

CURRICULUM VITAE

Vinay Kumar Ph.D. (Biotechnology)

**Associate Professor and Head,
Department of Biotechnology,
P.E.S.'s Modern College of Arts, Science & Commerce (Autonomous)
(Savitribai Phule Pune University),
Ganeshkhind, Pune – 411 016 (India)**



Visiting/Adjunct Faculty

- Visiting Faculty, Department of Environmental Science, Savitribai Phule Pune University, Pune, India
- Visiting Faculty, Interdisciplinary School of Science, Savitribai Phule Pune University, Pune, India
- Adjunct Professor, Molecular Biology & Genetic Engineering Division, Vasantdada Sugar Institute, Pune, India

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Professional Recognition, Awards and Highlights

- SERB-DST (Government of India) Young Scientist, 2012
- Best Teacher Award, Savitribai Phule Pune University, Pune (2022)
- Indian National Science Academy (INSA) Visiting Scientist Award, 2022
- Best Teacher Award, Progressive Education Society, Pune (2015)
- Member, DBT (Govt. of India) Expert Committee for Evaluating Star College proposals (2018-21)
- Member, Expert Panel for Evaluating Grant Proposals, National Science Centre, Govt. of Poland
- Member, Reviewer/Expert Panel for Grant Proposals (REPRISE), Government of Italy, Italy
- Reviewer for Research Grants Proposal submitted to Science and Engineering Research Board, Govt. of India
- Coordinator, DBT Star College, DBT-BUILDER, DST-FIST Programs, Modern College, Ganeshkhind, Pune
- Member, Board of Studies, B. Voc., Savitribai Phule Pune University, Pune (2021-23)
- Member, Academic Council, Modern College, Ganeshkhind, Pune
- Hon. Vice-Chancellor's Nominee, Board of Studies, Biotechnology, SP College, Pune
- Member, Internal Quality Assurance Cell, Modern College, Ganeshkhind, Pune
- Member, Board of Studies, Biomedical Sciences, MGM Institute of Health Sciences, Mumbai
- Member, Board of Studies, Bioanalytical Sciences, Ruia College, Mumbai
- Member, Board of Studies, Life Sciences, Sandip University, Nashik
- Chairman, Board of Studies, Biotechnology, Modern College, Ganeshkhind, Pune
- Member, Board of Studies, Zoology, Modern College, Ganeshkhind, Pune

Current Position and Job Profile

- Faculty at the Department of Biotechnology, P.E.S.'s Modern College, Ganeshkhind, Pune- 411 016 since 2008 and teaching subjects including Phytochemistry, Natural Products, Metabolic Engineering, Nanotechnology, Environmental Biotechnology, and Plant Biotechnology at Under- and Post- graduate levels.
- Three PhDs awarded under my guidance, guided 60 MSc (Biotech), 4 MSc (Env. Sci.), 2 MSc (Botany), 2 (BTech Agricultural Biotechnology) and 32 BSc (Biotech) students for their research projects

Research Interests

Plant-Environment Interactions, Environmental Stress Biology; Crop Biotechnology; Environmental Biotechnology; Antimicrobial Resistance; Nanotechnology; Nano-toxicity; Natural Products

Educational Qualifications

- **Ph.D. (Biotechnology)**
Title of the Thesis : Genetic transformation using P5CS gene for salt stress tolerance in local (Maharashtra) cultivar of rice (*Oryza sativa* L.)
Year of Passing : 2009
University/Institute : University of Pune, Pune; & Bhabha Atomic Research Centre, Mumbai, India

Membership of Professional Bodies

- Life Member, the Biotech Research Society, India (BRSI), Trivandrum, India
- Member, Asian Federation of Biotechnology, Incheon, South Korea
- Member, Asian Council of Science Editors, UAE
- Senior Member, Chemical, Biological & Environmental Engineering Society (CBEES), Hong Kong

Work Experience

S. No.	Institution/Place	Position	From (Date)	To (Date)
1.	Department of Biotechnology, Modern College, Ganeshkhind, Pune	Associate Professor	01/10/2018	Till date
2.	Department of Biotechnology, Modern College, Ganeshkhind, Pune	Assistant Professor	01/12/2008	30/09/2018
3.	Department of Botany, University of Pune, Pune	Senior Research Fellow (DAE-BRNS)	21/05/2007	30/11/2008
4.	Department of Botany, University of Pune, Pune	Junior Research Fellow (DAE-BRNS)	12/05/2005	20/05/2007
5.	Department of Botany, University of Pune, Pune	Project Assistant (DBT)	19/06/2003	30/11/2003

Research Projects

S. No.	Project Title	Funding Agency	Amount sanctioned (INR)	Duration of the Project	Role (PI/Co-I)
1.	DBT-BUILDER "Thematic Research Project" [BT/INF/22/SP45363/2022]	DBT, Govt. of India	2.36 Crores	2022-27 (Ongoing)	PI
2.	Identification and functional characterization of salt responsive conserved and novel miRNAs in soybean [37(1)/14/30/2018-BRNS]	DAE-BRNS Govt. of India	34.63 Lakhs	2018-21	PI
3.	Identification of novel & conserved sodium-responsive miRNAs & their target genes modulating salinity stress during reproductive phase in rice cultivars [EMR/2016/003896]	SERB Govt. of India	26.51 Lakhs	2017-20	PI
4.	Elicitation of diosgenin production in <i>Helicteres isora</i> suspension cultures [OSD/BCUD/392/132]	University of Pune, Pune	2.40 Lakhs	2016-18	PI
5.	Reviving Indian Rivers: Is nano-remediation the answer?	Australia-India Council	Aus \$ 45,000	2016-17	Co-I
6.	Investigating the individual roles and relative importance of Na ⁺ and Cl ⁻ in NaCl-induced salt stress, and in the activation of antioxidant machinery in-response [SR/FT/LS-93/2011]	SERB Govt. of India	18.37 Lakhs	2012-15	PI
7.	Exploration of <i>Helicteres isora</i> L. as a source of diosgenin and enhancement of diosgenin production using plant	UGC, Govt. of India	6.25 Lakhs	2012-15	PI

tissue culture and genetic engineering approaches
[F. No. 41-521/2012 (SR)]

8.	Investigating the individual roles of Na ⁺ and Cl ⁻ in exerting the oxidative stress in rice and in activation of antioxidant machinery in-response-to it [OSD/BCUD/230/110]	University of Pune, Pune	2.00 Lakhs	2012-14	PI
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Projects As Coordinator

1.	PM-USHA (RUSA) Grants to Strengthen Colleges [SPD/RUSA/2022-23/243]	RUSA, Govt. of India and Govt. of Maharashtra	5.00 Crores	2024-26 (Ongoing)	Coordinator
2.	DST-FIST Project '2 nd Cycle' [SR/FST/College/2019/568]	DST, Govt. of India	75.00 Lakhs	2020-25 (Ongoing)	Coordinator
3.	'STAR STATUS' from DBT [DBT/HRD/11/030/2012]	DBT, Govt. of India	3.07 Crores	2017-20	Coordinator
4.	DST-FIST Project [SR/FST/College-75/2011]	DST, Govt. of India	79.00 Lakhs	2013-18	Coordinator
5.	DBT STAR College Scheme	DBT, Govt. of India	1.18 Crores	2012-15	Coordinator

