

## CURRICULUM VITAE



**Dr. Monica Jamla**

**Ph.D., Biotechnology**

**Assistant Professor**

**Modern College of Arts, Science and Commerce, Ganeshkhind, Pune,  
Maharashtra, India**

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### **EDUCATION**

- Ph.D., Biotechnology, Banasthali University, Rajasthan, 2018
- Title: Identification of molecular markers to screen for heat and drought tolerant wheat (*Triticum* sp.) genotypes.
- M.Sc., Biotechnology, Banasthali University, Rajasthan, 2010  
Dissertation: Genetic diversity analysis of Pomegranate using ISSR and SSR markers (NBPGR, Pusa, New Delhi).
- B.Sc., Biotechnology, Ch. Charan Singh University, UP, 2008

### **RESEARCH FELLOWSHIPS AND AWARDS**

- Visiting Senior Research Scholar, Fuyang Normal University, China, 2018-2018
- Senior research fellowship by ICAR, Govt. of India, under NICRA programme, 2011-2014
- Junior research fellowship by DST, Govt. of India, 2010-2011
- Academic fellowship by DBT, Govt. of India during M.Sc. programme, 2008-2010
- University scholarship for securing First Position during graduation, 2005-2008

### **RESEARCH PROJECTS**

- **DABAKE TRUST PUNE:** Ongoing (2023-24)

### **PUBLICATIONS**

1. Sunil Archak, Ramchandra, Ambika B. Gaikwad, **Monica Jamla**, R Parimalan, Diksha Gautam and V T Jadhav. 2014. Molecular and morphometric analyses reveal discrete grouping of pomegranate (*Punica granatum*) genebank accessions away from cultivars. *Indian Journal of Agricultural Sciences* 84: 971-976. **IF: 0.374.**
2. **Monica Jamla**, Ambika Baldev Gaikwad, Shery Rachel Jacob and Sunil Archak. 2017. Text-mining for identify abiotic stress candidate genes to screen bread wheat (*Triticum aestivum*) germplasm. *Indian Journal of Plant Genetic Resources* 30:162-164. <https://doi.org/10.5958/0976-1926.2017.00023.7>. **IF: 1.2.**
3. **Monica Jamla and Sunil Archak. 2019. Genomic resources of plant abiotic**

stress tolerance: An overview of functional and regulatory Protein. *Indian Journal of Plant Genetic Resources* 32:93-106. <https://doi.org/10.5958/0976-1926.2019.00013.5>. IF: 1.2.

4. **Monica Jamla**, Tushar Khare, Shrushti Joshi, Suraj Patil, Penna Suprasanna, and Vinay Kumar. 2021. Omics Approaches for Understanding Heavy Metal Responses and Tolerance in Plants. *Current Plant Biology* 27:100213. <https://doi.org/10.1016/j.cpb.2021.100213>. IF: 5.4
5. **Monica Jamla**, Suraj Patil, Shrushti Joshi, Tushar Khare, and Vinay Kumar. 2021. MicroRNAs and Their Exploration for Developing Heavy Metal-tolerant Plants. *Journal of Plant Growth Regulation*. <https://doi.org/10.1007/s00344-021-10476-2>. IF: 4.8
6. Suraj Patil, Shrushti Joshi, **Monica Jamla**, Xianrong Zhou, Mohammad J Taherzadeh, Penna Suprasanna & Vinay Kumar. 2021. MicroRNA-mediated bioengineering for climate resilience in crop. *Bioengineered* 12:10446-10472. <https://doi.org/10.1080/21655979.2021.1997244>. IF: 4.9
7. Cai Q, Suraj Patil, Shrushti Joshi, **Monica Jamla**, Vinay Kumar. 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>. IF:6.5
8. Kandasamy Saravanakumar , Sugavaneswaran Sivasantosh , Anbazhagan Sathiyaseelan, Alwarappan Sankaranarayanan ,Kumar Vishven Naveen, Xin Zhang, **Monica Jamla** , Sampathkumar Vijayasathy, Veeraraghavan Vishnu Priya, Davoodbasha MubarakAli, Myeong-Hyeon Wang. 2022. Impact of benzo[a]pyrene with other pollutants induce the molecular alternation in the biological system: existence, detection, and remediation methods. *Environmental Pollution* 304: 119207 <https://doi.org/10.1016/j.envpol.2022.119207>. IF: 8.9
9. **Monica Jamla**; Shrushti Joshi; Suraj Patil; Bhumi Tripathi; Vinay Kumar. 2022. MicroRNAs modulating nutrient homeostasis: A sustainable approach for developing biofortified crops. *Protoplasma* <https://doi.org/10.1007/s00709-022-01775-w>. IF: 2.9
10. Kandasamy Saravanakumar; Shanali De Silva; Sugavaneswaran Siva Santosh;Anbazhagan Sathiyaseelan; Archchana Ganeshalingam; **Monica Jamla**; Alwarappan Sankaranarayanan; Veeraraghavan Vishnu Priya; Davoodbasha MubarakAli; Gobika Thiripuranathar. 2022. The impact of industrial effluentson the environment and human health and their remediation using hybrid membrane filtration techniques based on metal-organic frameworks. *Chemosphere* 307: 135593 <https://doi.org/10.1016/j.chemosphere.2022.135593>. IF: 8.8
11. Shrushti Joshi, Suraj Patil, Monica Jamla, Abhijit Dey, Penna Suprasanna, Vinay Kumar. 2023. Systems Biology for Bioengineering Smart Crops. *Bioengineered* IF: 4.9 (Accepted).
12. Modern Omics Toolbox for Tailoring Combined and Multifactorial Abiotic Stress Tolerant Plants. Shrushti Joshi, Suraj Patil, Alisha Shaikh, **Monica Jamla**, Vinay Kumar. 2024. *Plant Stress Journal* 11: 100301 <https://doi.org/10.1016/j.stress.2023.100301> IF:5.0.
13. Transcriptomics, proteomics, and metabolomics interventions prompt crop improvement against metal(loid)s toxicity. Ali Raza, Hajar Salehi, Shanza Bashir, Javaria Tabassum, Monica Jamla,

