Contrasting patterns of petal senescence in *Hibiscus mutabilis* and *Vincarosea*, *J. Indian bot. Soc.* **70** : 75-78.
6. Lavania U.C., Lavania S and **Vimala Y** (1998) Molecular mapping of gene – rich chromosome – specific sequences – A complementary approach to plant genome initiative in India. *Curr. Sci.* **75(6)**: 538-539.
7. Lavania UC, Lavania S and **Vimala, Y** (1998) Targeted transgene integration – the way ahead to stable transformation. *Curr. Sci.* **75(8)**: 759-760.
8. Lavania UC, Lavania S and **Vimala Y** (1999) Telomere dynamism and developmental concentration of differential telomerase activation in cell proliferation and replicative senescence. *Curr. Sci.* **76(4)**: 470-472.
9. Lavania UC, Lavania S and **Vimala Y** (1999) Regulation of chromosome condensation and sister chromatid separation, *Curr. Sci.* **77(9)** : 1133-1134.
10. **Vimala Y** and Jain R (2000) Changes in grain biochemical status due to variation in crop geometry in wheat, *J. Indian bot. Soc.* **79**: 97-99.
11. **Vimala Y**, Jain R. (2001) A new flavone in mature *Catharanthus roseus* petals. *Indian J Plant Physiol.* 2001; **6**:187–189.
12. Sharma P and **Vimala Y** (2002): Leaf senescence patterns of two species of *Catharanthus roseus*. *Indian J. Plant Physiol.* **7**: 92-93.
13. Lavania UC, Lavania S and **Vimala Y** (2002) Mitosis – meiosis transition, the regulation of means to sexual reproduction. *Curr. Sci.* **82(1)**: 15-16.
14. Kumari Meena, Dass Sain, **Vimala Y** and Arora, Pawan (2004) Physiological parameters governing drought tolerance in maize, *Indian J. Plant Physiol.* **9**: 203-207.
15. Singh SK, Khawale RN, **Vimala Y** and Singh SP (2004) *In Vitro* mass propagation of grape cv. Pusa Urvashi through two-node micro-cuttings, *Physiol. Mol. Biol. Plants* **10(2)**: 277-283.
16. Lavania UC, Lavania S and **Vimala Y** (2004) Vetiver system ecotechnology for water quality improvement and environment enhancement, *Curr. Sci.* **86 (1)**: 11-14.
17. Singh SK, Khawale RN, Singh Room and **Vimala Y** (2005) Use of random amplified polymorphic DNA(RAPD) analysis to confirm genetic stability of *in vitro* regenerated grape plantlets, *Indian J. Hort.* **62(1)**: 19-22.