Research supervision/ guidance

PhDs Completed (Degree Awarded):

3 as guide; 1 as co-guide

S. No.	Name of the student	Title	Subject	University	Role	Year of award
1.	Ms. Samrin Shaikh	Optimization of <i>in vitro</i> production of diosgenin, a steroidal sapogenin, employing plant cell and hairy root cultures of <i>Helicteres isora</i> L.	Biotechnology	Savitribai Phule Pune University	Guide	2019
2.	Mr. Vikas Nanekar	In-vitro propagation, antioxidant activities and elicitation of secondary metabolites of <i>Eulophia nuda</i> Lindl.	Botany	Savitribai Phule Pune University	Co-Guide	2019
3.	Mr. Braj Mohan	Molecular Epidemiology of Antibiotic Resistance in Clinical Isolates of <i>Vibrio</i> Spp. from India	Biotechnology	Savitribai Phule Pune University	Guide	2021
4.	Mr Tushar Khare	Studies on rice responses and adaptive strategies to sodium toxicity	Environmental Science	Savitribai Phule Pune University	Guide	2021

PhDs Ongoing:

S. No.	Name of the student	Title	Subject	University	Role
1.	Shrushti Joshi	Identification and functional analysis of salt-responsive miRNAs in <i>Glycine max</i> L.	Biotechnology	Savitribai Phule Pune University	Guide
2.	Suraj Patil	Epigenomic regulations of rice responses to combined heat and salinity stress	Biotechnology	Savitribai Phule Pune University	Guide
3.	Pramod Dinkar Barathe	Investigating antibiotic-resistance in <i>Enterobacteriaceae</i> members of environmental origin and identifying potent phyto-antimicrobials against them	Biotechnology	Savitribai Phule Pune University	Guide
4.	Kawaljeet Kaur	Studies on antibiotic-resistance in <i>Klebsiella pneumoniae</i> and Nano-strategies for combating it	Biotechnology	Savitribai Phule Pune University	Guide

5	Alisha Shaikh	Exploring nanomaterials for drought stress alleviation and enhancing crop productivity in mung bean	Biotechnology	Savitribai Phule Pune University	Guide
6	Mrunal Pardeshi	Evaluation of <i>Acinetobacter</i> as a food borne pathogen	Biotechnology	Savitribai Phule Pune University	Co-Guide
7	Dhananjaya Randhye	<i>In vitro</i> production and elicitation of Acetoxychavicol acetate from <i>Alpinia galanga</i> (L) Willd. and its bioactivity studies against drug-resistant microbes	Botany	Savitribai Phule Pune University	Co-Guide
8	Sagar Reddy	Exploring plant essential oils as potent resistance reversal agents against drug resistant <i>Pseudomonas aeruginosa</i> isolates from rivers in Pune city	Botany	Savitribai Phule Pune University	Co-Guide

Patents

1. **Kumar V**, Khare T, Kharat S. 2022. "A Formulation for Alleviating Rice Salinity Stress, Its Preparation and Application Thereof". Filed Indian Patent [TEMP/E-1/11719/2022-MUM]

Publications: Journal Articles

No. of Articles:	85
Books Edited:	09 (6 Springer-Nature, 1 Wiley, 1 Elsevier, 1 Taylor & Francis)
Book Chapters:	37 (Taylor and Francis, Springer, Elsevier)
Cumulative Impact Factor:	359 [©JCR, 2022]

Total citations	5897
h-index	41
i₁₀ index	80
https://scholar.google.co.in/citations?user=QWhTh3YAAAAJ&hl=en	

S. No.	Details	Impact Factor
85	Sharma G, Bhardwaj R, Barvkar VT, Godbole RC, Kumar V, Mathur V. 2024. Host-specific endophytes of <i>Momordica charantia</i> : A promising source for affordable lung cancer therapeutics. <i>South African Journal of Botany</i> 170: 181-193. https://doi.org/10.1016/j.sajb.2024.05.030	3.1
84	Khare T, Jamla M, Mathur V, Kumar V* . 2024. Exploring Halobiome Resources for Developing Salt-Tolerant Crops: A Perspective Review. <i>Journal of Plant Growth Regulation</i> https://doi.org/10.1007/s00344-024-11266-2	4.8
82	Barathe P, Kaur K, Reddy S, Shriram V, Kumar V* . 2024. Antibiotic pollution and associated antimicrobial resistance in the environment. <i>Journal of Hazardous Materials Letters</i> 5: 100105 https://doi.org/10.1016/j.hazl.2024.100105	6.6
81	Shaikh A, Jamla M, Joshi S, Patil S, Oak U, Kumar V* . 2024. Microbial Nanotechnology for Producing Stress Smart Crops. <i>Plant Nano Biology</i> 7: 10063 https://doi.org/10.1016/j.plana.2024.100063	-
80	Khare T, Mathur V, Kumar V* . 2024. Agro-ecological Microplastics Enriching the Antibiotic Resistance in Aquatic Environments. <i>Current Opinion in Environmental Science and Health</i> 37: 100534. https://doi.org/10.1016/j.coesh.2024.100534	8.1
79	Khare T, Barvkar VT, Devarumath RM, Kumar V* . 2023. Osa-miR1861e modulates sodium toxicity responses in rice immature grains via OsGST and OsPILS7b. <i>Journal of Plant Growth Regulation</i> https://doi.org/10.1007/s00344-023-11193-8	4.8
78	Joshi S, Patil S, Hossain MA, Kumar V* . 2023. <i>In-Silico</i> Identification and Characterization of Sucrose Transporter Genes and Their Differential Expression Pattern under Salinity Stress in	5.0