Sidra Charagh, Rutwik Barmukh, Rakeeb Ahmad Mir, Basharat Ahmad Bhat, Muhammad Arshad Javed, Dong-Xing Guan, Reyazul Rouf Mir, Kadambot H. M. Siddique, Rajeev K. Varshney. 2024. *Plant Cell Reports* **43:80** <https://doi.org/10.1007/s00299-024-03153-7> **IF:6.8**.

14. Temperature-smart plants: A new horizon with omics-driven plant breeding. Ali Raza, Shanza Bashir, Tushar Khare, Benjamin Karikari, Rhys G. R. Copeland, Monica Jamla, Saghir Abbas, Sidra Charagh, Spurthi N. Nayak, Ivica Djalovic, Rosa M. Rivero, Kadambot H. M. Siddique, Rajeev K. Varshney. 2024. *Physiologia Plantarum* **176: e14188**. <https://doi.org/10.1111/ppl.14188> **IF: 6.4**.
15. Microbial nanotechnology for producing stress smart crops. Alisha Shaikh, Monica Jamla, Shrushti Joshi, Suraj Patil, Uttara Oak, Vinay Kumar. 2024. *Plant Nano Biology* **7: 100063**. <https://doi.org/10.1016/j.plana.2024.100063>

### **BOOK CHAPTERS/PROCEEDINGS**

16. **Monica Jamla**, “Studying synergistic effects of dual nanocarriers in PGPR assisted biodegradation of the polycyclic aromatic hydrocarbons” at **International Conference on Nanoscience and Nanotechnology**, November 17-18, 2022 in Dubai, UAE. **Accepted Abstract**.
17. Ali Raza; Shanza Bashir; Hajar Salehi; **Monica Jamla**; Sidra Charagh; Abdolkarim Chehregani Rad; Mohammad Anwar Hossain. **2023**. Advanced techniques in omics research in relation to heavy metals toxicity and tolerance in plants. Heavy Metal Toxicity and Tolerance in Plants: A Biological, Omics, and Genetic Engineering Approach, 35-57. <http://dx.doi.org/10.1002/9781119906506.ch2>

### **JOURNAL REVIEWIER**

1. PLOS ONE
2. Journal of Plant Growth and Regulation
3. Frontiers in Plant Science
4. Science of the Total Environment
5. Journal of Hazardous Material
6. Plant Stress
7. Molecular Biology Reports
8. BMC Plant Biology
9. Process Safety and Environmental Protection

### **CONFERENCES/ WORKSHOPS/CERTIFICATE COURSE/WEBINAR/NFDP**

1. Poster presentation: Identification of molecular markers to screen for heat tolerant wheat (*Triticum* sp.) genotypes, at 1st International Agro biodiversity Congress, NBPGR, New Delhi, November 2016.
2. Active participation in NAIP sponsored training programme on Conservation of Plant genetic resources at NBPGR, New Delhi, and March 2012.