18. Khawale RN, Singh SK, **Vimala Y** and Minakshi (2006) Assessment of clonal fidelity of micropropagated grape (*Vitis vinifera* L.) plants by RAPD analysis, *Physiol. Mol. Biol. Plants* **12** (2): 189-192.
19. Khawale RN, Singh SK and **Vimala Y** (2006) Gamma Rays Induced In Vitro Mutagenesis and Molecular Marker- Assisted Selection of Mutants in Grapevine. *Acta Hortic.* **725**: 643-652. DOI: 10.17660/ActaHortic.2006.725.89.
20. Khawale RN, **Vimala Y** and Singh SK (2007) Molecular marker-assisted selection of in vitro chemical mutagen-induced grapevine mutants. *Curr. Sci.* **92**: 1056-1060.
21. Ahalavat Anuj Kumar and **Vimala Y.** (2008) Allelopathic interactions of *Populus deltoides* leaf leachate with some crop plants. *J Indian bot. Soc.* **87(3&4)**:237-241.
22. Kaushik Divya, Ahalavat Anuj and **Vimala Y.** (2009) Comparative biochemical performance of different accessions of *Calotropis procera* and *Calotropis gigantea* under different soil conditions, *J. Indian bot. Soc.* **88(1&2)**:150-155.
23. Ahalavat Anuj Kumar, **Vimala Y.** and Kaushik, Divya (2009) Comparative potential of *T. aestivum* and *S. vulgare* seedlings to withstand *Populus deltoides* leachate. *J. Indian bot. Soc.* **88(3&4)**: 170-173.
24. Kumar U., Singh I and **Y. Vimala** (2009) *In vitro* regeneration of *Moringa oleifera*, *J. Indian bot. soc.* **88 (3 & 4)**:120-123.
25. Singh I., Kumar U and **Y. Vimala** (2009) *In vitro* shoot multiplication and rhizome development from embryo of non-germinating seeds of *Costus speciosus*. *Progressive Research An International Journal*, **4(2)**:178-180 (Society for Scientific Development in Agriculture & Technology: ISSN: 0973-6417).
26. Chauhan Shilpi and **Vimala Y.** (2009) Comparative *in vitro* and *in vivo* biochemical performance of *Adhatoda vasica*. *J. Indian bot. Soc.* **88(3&4)**: 54-57.
27. Ahalavat A.K. and **Vimala Y.** (2010) Influence of *Jatropha curcas* and *Ricinus communis* leachates on their seedling performance. *J. Scientific & applied Research* **1(1)**: 42-45.
28. Akmal Md., Aslam J. and **Vimala Y.** (2010) Allelopathic effects on seedling growth of *Trigonella foenum-graecum* and *Coriandrum sativum*. *Journal of Phytology* **2(4)**:22-26.
29. Sharma Shalini and **Vimala Y.** (2010) Adenine sulphate enhanced *in vitro* shoot regeneration in *Centella asiatica* (L.) Urban, *J.Indian bot. Soc.* **89(1&2)**: 30-33.
30. Kumar U., Singh I., Priyanka and **Vimala Y.** (2010) *In vitro* salt stress induced production of gymnemic acid in callus cultures of *Gymnema sylvestre* (R.Br). *African Journal of Biotechnology*. **09(31)**: 4904-4909.
31. Gupta, M.K. and **Vimala, Y.** (2010) *In vitro* regeneration of biochemically superior vetiver (*Vetiveria zizanioides*) explants from polluted sites. *Journal of Eco-friendly Agriculture.* **5 (2)**: 110-113.
32. Gupta Maneesh K. and **Vimala Y.** (2011) Optimization of plantlet stage for vetiver (*Vetiveria zizanioides*) plantation in different soil provenances, *Journal of Eco-friendly Agriculture* **6(1)**:33-36. (Doctor's Agricultural & Horticultural Developmental Society- ISSN: 2229-628X).

33. Kumar V., Ahalavat A.K. and **Vimala Y.** (2011): Positive allelopathic interaction of *Amaranthus viridis* with *Triticum aestivum*, *J. Plant Dev. Sci.***3(1&2)**:103-106. ISSN:0974-6382 (Print), 2348-9170 (Online).
34. Kumar, U., Singh, I., Priyanka and **Vimala Y.** (2011) *In vitro* production of L-DOPA in tissue cultures of *Mucuna pruriens* L. *Vegetos* 24(1): 111-113.
35. Gautam, Y.K., Renu Rani and **Vimala Y.** (2011) *In vitro* accumulation of active metabolites in *Physalis peruviana*. *Vegetos* **24 (1)**: 58-60. (ISSN:0970-4078 Online ISSN: 2229-4473).
36. Akmal M., **Vimala Y.** and Aslam Junaid (2011) Allelopathic Interaction of Spinach (*Spinacia oleracea* L.) with *Trigonella* and *Coriandrum sativum*. *Current Botany*, **2(5)**: 07-10.
37. Kumar, U., Singh, I., Priyanka, **Vimala Y.** and Sharma, R. (2011-12) *In vitro* somatic embryogenesis in *Cassia fistula* L., *International Journal of Applied Sciences and Humanities*, **2**: 6-8. ISSN: 0976-1217.
38. Sarita and **Vimala, Y.** (2011-12) *In vitro* salt induced over expression of peroxidase activity in *Gymnema sylvestre* callus on phenyl alanine fortified medium. *International Journal of Applied Sciences and Humanities*, **2**: 9-15. ISSN: 0976-1217.
39. Kapoor, Neelesh, Awasthi, Devendra K. and **Vimala Y.** (2011) Effect of iron toxicity on growth of fenugreek, *Journal of Plant Development Science* **3(3&4)**:297-300. (ISSN: 0974-6382).
40. Rani, Renu, Gautam, Yogendra Kumar, Tomar, Veenita and **Vimala Y.** (2012) Physico-chemical markers of salt stress in *Mucuna pruriens* seedlings. *Vegetos* **25(1)**: 134-137.
41. Rani, Renu and **Y Vimala*** (2013)*In vitro* maintenance of bioactive Ca²⁺ and primary metabolite status in *Cissus quadrangularis* under salt stress, *Annals of Plant Science*, **2(5)**: 156-159. ISSN: **2287-688X**.
42. Rani, Roma and **Y. Vimala** (2013) Possible involvement of non-protein nitrogenous metabolites in conferring *in vitro* lead tolerance to *Dalbergia sissoo* Roxb., *Annals of Plant Science*, **2 (5)**:**169-173** ISSN: **2287-688X**.
43. Arora, Naresh, Sachdev, Bindiya, Gupta, Rani, **Y. Vimala**, Bhatnagar, Raj K. * (2013) Characterization of a Chitin-Binding Protein from *Bacillus thuringiensis* HD-1. *PLOS One***8(6)**: 1-8.
44. Singh I, Gautam Y, Vimala Y. 2013. Detection and isolation of diosgenin from *Costus speciosus* callus raised from non-germinal seeds. *Int J Chem and Life Sci.* 2(10):1240–1242.
45. Singh, Prabhat, Ahalavat, Anuj Kumar and **Y. Vimala** (2013) *Jatropha curcas*, *Pongamia pinnata* plantation with *Glycine max* as safe and potent green energy source, *Annals of Plant Science*, **2(12)**: 520-523. ISSN: **2287-688X**.
46. Gautam, Yogendra Kumar and **Y. Vimala** (2014)Antioxidant activity and RP-HPLC analysis of Diosgenin from the callus of *Tribulus terrestris* Linn. *Int. J. Res. Ayurveda Pharm.*,**5(3)**: 343-346. DOI: 10.7897/2277-4343.05371.ISSN (online) **2229-3566**ISSN (Print) **2277-4343**.
47. Saini, Sapna, Rani, Roma, Rani Renu and **Y. Vimala** (2014) *In vitro* callus induction protocols of *Mesua ferrea* (a slow growing medicinal tree) using two type