	<i>Glycine max.</i> Plant Stress 11: 100314. https://doi.org/10.1016/j.stress.2023.100314	
77	Joshi S, Patil S, Shaikh A, Jamla M, Kumar V* . 2023. Modern Omics Toolbox for Tailoring Combined and Multifactorial Abiotic Stress Tolerant Plants. Plant Stress 11: 100301 https://doi.org/10.1016/j.stress.2023.100301	5.0
76	Kumar V , Srivastava AK, Sytar O, Penna S. 2023. Plants for Future Climate: Responses and Stress Adaptations. Frontiers in Plant Science 14: 1290649 https://doi.org/10.3389/fpls.2023.1290649	5.6
75	Verma CR, Kumkar P, Shendage T, Shinde P, Kumar V , Kharat SS, Khare T, Kalous L. 2023. Carbon nanofibers caused oxidative stress and disrupted anti-predator responses in common spiny loach. Toxicological and Environmental Chemistry https://doi.org/10.1080/02772248.2023.2254436	1.8
74	Joshi S, Sahoo SA, Khare T, Srivastava AK, Kumar V* . 2023. Genome-wide identification of BONZAI (BON) genes in <i>Glycine max</i> L and their regulated expression patterns under saline environment. Current Plant Biology 33:100273 https://doi.org/10.1016/j.cpb.2023.100273	5.4
73	Bhattacharje R, ... Kumar V , Malik S, Dey A, Proćków J. 2022. The emergence of metal oxide nanoparticles as a phytomedicine: A two-facet role in plant growth, nanotoxicity and anti -phyto-microbial activity. Biomedicine and Pharmacotherapy 155: 113658 https://doi.org/10.1016/j.biopha.2022.113658	7.5
72	Reddy S, Kaur K, Barathe P, Shriram V, Govarthanam M, Kumar V* . 2022. Antimicrobial resistance in urban river ecosystems. Microbiological Research 263: 127135 https://doi.org/10.1016/j.micres.2022.127135	6.7
71	Kavi Kishor PB, Ganie SA, Wani SH, Guddimalli R, Karumanchi AR, Edupuganti S, Jalaja N, Kumar V , Polavarapu R, Suravajhala P, Suprasanna P. 2022. Nuclear Factor-Y (NF-Y): Developmental and Stress-Responsive Roles in the Plant Lineage. Journal of Plant Growth Regulation 42:2711–2735. https://doi.org/10.1007/s00344-022-10739-6	4.8
70	Jamla M, Joshi S, Patil S, Tripathi BN, Kumar V* . 2022. MicroRNAs modulating nutrient homeostasis: A sustainable approach for developing biofortified crops. Protoplasma 260:5–19. https://doi.org/10.1007/s00709-022-01775-w	2.9
69	Yang X, Patil S, Joshi S, Jamla M, Kumar V* . 2022. Exploring Epitranscriptomics for Crop Improvement and Environmental Stress Tolerance. Plant Physiology and Biochemistry 183:56-71 https://doi.org/10.1016/j.plaphy.2022.04.031	6.5
68	Ghorai M, Kumar V, Kumar V , Shekhawat MS, Pandey DK, Batiha GE. Bursal G, Sharifi-Rad J, Dey A. 2022. Beneficial role of Selenium (Se) biofortification in developing resilience against heavy metal and metalloid stress in crops: Recent trends in genetic engineering and omics approaches. Journal of Soil Science and Plant Nutrition 22: 2347-2377 https://doi.org/10.1007/s42729-022-00814-y	3.9
67	Shriram V, Kumar V* , Dey A. 2022. Fighting Antimicrobial Resistance with Natural Products - Current Developments and Future Prospects. Current Topics in Medicinal Chemistry 22: 1045 https://doi.org/10.2174/156802662213220630121857	3.4
66	Sharma A, Mistry V, Kumar V , Tiwari P. 2022. Production of Effective Phyto-Antimicrobials via Metabolic Engineering Strategies. Current Topics in Medicinal Chemistry 22: 1068-1092 https://doi.org/10.2174/1568026622666220310104645	3.4
65	Anand U, Biswas P, Kumar V , Ray D, Ray P, Loake VIP, Kandimalla R, Chaudhary A, Singh B, Routhu NK, Chen Z-S, Prockow J, Dey A. 2022. <i>Podophyllum hexandrum</i> and its active constituents: Novel radioprotectants. Biomedicine and Pharmacotherapy 146: 112555 https://doi.org/10.1016/j.biopha.2021.112555	7.5
64	Kaur K, Reddy S, Barathe P, Oak, U, Shriram V, Kharat SS, Govarthanam M., Kumar V* . 2022. Microplastic-Associated Antimicrobial Resistance in Environment. Chemosphere 291: 133005	8.8

	https://doi.org/10.1016/j.chemosphere.2021.133005	
63	Khare T, Dange D, Jadhav A, Shriram V, Gosavi S, Kumar V* . 2022. Nano-Boehmite induced oxidative and nitrosative stress responses in <i>Vigna radiata</i> L. <i>Journal of Plant Growth Regulation</i> 41: 327-343. https://doi.org/10.1007/s00344-021-10303-8	4.8
62	Polash SA, Khare T, Kumar V* , Shukla R. 2021. Prospects of exploring metal-organic framework for combating antimicrobial resistance. <i>ACS Applied Bio Materials</i> 4(12): 8060-8079. https://doi.org/10.1021/acsabm.1c00832	4.7
61	Kumar V , Srivastava AK, Wani SH, Shriram V, Suprasanna P. 2021. Transcriptional and post-transcriptional mechanisms regulating salt tolerance in plants. <i>Physiologia Plantarum</i> 173:1291–1294. https://doi.org/10.1111/ppl.13592	6.4
60	Patil S, Joshi S, Jamla M, Zhou X, Taherzadeh MJ, Suprasanna P, Kumar V* . 2021. MicroRNA-mediated crop engineering for developing climate-resilient crops. <i>Bioengineered</i> 12: 10430-10456. https://doi.org/10.1080/21655979.2021.1997244	4.9
59	Kaur K, Reddy S, Barathe P, Shriram V, Anand U, Proćków J, Kumar V* . 2021. Combating Drug-Resistant Bacteria Using Photothermally Active Nanomaterials: A Perspective Review. <i>Frontiers in Microbiology</i> 12: 659614. https://doi.org/10.3389/fmicb.2021.659614	5.2
58	Verma SK, Das AK, Gantait S, Panwar Y, Kumar V , Marian Brestic. 2021. Green synthesis of carbon-based nanomaterials and their applications in various sectors: A topical review. <i>Carbon Letters</i> 32: 365–393. https://doi.org/10.1007/s42823-021-00294-7	4.5
57	Tan P, Du X, Shang Y, Zhu K, Joshi S, Kaur K, Khare T, Kumar V* . 2021. Ion transporters and their exploration for conferring abiotic stress tolerance in plants. <i>Plant Growth Regulation</i> 96: 1-23. https://doi.org/10.1007/s10725-021-00762-0	4.2
56	Jamla M, Patil S, Joshi S, Khare T, Kumar V* . 2021. MicroRNAs and their exploration for developing heavy metal tolerant plants. <i>Journal of Plant Growth Regulation</i> 41: 2579-2595. https://doi.org/10.1007/s00344-021-10476-2	4.8
55	Malik S, Kaur K, Prasad S, Jha NK, Kumar V* . 2021. A perspective review on medicinal plant resources for their anti-mutagenic potentials. <i>Environmental Science and Pollution Research</i> 29: 62014-62029. https://doi.org/10.1007/s11356-021-16057-w	5.8
54	Sarkar S, Dey A, Ray P, Kumar V , Baty RS, Batiha GE. 2021. Fungal endophyte: An interactive endosymbiont with the capability of modulating host physiology in myriad ways. <i>Frontiers in Plant Science</i> 12:701800. https://doi.org/10.3389/fpls.2021.701800 .	5.6
53	Jamla M, Khare T, Joshi S, Patil S, Suprasanna P, Kumar V* . 2021. Omics Approaches for Understanding Heavy Metal Responses and Tolerance in Plants. <i>Current Plant Biology</i> 27: 100213. https://doi.org/10.1016/j.cpb.2021.100213	5.4
52	Khare T, Anand U, Dey A, Assaraf YG, Chen Z-S, Liu Z, Kumar V* . 2021. Exploring phytochemicals for combating antibiotic resistance in microbial pathogens. <i>Frontiers in Pharmacology</i> 12: 720726. https://doi.org/10.3389/fphar.2021.720726	5.6
51	Khare T, Mahalunkar S, Shriram V, Gosavi S, Kumar V* . 2021. Embelin-loaded chitosan gold nanoparticles interact synergistically with ciprofloxacin by inhibiting efflux pumps in multidrug-resistant <i>Pseudomonas aeruginosa</i> and <i>Escherichia coli</i> . <i>Environmental Research</i> 199: 111321. https://doi.org/10.1016/j.envres.2021.111321	8.3
50	Zhou X, Joshi S, Khare T, Patil S, Shang J, Kumar V* . 2021. Nitric Oxide, Crosstalk with Stress Regulators and Plant Abiotic Stress Tolerance. <i>Plant Cell Reports</i> 40: 1395-1414. https://doi.org/10.1007/s00299-021-02705-5	6.2
49	Tiwari P, Khare T, Shriram V, Bae H, Kumar V* . 2021. Plant Synthetic Biology for Producing Potent Phyto-Antimicrobials to combat Antimicrobial Resistance. <i>Biotechnology Advances</i> 48: 107729. https://doi.org/10.1016/j.biotechadv.2021.107729	16.0

48	Khare T, Joshi S, Kaur K, Srivastav A, Shriram V, Srivastava AK, Suprasanna P, Kumar V* . 2021. Genome-wide in silico Identification and Characterization of Sodium-Proton (Na ⁺ /H ⁺) Antiporters in Indica Rice. <i>Plant Gene</i> 26: 100280. https://doi.org/10.1016/j.plgene.2021.100280	2.2
47	Zhou X, Joshi S, Patil S, Khare T, Kumar V* . 2021. Reactive Oxygen, Nitrogen, Carbonyl and Sulfur Species and their roles in Plant Abiotic Stress Responses and Tolerance. <i>Journal of Plant Growth Regulation</i> 41: 119-142. https://doi.org/10.1007/s00344-020-10294-y	4.8
46	Joshi S, Kaur K, Khare T, Srivastava AK, Suprasanna P, Kumar V* . 2021. Genome-wide identification, characterization, and gene expression analyses of soybean NHX-type (Na ⁺ /H ⁺) antiporters. <i>3 Biotech</i> 11:16. https://doi.org/10.1007/s13205-020-02555-0	2.8
45	Khare T, Srivastava AK, Suprasanna P, Kumar V* . 2020. Individual (Na ⁺ and Cl ⁻) and Additive Stress Impacts of NaCl on Proline Metabolism and Nitrosative Responses of Rice. <i>Plant Physiology and Biochemistry</i> 152: 44-52. https://doi.org/10.1016/j.plaphy.2020.04.028	6.5
44	Wani SH, Kumar V , Khare T, Guddimalli R, Parveda M, Solymosi K, Suprasanna P, Kavi Kishor PB. 2020. Engineering Salinity Tolerance in Plants: Progress and Prospects. <i>Planta</i> 251: 76. https://doi.org/10.1007/s00425-020-03366-6	4.3
43	Shaikh S, Shriram V, Khare T, Kumar V* . 2020. Biotic elicitors enhance diosgenin production in <i>Helicteres isora</i> L. suspension cultures via up-regulation of CAS and HMGR genes. <i>Physiology and Molecular Biology of Plants</i> 26: 593-604. https://doi.org/10.1007/s12298-020-00774-6	3.5
42	Yu Z, Tang J, Khare T, Kumar V* . 2020. The Alarming Antimicrobial Resistance in ESKAPEE pathogens: Can Essential Oils come to the Rescue? <i>Fitoterapia</i> 140: 104433. https://doi.org/10.1016/j.fitote.2019.104433	3.4
41	Zhou X, Khare T, Kumar V* . 2020. Recent trends and advances in identification and functional characterization of plant miRNAs. <i>Acta Physiologiae Plantarum</i> 42: 25. https://doi.org/10.1007/s11738-020-3013-8	2.6
40	Wani SH, Kumar V , Khare T, Tripathi P, Shah T, Ramkrishna C, Aglawe S, Mangrauthia SK. 2020. miRNA applications for engineering abiotic stress tolerance in plants. <i>Biologia</i> 75: 1063–1081. https://doi.org/10.2478/s11756-019-00397-7	1.5
39	Nanekar V, Shriram V, Khare T, Kumar V* 2020. Nrf2/HO-1 mediated antioxidant activities, cytotoxicity analysis and LC-ESI/MS profiling of <i>Eulophia nuda</i> L. <i>Natural Products Journal</i> 10: 69-79. https://doi.org/10.2174/2210315509666190215101646	0.9
38	Verma SK, Das AK, Gantait S, Kumar V , Gurel A. 2019. Applications of carbon nanomaterials in the plant system: A perspective view on the pros and cons. <i>Science of the Total Environment</i> 667: 485-499. https://doi.org/10.1016/j.scitotenv.2019.02.409	9.8
37	Yang B, Tang J, Yu Z, Khare T, Srivastav A, Datir S, Kumar V* . 2019. Light stress responses and prospects for engineering light stress tolerance in crop plants. <i>Journal of Plant Growth Regulation</i> 38: 1489-1506. https://doi.org/10.1007/s00344-019-09951-8	4.8
36	Kumar V* , Shriram V, Bhagat R, Khare T, Kapse S, Kadoo N. 2019. Phytochemical profile, antioxidant, anti-inflammatory and antiproliferative activities of <i>Pogostemon deccanensis</i> essential oils. <i>3 Biotech</i> 9: 31. https://doi.org/10.1007/s13205-018-1560-0	2.8
35	Xu J, Hou Q-M, Khare T, Verma SK, Kumar V* . 2019. Exploring miRNAs for developing climate-resilient crops: A perspective review. <i>Science of the Total Environment</i> 653: 91-104. https://doi.org/10.1016/j.scitotenv.2018.10.340	9.8
34	Shriram V, Khare T, Bhagwat R, Shukla R, Kumar V* . 2018. Inhibiting bacterial drug efflux pumps via phyto-therapeutics to combat threatening antimicrobial resistance. <i>Frontiers in Microbiology</i> 9: 2990. https://doi.org/10.3389/fmicb.2018.02990	5.2
33	Wani SH, Tripathi P., Zaid A, Challa GS, Kumar A, Kumar V , Upadhyay J, Joshi R, Bhatt M. 2018. Transcriptional regulation of osmotic stress tolerance in wheat (<i>Triticum aestivum</i> L.). <i>Plant</i>	5.1

	<i>Molecular Biology</i> 97: 469-487. https://doi.org/10.1007/s11103-018-0761-6	
32	Shaikh S, Shriram V, Srivastav A, Barve P, Kumar V* . 2018. A critical review on Nepal Dock (<i>Rumex nepalensis</i>): A tropical herb with immense medicinal importance. <i>Asian Pacific Journal of Tropical Medicine</i> 11(7): 405-414. https://doi.org/10.4103/1995-7645.237184	3.1
31	Verma SK, Das AK, Patel MK, Shah A, Kumar V , Gantait S. 2018. Engineered nanomaterials for plant growth and development: A perspective analysis. <i>Science of the Total Environment</i> 630: 1413-1435. https://doi.org/10.1016/j.scitotenv.2018.02.313	9.8
30	Shaikh S, Shriram V, Khare T, Kumar V* . 2018. Establishment of Callus and Cell Suspension Cultures of <i>Helicteres isora</i> L. <i>Research in Plant Biology</i> 8: 1-7. https://doi.org/10.25081/ripb.2018.v8.3366	
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Publications: Books