- explants and different concentrations of PGRs, *Annals of Plant Science*, **3(3)**: 651-655. ISSN: 2287-688X.
48. Sharma, S., Singh, I. and **Vimala, Y.** (2014). *In vivo* and *In vitro* Enhancement of Asiaticoside in *Centella asiatica* (L.) Urban. *International Journal of Research in Phytochemistry and Pharmacology*. **3(4)** 178-181. (ISSN: 2231-010X).
 49. Chauhan, P., **Vimala Y.** (2014) Biochemical screening of sugar mill effluent-contained heavy metal accumulation and tolerance in *Ocimum tenuiflorum* L. *Progressive Agriculture* **14 (1)**: 69-75.
 50. Rani, Roma, Saini, Sapna, Rani Renu and **Y. Vimala** (2014) Improved micropropagation of *Dalbergiasissoo* Roxb. from nodal explants of *in vitro* developed plantlets, *Progressive Agriculture (An International Journal)*, **14(2)**: 336-338. Print ISSN : 0972-6152. Online ISSN: 0976-4615.
 51. Gautam, Y.K., Singh, I. and, **Vimala, Y.** (2014). *In vitro* estimation of potential antioxidant compounds in *Tinospora cordifolia* by chromatography. *International Journal of Research in Engineering and Technology*. **2(1)**: 31-36. ISSN (P): 2347-4599, ISSN (E): 2321-8843.
 52. Jan, Nelofer, Gautam, Yogendra K. and **Y. Vimala** (2015) Higher salt tolerance of *Physalis peruviana* L. callus with reduced peroxidase activity compared to its *in vitro* raised seedlings, *Int. J. Res. Ayurveda Pharm.*, **6(2)**: 272-276. <http://dx.doi.org/10.7897/2277-4343.062> ISSN (online) **2229-3566** ISSN (Print) **2277-4343**.
 53. Sharma, Shalini and **Y. Vimala** (2015) Effect of rhizospheric media on growth, yield and biochemical status of a potent pharmaceutical *T. foenum-graecum*, *World J. Pharmacy and Pharmaceutical Sciences*, **5(2)**: 763-771. (SJIF:5.20) ISSN:2278 – 4357.
 54. Nagar, Laxman, Kumar, Anuj, **Vimala, Y.**, Prasad Gajula, MNV (2015) Sequence to Structure Analysis of DOPA Protein from *Mucuna pruriens*: A Computational Biology Approach, *International Journal of Emerging Trends in Science and Technology*. **2(8)**:3083-3089. ISSN 2348-9480. DOI: <http://dx.doi.org/10.18535/ijetst/v2i8.12>.
 55. Sharma, Shalini and **Y. Vimala** (2016) Effect of Salt Stress on Germination and Growth of *T. foenum-graecum* Seedlings, *International Journal of Advanced Research* **4(3)**: 40-45. ISSN 2320-5407.
 56. Sushil Kumar and **Vimala Y.** (2016) Age and Subculture Induced Accumulation of Bound Flavonoids in *Cassia fistula* Linn. Cultures, *World Journal of Pharmacy and Pharmaceutical Sciences*, **5(9)** 1488-1500. ISSN **2278 – 4357**.
 57. Dhillon, Juhi, Singh, Ishwar and **Vimala Y.** (2016) A simple TLC method for identification of quercetin and antioxidant properties of methanolic extracts of *Cissus quadrangularis*, *Cassia fistula* and *Calotropis procera*. *J. Indian bot. Soc.* **95(3&4)**: 225-230.
 58. Nagar Laxman, Dhillon, Juhi, Singh, Ishwar and **Vimala Y.** (2017) Screening of PGRs, L-DOPA precursor and polyploidy inducer treatments on protein content of *Mucuna pruriens* callus. *J. Indian bot. Soc.* **96 (1&2)**: 136-139.
 59. Dhillon Juhi, Nagar, Laxman, **Vimala Y.** and Singh Ishwar (2017) Hyperaccumulation and soil enrichment of certain inorganic nutrients by some plants from Meerut, *J. Indian bot. Soc.* **96 (3&4)** 284-289.