Year	Title	Editors	Publisher	ISBN	Link
2018	Salinity Responses and Tolerance in Plants: Vol I	Kumar V , Wani SH, Suprasanna P, Tran Lam-Son P.	Springer Nature	978-3-319-75671-4	https://doi.org/10.1007/978-3-319-75671-4
2018	Salinity Responses and Tolerance in Plants: Vol II	Kumar V , Wani SH, Suprasanna P, Tran Lam-Son P.	Springer Nature	978-3-319-90317-0	https://doi.org/10.1007/978-3-319-90318-7
2019	Osmoprotectant-Mediated Abiotic Stress Tolerance in Plants	Hossain MA, Kumar V , Burritt D, Fujita M, Mäkelä P.	Springer Nature	978-3-030-27422-1	https://doi.org/10.1007/978-3-030-27423-8
2020	Heat Stress Tolerance in Plants	Wani SH, Kumar V .	Wiley	978-1-119-43236-4	https://doi.org/10.1002/9781119432401
2021	Plant Nutrition and Food Security in the Era of Climate Change	Kumar V , Srivastava AK, Suprasanna P	Academic Press (Elsevier)	978-0-12-822916-3	https://doi.org/10.1016/C2019-0-04692-4
2022	Antimicrobial resistance - Underlying mechanisms and therapeutic approaches	Kumar V , Shriram V, Paul T, Thakur M	Springer Nature	978-9-81-163119-1	https://link.springer.com/book/10.1007/978-981-16-3120-7
2023	Nano-Strategies for Addressing Antimicrobial Resistance	Kumar V , Shriram V, Shukla R, Gosavi S	Springer Nature	978-3-03-110219-6	https://link.springer.com/book/10.1007/978-3-03-10220-2
2023	Non-coding RNAs: molecular tools for crop improvement	Suprasanna P, Kumar V , Srivastava, AK,	CRC, Taylor & Francis	978-1-03-242544-3	https://doi.org/10.1201/9781003369288
2024	Medicinal Plants and Antimicrobial Therapies	Kumar V , Shriram V, Dey A.	Springer Nature	978-9-81-997260-9	https://doi.org/10.1007/978-981-99-7261-6

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37. Kaur K, Barathe P, Reddy S, Mathur V, Mathur V, **Kumar V***. 2024. One Health Perspectives for Addressing Antimicrobial Resistance. In: Kumar V, Shriram V, Dey A (eds) Medicinal Plants and Antimicrobial Therapies. Springer, Singapore pp 1-21. https://doi.org/10.1007/978-981-99-7261-6_1
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1. **Kumar V***, Shriram V, Hussain MA, Kavi Kishor PB. 2015. Engineering proline metabolism for enhanced plant salt stress tolerance. In: Wani SH, Hussain MA (Eds.) *Managing salinity tolerance in plants: molecular and genomic perspectives*. CRC Press, Taylor & Francis Group, pp353-372; ISBN: 978-1-4822-4513-4

Sequences submitted to GenBank: 24

MH685524	MH636868	KR677082	KR677083	KR677084	KR677085	MF040219	MF040227
MF039480	MF039481	MF039714	MF039715	MF040166	MF040188	MF040224	MF040225
MF040170	MF040217	MF00988	MF040220	MF00985	MF00986	MF040223	MF040226

Editorial/ Review Work:

Editor:

1. Editor, *Journal of Plant Growth Regulation* (Springer, Germany)
2. Editor, *The Natural Products Journal* (Bentham Science, UAE)
3. Editor, *Plant Science Today* (Horizon Publishing)
4. Guest Editor, *Physiologia Plantarum* (Wiley, UK)
5. Guest Editor, *Current Topics in Medicinal Chemistry* (Bentham Science, UAE)

Edited Special Issues:

Guest Editor for Special Issue on “Transcriptional and Post-Transcriptional Regulation of Plant Growth, Development and Stress Responses” in *Journal of Plant Growth Regulation* (Springer-Nature, Germany), Impact Factor 4.8). <https://link.springer.com/collections/aehgcfbbdd>

Guest Editor for Special Issue on “Fighting antimicrobial resistance with natural products- current developments and future prospects” in *Current Topics in Medicinal Chemistry* (Bentham, Impact Factor 3.4). <https://www.eurkaselect.com/issue/11654>

Guest Editor for Special Issue on “Transcriptional and Post-Transcriptional Mechanisms Regulating Salt Tolerance in Plants” in *Physiologia Plantarum* (Wiley, UK, Impact factor 6.4). <https://onlinelibrary.wiley.com/toc/13993054/2021/173/4>

Guest Editor for Special Issue on “Plants for Future Climate: Responses and adaptations to Combined, Multifactorial and Sequential Stresses” in *Frontiers in Plant Science* (Frontiers media, Switzerland, Impact Factor 5.2). <https://www.frontiersin.org/research-topics/27879/plants-for-future-climate-responses-and-adaptations-to-combined-multifactorial-and-sequential-stresses>

Reviewer for Journals:

<i>Journal of Photochemistry and Photobiology, C: Photochemistry Reviews</i> (Elsevier)	<i>Science of the Total Environment</i> (Elsevier)	<i>Drug Resistance Updates</i> (Elsevier)
<i>Scientific Reports</i> (Nature Publishing Group)	<i>Current Opinion in Environmental Science and Health</i> (Elsevier)	<i>Phytotherapy Research</i> (Wiley)
<i>Planta</i> (Springer-Verlag)	<i>Physiologia Plantarum</i> (Wiley)	<i>Environmental Pollution</i> (Elsevier)
<i>Frontiers in Microbiology</i> (Frontiers Media, Switzerland)	<i>Food Chemistry</i> (Elsevier)	<i>Journal of Rare Earths</i> (Elsevier)
<i>Environmental Science and Pollution Research</i> (Springer-Verlag)	<i>Functional and Integrative Genomics</i> (Springer)	<i>Frontiers in Plant Science</i> (Frontiers, Switzerland)
<i>Applied Microbiology and Biotechnology</i> (Springer)	<i>Future Microbiology (Future Medicine Group)</i>	<i>Physiology and Molecular Biology of Plants</i> (Springer)
<i>Journal of Food Biochemistry</i> (Wiley-VCH)	<i>Pedosphere</i> (Elsevier)	<i>Data in Brief</i> (Elsevier)
<i>Chemosphere</i> (Elsevier)	<i>Plant Cell Reports</i> (Springer)	<i>Fitoterapia</i> (Elsevier)
<i>Archives of Agronomy and Soil Science</i> (Taylor and Francis)	<i>Plant Gene</i> (Elsevier)	<i>Journal of Plant Growth Regulation</i> (Springer)
<i>Plos One</i> (PLOS)	<i>Journal of Herbal Medicine</i> (Elsevier)	<i>Current Plant Biology</i> (Elsevier)
<i>3 Biotech</i> (Springer)	<i>Acta Physiologiae Plantarum</i> (Springer)	<i>Current Protein and Peptide Science</i> (Bentham Science)
<i>Proc. Natl Acad Sci India B: Biol Sci</i> (Springer)	<i>Protoplasma</i> (Springer)	<i>Phyton</i>
<i>South African Journal of Botany</i> (Elsevier)	<i>NanoImpact</i> (Elsevier)	Reviewer for Book Proposals – Springer and Elsevier

Key Research Collaborations

- Dr. Ravi Shukla, RMIT University, Australia
- Dr. Susana Araujo, ITQB, New University of Lisbon, Portugal
- Prof. P. B. Kavi Kishor, Osmania University, Hyderabad, India
- Dr. Ashish Kumar Srivastava, Scientist F, Bhabha Atomic Research Centre, Mumbai, India
- Dr. Atish Paul, Pharmaceutical Sciences, BITS, Pilani, India
- Dr. Vartika Mathur, Sri Venkateswara College (University of Delhi), New Delhi, India

Seminar/Conference/Workshop Organized:

1. Organised workshop (hands-on-training) on “Advanced Techniques in Biotechnology” at the Department of Biotechnology, Modern College of Arts, Science and Commerce, Pune, from 14/10/2010 to 15/10/2010.
2. **Coordinator**, Summer Training on “Gene isolation and amplification” under DBT star college scheme for B. Sc. students from 20-25/06/2016 at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune.
3. **Coordinator**, Research Induction Program for M.Sc. students under DST-FIST program from 06/09/2016 to 07/09/2016 at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune.

4. **Coordinator, Science Academies' Lecture Workshop** jointly organized by Indian Academy of Sciences, Bangalore; Indian National Science Academy, New Delhi and National Academy of Sciences, Allahabad, themed on "Understanding and Exploring the Interfaces Between Biology and Biotechnology", from 01/11/2017 to 03/11/2017, held at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune.
5. **Chaired a Session** at One-day National Seminar on Innovative and Best Practices in Higher Education, organized by Modern College, Ganeshkhind in collaboration with NAAC, Bangalore, SPPU, Pune and CEDA, Pune, on 26/07/2019
6. **Coordinator, DBT (Govt. of India)** funded Science Popularization Program "Science Fair" held at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune, 30/08/2019
7. **Member, Organizing Committee**, International E-conference on Biotechnology, Bioinformatics and Biomedicine 2020, Organized by the Faculty of Applied Sciences, AIMST University, Malaysia, 24-26 August 2020.
8. **Coordinator**, National Lecture Series under the aegis of DBT Star College Scheme at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune, 01-02/02/2021.
9. **Coordinator**, Faculty Development Program on "IPR and Patenting" at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune, 29/11/2021 to 01/12/2021.
10. **Coordinator, DBT (Govt. of India)** funded Science Popularization Program "Science Adda" for school students held at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune on 05/01/2022.
11. **Coordinator**, Hands-on Workshop on 'Techniques in Molecular Biology' funded by **DBT (Govt. of India) under BUILDER program** for faculty members, post-doctoral fellows, and research students held at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune from 15th to 19th November 2022.
12. **Coordinator**, Hands-on Workshop on 'Modern Analytical Techniques' funded by **DBT (Govt. of India) under BUILDER program** for faculty members, post-doctoral fellows, and research students held at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune from 10th to 12th January 2023.

Resource Person/Invited Talks Delivered

1. Worked as Resource Person at UGC Academic Staff College Refresher Course held at the Department of Environmental Science, Savitribai Phule Pune University, Pune and delivered a lecture on 'Developing Biotech-Crops for Saline Environments' 19/10/2015
2. Resource Person at Post-Graduate Research Centre, Department of Zoology, Modern College, Shivajinagar, Pune for Course Work for PhD students and delivered a lecture on 'Research Methodologies' 21/11/2015
3. Resource Person for Two-day Training Workshop Program for Life Science Post-Graduate Students "Research Induction Program" 06-07/09/2016, Modern College, Ganeshkhind, Pune
4. Resource Person at UGC Academic Staff College Refresher Course held at the Department of Environmental Science, Savitribai Phule Pune University, Pune and delivered a lecture on "Antimicrobial Resistance", 12/07/2017
5. Resource Person for Faculty Development Program for the IQAC Coordinators/Members for Colleges organized by UGC-HRD Centre, Savitribai Phule Pune University, Pune, 22/03/2018.
6. Delivered an invited talk on "Individual and additive effects of Na and Cl ions on rice cultivars with contrasting salt tolerance" in DAE-BRNS Life Sciences Symposium 2018 on Frontiers in Sustainable Agriculture, Organized by Bhabha Atomic Research Center, Mumbai, 26-28/04/2018
7. Resource Person for Savitribai Phule Pune University, Pune sponsored Faculty Development Program at Abeda Inamdar College, Pune, and delivered a lecture on 'Research based Teaching' 09/05/2018.
8. Resource Person for Faculty Development Program at Mamasahab Mohol College, Pune and delivered a lecture on 'Research, Innovation and Extension', 19/06/2018.
9. Resource Person for Faculty Development Program at H.V. Desai College, Pune and delivered a lecture on "Research Writing- Research Papers, General Purpose Writing" 21/06/2018.
10. Resource Person for Faculty Development Program on Demystifying VII criteria of NAAC at Modern Law College, Ganeshkhind, Pune, and delivered a lecture on the topic 'Criterion III – Research, Innovation and Extension' 02/08/2018
11. Resource Person at UGC Academic Staff College Refresher Course held at the Department of Environmental Science, Savitribai Phule Pune University, Pune and delivered a lecture on "Threatening Antimicrobial Resistance and Combating it", 30/11/2018.