60. Dhariwal Shweta , Nagar Laxman, **Vimala Y.** (2017) Effect of abiotic elicitors on biochemical status of two cultivars of *Vigna radiata* (L.) Wilczek. *Int. J. Res. Ayurveda pharma.* 8(4):97-100ISSN (online) 2229-3566 ISSN (Print) 2277-4343 (Scopus indexed) SJR 2013= 0.11 IC=6.33.
61. Dhariwal, Shweta, NagarLaxman, Singh Ishwar and **Vimala Y.** (2017) Enhanced ROS- Scavenging enzyme activity by salicylic acid elicitation of salt treated seeds of *Vigna radiata* (L.) Wilczek cultivars. *European journal of Pharmaceutical and medical research.* 4(9) 639-642Y.
62. Saksham, **Y.Vimala** and Ishwar Singh (2018) Range of metabolic flexibility for antioxidant potential of ten wild and ornamental Asteraceae plants of Meerut. *World Journal of Pharmaceutical Research* 7 (8):908-921
63. Dhillon Juhi and **Y. Vimala** (2018) Salt Stress Tolerance by C-N Balance in calli of Vegetative part of *Cissus quadrangularis* L. and *Calotropis procera* L. *Vegetos* 31(Special) 40-44.
64. Gupta, Komal and **Y. Vimala** (2018) Supportive allelopathic effect of *Parthenium hysterophorus* on *Azadirachta indica*. *J. Indian bot. Soc.* 97 (1&2): 126-130.
65. Ashu, Kumar Devendra, **Vimala Y.**, Dhillon Neha and Nehra Priyanka (2020) Physiological attributes and lipid profiling of algal strain *Botryococcus*, *Journal of Emerging Technologies and Innovative Research (JETIR)* 7 (10):780-787. (ISSN:2349-5162).
66. Dhillon Neha, Kumar Devendra, **Vimala Y.**, Ashu and Nehra Priyanka (2020) Nutraceutical aspects and physiological parameters of cyanobacterial strain *Spirulina*, *Journal of Emerging Technologies and Innovative Research (JETIR)* 7 (10):752-760. (ISSN:2349-5162)
67. Singh Madhavi, **Vimala Y.**, Lavania, S. and Verma D. (2020) Leaf epidermal features in relation to taxonomy of some species of *Bulbophyllum* (Orchidaceae) from Northeast India. *Rheedea* 30(4):427-443. <https://dx.doi.org/10.22244/rheedea.2020.30.04.02>
68. **Vimala, Y.** & Lavania, U.C. (2021) Genomic territories in inter-genomic hybrids: the winners and losers with hybrid fixation. *Nucleus* (Springer) 64: 1-6. <https://doi.org/10.1007/s13237-021-00348-1>.
69. **Vimala, Y.**, Lavania, S. and Lavania, U.C. (2021) Chromosome change and karyotype differentiation—implications in speciation and plant systematics. *Nucleus* (Springer) 64: 33-54. <https://doi.org/10.1007/s13237-020-00343-y>.
70. Singh, M., **Vimala, Y.**, Singh, I. and Singh, D. (2021). Optimization of in vitro micropropagation of ethnomedicinally important underexplored plant *Maytenus emarginata*. *Indian J. Agric. Sci.* 91 526-530.
71. Singh, D., Sharma, N.L., Singh, C.K., **Vimala, Y.**, Narayan, R., Sarkar, S.K. and Singh, I. (2021) Chromium (VI)-induced alterations in physio-chemical parameters, yield, and yield characteristics in two cultivars of mungbean (*Vigna radiata* L.). *Front. Plant Sci.* | doi: 10.3389/fpls.2021.735129
72. Shah, S.H., Kumar, S. and **Vimala, Y.** (2021). An insight on the ascorbate peroxidase and glutathione reductase activities in plants under salinity stress. Mini-