12. Resource Person at 'National Conference on Innovations and Developments in Computational and Applied Science' held at MIT Arts, Commerce and Science College, Pune, and delivered a keynote on 'Research Quality Benchmarks and Publications', 22/12/2018.
13. Resource Person at the Workshop on "Recent Trends in Laboratory Diagnosis of Infectious Disease" organized by the Moving Academy of Medicine and Biomedicine, Pune for resident doctors and medical faculty, 09/02/2019.
14. Resource Person at the State Level Workshop on "Revised Methodology of Accreditation by NAAC" organized by Institute of Business Management and Research, Pune and delivered a lecture on Criterion III 'Research and Innovation', 22/02/2019.
15. Judge/Panel Member at 'Abhikalp 2019' (A Design competition for Innovative Projects and Proof-of-Concept development) organized by Design Innovation Centre, Savitribai Phule Pune University, Pune, 6-7 March 2019
16. Delivered an invited 'Lead Presentation' on Star College Scheme at Pondicherry University, Pondicherry organized by DBT, Govt. of India, 19/04/2019.
17. Delivered an Invited Special Talk on Star College Scheme of DBT at Karnataka College, Bidar, Karnataka, 08/06/2019.
18. Delivered an invited talk on "Research – Quality Benchmarks and Publications" under SAGE Summer School Program, at SAGE University, Indore, 21/05/2020.
19. Resource Person at National Webinar on "NAAC Criterion III – Research Innovation and Extension: Its Challenges and Opportunities as per NAAC New Guidelines" organized by Mata Gujri Mahila Mahavidyalaya, Jabalpur, Madhya Pradesh, and delivered a talk on "Research Quality Indicators, Ethics and Publications, 26/05/2020.
20. Resource Person at a Faculty Development Program on "Life Science for Enhancing Human Life" organized by Nirmala College for Women, Coimbatore, Tamil Nadu, and delivered a talk on "Research Quality Indicators, Ethics and Publications, 28/05/2020.
21. Resource Person at National Webinar on "Research Innovation and Extension, Criterion 3 of NAAC Assessment under revised accreditation framework" organized by Government Science College, Jabalpur, Madhya Pradesh, and delivered a talk on "Research – Quality, Ethics and Dissemination", 24/06/2020.
22. Resource Person at National Webinar on "Documentation useful for IQAC primarily with the focus on NAAC Accreditation" organized by IQAC Cluster, India, and delivered a talk on 'Quantitative matrices, calculations and terminologies for research publications' 20/10/2020.
23. Resource Person at Faculty Development Program organized by School of Biomedical Sciences, MGM Institute of Health Sciences, Mumbai, and delivered a talk on "Research: Documentation, Indices, Calculation and Ethics" 05/01/2021.
24. Resource Person at National Webinar on "Documentation useful for IQAC primarily with the focus on NAAC Accreditation – 2" organized by IQAC Cluster, India, and delivered a talk on 'Quantitative matrices, calculations and terminologies for research publications' 23/02/2021.
25. Resource Person at "Two-day National Workshop on Interdisciplinary Research: Frontiers and Opportunities in Post-Covid World" organized by MGM University, Aurangabad and delivered a talk on "Research – Dissemination, Quality Benchmarks and Indices' 06/04/2021.
26. Resource Person at Four-days Lecture Series on Research, Innovation: Pathways to Success, organized by Pratibha College in association with UGC-HRDC, Savitribai Phule Pune University, Pune, and delivered a talk on Research: Quality Benchmarks, Ethics, Publications and Indices, 12/10/2021.
27. Resource Person at International Conference on Challenges and Opportunities in Biotechnology organized by Amity University, Jharkhand and delivered a talk on "miRNA Biotechnology for Developing Climate-smart Crops", 12/11/2021.
28. Resource Person at Faculty Development Program on National Education Policy organized by Modern College of Arts, Science and Commerce, Ganeshkhind, Pune and delivered a talk on "Bio-business" 08/07/2022.
29. Resource Person at State Level Workshop on "Project in collaboration with funding agency and Proposal writing" organized by Modern College of Engineering, Pune and delivered a lecture on "Information of various funding agencies, types and grants" 19/09/2022.
30. Resource Person at Staff Development Program "A way to achieve excellence and quality through NAAC accreditation process" organized by ATS College Business Studies and Computer Applications, Pune and delivered a lecture on "NAAC Criterion 3" 14/01/2023.

PhD Thesis Evaluator

Worked as evaluator/ examiner for PhD Thesis for the following institutes:

- National Institute of Plant Genomic Research (NIPGR), New Delhi, India
- Jawaharlal Nehru University (JNU), New Delhi, India
- Bharathiar University, Coimbatore, India
- Indira Gandhi Agricultural University, Ranchi, India
- MGM Institute of Health Sciences, Mumbai
- Veer Narmad South Gujarat University, Surat, India

Curriculum enrichment duties

- Appointed and worked as Chairman, for developing a Handbook for Practical Examinations of B.Sc. Biotechnology students, Savitribai Phule Pune University.

University Assignments

- Worked as Chairman/Member of S. P. Pune University's Local Inquiry Committees for PhD (Biotechnology) and MSc (Biotechnology) courses permission for new affiliation/continuation
- Worked as Chairman, Practical Examinations, MSc Biotechnology
- Worked as Chairman, Practical Examinations, BSc Biotechnology
- Worked as Chairman, Paper Settings and Paper Checking for MSc Biotechnology
- Worked as Chairman, Paper Settings and Paper Checking for BSc Biotechnology
- Worked as Chairman, Skeleton for TYBSc Practical Examination of Savitribai Phule Pune University

Participated in Refresher/ Orientation Course/Workshops

1. Attended a Virtual Training Program on "**Intellectual Property Rights (IPRs) for Academics and Research**" organized by P.E.S.'s Modern College of Arts and Commerce, Ganeshkhind, Pune in collaboration with CSIR-IMMT, Bhubaneswar on 11th July 2023.
2. Attended a Two - week "**Refresher Course in Advanced Research Methodology**" organized by Teaching Learning Centre, Ramanujan College, University of Delhi, Delhi from 21 June – 05 July, 2022.
3. Completed a faculty development program on "e-Content Development for Online Teaching" organized by P.E.S.'s Modern College of Arts and Commerce, Ganeshkhind, Pune from 25 – 30 June 2020.
4. Attended a "**Moodle Hands-on Training Webinar Series for Promoting the Use of Technology**" held at the P.E.S.'s Modern College of Arts and Commerce, Ganeshkhind, Pune from April – May 2020.
5. Attended a Ministry of Earth Sciences sponsored Brain Storming Session on "**Renewing the tradition of natural product research in India**" held at CSIR- Central Drug Research Institute, Lucknow from 21 – 23 January 2016.
6. Attended Academies' Refresher Course on "**Advances in Biotechnology**" organised jointly by Indian Academy of Sciences, Bangalore; Indian National Science Academy, New Delhi and National Academy of Sciences, Allahabad at National Institute of Research in Reproductive Health, Mumbai from 1 – 16 March 2011.
7. Participated in a DBT Sponsored workshop entitled "**Modern Techniques in Studies of Abiotic Stress Response and Stress-inducible Genes in Plants**" held at the Institute of Life Sciences Bhubaneswar, 21-24 March 2006.
8. Attended a workshop entitled "**Environmental protection, challenges and issues**" held at A. M. College, Hadapsar, Pune, 7th January 2004.

Paper presented in International Symposia / Seminars:

12

1. **Kumar V** (2023) Epigenetic Regulation of Combined Heat and Salinity Stress Responses in Rice. Poster presented at 38th Annual Meeting of the International Society of Chemical Ecology (ISCE 2023), held at IISc Bangaluru, 23-27 July 2023.
2. **Kumar V** (2023). Epigenetic Regulation of Combined Heat and Salinity Stress Responses of Rice Cultivars. A Flash Talk delivered in “3rd Conference on Epigenetic Mechanisms of Crop Adaptation to Climate Change (EPICATCH), held at the Bulgarian Academy of Sciences, Sofia, Bulgaria (fully sponsored by the European Union under COST program), 30 May – 1 June 2023.
3. **Barathe P**, Sharma M, Kumar V (2018). Antibiotic-potential activity of *Cassia surattensis* against multi-drug resistant (MDR) bacteria. Presented at International Conference on Frontiers in Life Sciences and Earth Sciences, organized by Prof. Ramkrishna More College, Akurdi, Pune, 18-19 January 2018.
4. **Iqbal G**, Bhagwat R, Kumar V (2018). Microbial diversity and physico-chemical analyses of leachate collected from a municipal waste disposal site in Pune. Presented at International Conference on Recent Trends in Life Sciences, held at Modern College, Ganeshkhind, Pune, 2-3 February 2018.
5. **Kumar V**, **Desai D**, Shriram V (2013). Exploration of *Helicteres isora* L. as a source of diosgenin and its enhancement using biotechnological tools. Presented at International Conference on Advances in Biotechnology and Bioinformatics, held at Dr. D Y Patil Vidyapeeth, Pune, 25-27 December 2013.
6. **Khare T**, **Kumar V**. (2013). Individual and additive effects of sodium and chloride ion stress on rice. Presented at International Conference on Advances in Biotechnology and Bioinformatics, held at Dr. D Y Patil Vidyapeeth, Pune, 25-27 December 2013.
7. **Kumar V**, **Mulla J** (2013). Effect of salt tolerant bacterial priming on growth and biochemical parameters of sorghum under salt stress. Presented at International Conference on Advances in Biotechnology and Bioinformatics, held at Dr. D Y Patil Vidyapeeth, Pune, 25-27 December 2013.
8. **Kumar V**, **Mapara N** (2013). Green synthesis of silver nanoparticles from aqueous extracts of *Helicteres isora* and their evaluation for antibiotic resistance reversal. Presented at International Conference on Advances in Biotechnology and Bioinformatics, held at Dr. D Y Patil Vidyapeeth, Pune, 25-27 December 2013.
9. Shriram V, **Nanekar V**, **Kumar V** (2013). In vitro plant regeneration via PLB derived callus in medicinal orchid *Eulophia ochreatea* Lindl. Presented at International Conference on Advances in Biotechnology and Bioinformatics, held at Dr. D Y Patil Vidyapeeth, Pune, 25-27 December 2013.
10. **Kadam A.**, **Kumar V**, Shriram V (2012). Hairy root induction in *Helicteres isora* for production of diosgenin-a steroidal sapogenin. Presented at International Conference on Current Trends in Medicinal Plant Research, held at Department of Botany, University of Pune, Pune, 10-12 January 2012.
11. **Vinay Kumar**, A. Vaze, N. Jawali and M. G. Shitole (2006). Comparative antioxidant enzyme activities and protein profiling in rice cultivars under salt stress. Presented at “2nd International Rice Congress” held at National Academy of Agricultural Sciences, IARI Campus, New Delhi, 9-13 October 2006.
12. **Vinay Kumar** and M. G. Shitole (2006). Biochemical analyses and protein profiling under NaCl stress in rice (*Oryza sativa* L.). Presented at “International Symposium on frontiers in genetics and biotechnology-retrospect and prospect” held at the Department of Genetics, Osmania University, Hyderabad, 8-10 January 2006.

Paper presented in National/Regional Symposium / Seminar:

15

- 1) **Mapara N** and **Kumar V***. (2013). *Helicteres isora* Fruit Extract Mediated Green Synthesis of Silver Nanoparticles. Presented at National Conference on Nanomaterials: Applications and properties, held at Arts, Science and Commerce College, Sonai, Ahmednagar, 22-23 February 2013.
- 2) Desai D, Kumar V*, Shriram V (2013). Ecogeographical variations in diosgenin content isolated from *Helicteres isora* L. Presented at National Conference on Current Prospects and Challenges in Life Sciences, held at New Arts, Commerce and Science College, Ahmednagar, 26-27 July 2013.
- 3) **Khare T**, Desai D and **Kumar V***. (2012). Comparative effects of three different salts on seed germination, seedling growth and biochemical parameters of sorghum genotypes. Presented at National seminar on

Physiological and Molecular Approaches for Development of Climate Resilient Crops, held at Acharya N G Ranga Agricultural University, Hyderabad, 12-14 December 2012.

- 4) Nanekar V, **Kumar V**. and Varsha Shriram (2012). Micropropagation of *Eulophia nuda* L., a medicinally important endangered orchid. Presented at National seminar on Physiological and Molecular Approaches for Development of Climate Resilient Crops, held at Acharya N G Ranga Agricultural University, Hyderabad, 12-14 December 2012
- 5) Mulla J, Kadam A, **Kumar V** and Shriram V. (2012). Evaluation of *Helicteres isora* L. from different localities of Western Ghats for diosgenin content and its enhancement using hairy root cultures. Presented at National seminar on Physiological and Molecular Approaches for Development of Climate Resilient Crops, held at Acharya N G Ranga Agri University, Hyderabad, 12-14 December 2012
- 6) Mulla J, **Kumar V*** and V. Shriram (2011). Genetic transformation in *Helicteres isora* L. to enhance diosgenin content. Presented at State Level Seminar on 'Recent Trends in Life Sciences' held at Arts, Commerce and Science College, Pirangut, Pune, 11-12 February 2011.
- 7) Sirdeshmukh V and **V. Kumar*** (2011). *In vitro* shoot multiplication and direct regeneration in medicinally important plant *Phyllanthus niruri*. Presented at State Level Seminar on 'Recent Trends in Life Sciences' held at Arts, Commerce and Science College, Pirangut, Pune, 11-12 February 2011.
- 8) Desai D. and **V. Kumar** (2011). Direct *in vitro* plant regeneration of *Rauwolfia serpentine* L.: an important medicinal plant. Presented at State Level Seminar on 'Recent Trends in Life Sciences' held at Arts, Commerce and Science College, Pirangut, Pune, 11-12 February 2011.
- 9) Khare T. and **V. Kumar** (2011). *In vitro* callus cultures of *Rauwolfia serpentine* L. Benth: an important medicinal plant. Presented at State Level Seminar on 'Recent Trends in Life Sciences' held at Arts, Commerce and Science College, Pirangut, Pune, 11-12 February 2011.
- 10) **Vinay Kumar**, V. Shriram and M. G. Shitole (2009). NaCl-induced mineral deficiency and nutrient imbalances in *indica* rice genotype 'Kalarata'. Presented at National Conference on 'Recent Trends in Life Sciences', held at A. M. College, Hadapsar, Pune, 18-19 December 2009.
- 11) **Vinay Kumar**, V. Shriram, N. Jawali, T. D. Nikam and M. G. Shitole (2008). Embryogenic callus induction and plant regeneration of *indica* rice. Presented at National Seminar on 'In the Role of Care-Takers of Biosphere', held at Vidya Pratishthan, Baramati, 14-16 February 2008. Won Best Paper Prize.
- 12) **Vinay Kumar**, V. Shriram and M G Shitole (2007). Optimisation of Callus cultures in rice (*Oryza sativa* L. cv. Karjat-3). Presented at National Seminar on Utilization of Plant Resources. Held at the Department of Botany, University of Pune, February 2007.
- 13) **Vinay Kumar** and M. G. Shitole (2006). Effect of NaCl stress on lipid peroxidation, proline accumulation and antioxidant enzyme activities in rice cultivars. Presented at "National Seminar on Plant Physiology" held at Kerala Agricultural University, Thrissur, Kerala, October, 2006.
- 14) **Vinay Kumar** and M. G. Shitole (2005). Germination and biochemical studies in relation to salinity stress in rice (*Oryza sativa* L.). Presented at "National Seminar on Plant Physiology" held at Navsari Agricultural University, Gujarat, November 2005.
- 15) Kondetti P., **Vinay Kumar**, N. K. Jawali, S. K. Apte and M. G. Shitole (2004). Biodiversity and its Importance with special reference to genetic diversity and its evaluation by molecular methods" at the "National Seminar on Assessment, Conservation and Utilization of Biodiversity" at Dept. of Botany, University of Pune, Pune, 26-27 March 2004.

Personal Details

Date of Birth:	01 / 07 / 1978
Gender:	Male
Languages known:	Hindi, English, and Marathi
Nationality:	Indian

Declaration:

I hereby declare that the information given above is true as per my knowledge.

Place: Pune
Date: 29/07/2024

Vinay Kumar