review. *Research Journal of Agricultural Sciences* 12(5): 1558–1563.
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73. Singh, M., **Vimala, Y.**, Lavania, S. and Verma, D. (2021) Diversity in aerial root anatomy of *Bulbophyllum* (Orchidaceae) and its significance as source for subsidiary characters in species identification. *Rheedea* 31(4): 248-259. <https://dx.doi.org/10.22244/rheedea.2021.31.04.02>.
74. **Vimala, Y.**, Lavania, U.C., Banerjee, R., Lavania, S. and Mukherjee, A. (2021) Vetiver Grass Environmental Model for Rehabilitation of Iron Overburden Soil: An Ecosystem Service Approach. *Natl. Acad. Sci. Lett.* 06 pages. <https://doi.org/10.1007/s40009-021-01087-2>
75. Kumar, S., Ahanger, M.A., Alshaya, H., Jan, B.L. and **Vimala, Y.** (2022) Salicylic acid mitigates salt induced toxicity through the modifications of biochemical attributes and some key antioxidants in *capsicum annuum*. *Saudi Journal of Biological Sciences* 29(3): 1337-1347. <https://doi.org/10.1016/j.sjbs.2022.01.028>
76. Lavania, U.C. and **Vimala, Y.** (2022) Synthetic hybrid speciation: a resource for breeding novel lineages for secondary metabolites. *Nucleus* (Springer) 65(1):1-6. <https://doi.org/10.1007/s13237-022-00384-5>

(ii) Patent Granted

77. Lavania U.C., Lavania S., **Vimala Y.**, Dubey B. & Singh M (2021). Vetiver plant named 'CIMAP- FORAGIKA'. **United States Patent No. US PP33,197 P3. Jun. 22, 2021**, 12 pages.
<https://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO1&Sect2=HITOFF&d=PALL&p=1&u=%2Fmetahtml%2FPTO%2Fsrchnum.htm&r=1&f=G&l=50&s1=PP33197.PN.&OS=PN/PP33197&RS=PN/P33197>

(iii) Editorials

78. **Vimala, Y.** (2020) From the archives - 100 years of the journey : From the archives of the Journal of the Indian Botanical Society. Archival Volume, *J. Indian bot. Soc.*
79. **Vimala, Y.** (2020) Raising the curtain in the centenary year of the Indian Botanical Society- learning the advancing frontiers . *J. Indian bot Soc.* 100 (special) i-vi.

(iv) Chapters in Edited Reference Books / Volumes

80. **Vimala, Y** and Jain, R (1998): Flower senescence: Some physiological aspects, In: *Perspectives in Environment*, (eds. Agrawal, S.K., Kaushik, J.P., Koul, K.K. and Jain, A.K.), APH Publishing Corporation, New Delhi, pp. 285-301.
81. **Vimala, Y**, Sharma, AK and Sharma, R (2005): On the biomarkers of senescence in plants, *Plant Reproductive and Molecular Biology*, Aavishkar Publishers & Distributors, Jaipur. Pp. 203-211.
82. **Vimala, Y** and Ahalavat, Anuj K. (2006): Petroplants – An emerging solution for oil crisis and conservation of green cover, *Plant Science Research in India: Challenges and Prospects*, Botanical Survey of India, Dehradun, Pp:111-138.
83. Arora, Naresh, Agrawal, Neema, **Vimala, Y.** and Bhatnagar, R. (2007): Biology and application of *Bacillus thuringiensis* in integrated pest management. (Eds) A. Cianao & K.G. Mukherji, *General Concepts in Pest and Disease Management*, Springer Verlag, Pp:227-244.

(iv) Authored Books / Edited volumes

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