3. Active participation in Wheat Phenotyping workshop at NBPGR, New Delhi, March 2012.
4. Active participation in DBT sponsored National Level Workshop on Biological Databases and Data Mining, at Banasthali University, Rajasthan, and December 2010.
5. Active participation in UGC sponsored National Conference on Recent trends in environmental toxicology and biotechnological approach to conserve environment, Jaipur, and January 2009.
6. Poster presentation: Molecular characterization of aluminum resistance in crops and wild plants at National Symposium: Current challenges in plant sciences: Gene to ecosystem at B.H.U., Uttar Pradesh, and March 2009.
7. Active participation in National Conference-cum-Seminar on Emerging Trends in Biotechnology at IMS, Ghaziabad, Uttar Pradesh, and January 2008.
8. Active participation in Workshop on Immuno-Technology, Ghaziabad, Uttar Pradesh, and December 2007.
9. Certificate course on "Basics of Nano-science" from SPPU, Pune, Maharashtra, 10-13 February, 2021.
10. Certification series on "JCR- Journal Citation Reports", organized by Clarivate Analytics, 15-17 June, 2021.
11. Course on "Plant Breeding Today New Techniques, New Skills", organized by Pune Knowledge Cluster (PKC), 14-25 June 2021.
12. International Webinar on "Innovations in High-throughput Genotyping & Seed Health", organized by Global Age, 24 June 2021.
13. Online workshop on "High-Performance Computation in the Agricultural Domain", organized by IIT Indore, ICAR-IISR Indore, and Mahindra University Hyderabad in collaboration with C-DAC Pune, IISC Bangalore, IIT Kharagpur under the aegis of National Supercomputing Mission, 14-16 July 2021. Webinar on "DELNET: Resources and Services", organized by Modern College of Arts, Science and Commerce, Ganeshkhind, Pune University, 22 September 2021.
14. International Webinar on "Plant Developmental Plasticity: A Molecular Perspective", jointly organized by ANU, Guntur and IISER, Tirupati, 27-29 September 2021.
15. Workshop on "IBE", organized by In Pods Ed-tech, 29 September 2021.
16. Workshop on "Intellectual Property Rights-Synnollet Innovations", jointly organized by PE Society Modern College, Ganeshkhind, 1-3 December 2021.
17. NFDP course on "Innovations & Intellectual Property Rights", jointly organized by ANU-A.P. and CSIR-Odisha, 6-12 December 2021.
18. Training Programme of NAHEP-CAAST on "Off-Season Protected Cultivation of Vegetable Crops", organized by ICAR-IARI, New Delhi, 20 January- 03 February 2022.
19. International Webinar on "Sustainable Agriculture and Health in a Challenging Environment", organized by Banasthali University, Rajasthan, 17 February 2022.
20. Workshop on "National Education Policy: New Engagements" organized by Modern College of Arts, Science and Commerce, Ganeshkhind, Pune University, 04-09 July 2022.

21. Organized the Workshop on "Techniques in Molecular Biology" under DBT-BUILDER scheme at Modern College of Arts, Science and Commerce, Ganeshkhind, Pune University, 15- 19 Nov 2022 and 13-16 Sep 2023.
22. Workshop on "Modern Analytical Techniques" under DBT-BUILDER organized by Modern College of Arts, Science and Commerce, Ganeshkhind, Pune University, 10-12 Jan 2023.
23. Training on "Virus Indexing of Banana Virus" organized by Vasantdada Sugar Research Institute, Pune, Maharashtra on 1 Aug 2023.
24. Workshop on "Taxonomy and Phylogeny of Lichens" under SERB CRG SSR, Govt. of India organized by MACS Agharkar Research Institute, Pune on 4 Oct 2023.
25. Organized the Summer School on "Advanced Chromatography" under DBT-BUILDER organized by Modern College of Arts, Science and Commerce, Ganeshkhind, Pune University, 09- 10 July 2024.

### **SPEAKER/TALK DELIVERED**

- **National Speaker** on Y20 Consultation "Climate Change and Disaster Risk Reduction: Making Sustainability a Way of Life", Amarkantak, IGNTU, Madhya Pradesh, 31 May- 2 June 2023.
- **International Speaker** on Sustainability in the field "Integrating biological resistance mechanisms towards balancing agriculture and the conservation of ecosystem services", UNIVSAF, Brazil, 5 June 2024.

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### **TEACHING EXPERIENCE**

- Lecturer, Department of Biotechnology  
SR Group of Institutions, Lucknow, Uttar Pradesh, 2015-2016
- Assistant Professor, Department of Biotechnology  
Modern College of Art, Science and Commerce, Ganeshkhind, Pune,  
Maharashtra, 2021-till date

### **TEACHING/EXAMINATION DUTIES**

- Mentor of MSc Part1 and Part2 Biotechnology
- Mentor of TYBSc and MSc Research Projects
- Paper Settings and Paper Checking for MSc Biotechnology
- Paper Settings and Paper Checking for BSc Biotechnology
- Skeleton for MSc Practical Examination of Modern College, Ganeshkhind
- Internal Examiner for SYBSc Practical Examination of SPPU
- Internal Examiner for MSc Biotechnology Practical Examination of Modern College, Ganeshkhind
- Paper Reviewer for UG/PG Biotechnology, Nowrosjee Wadia College, Pune.
- External Examiner for TYBSc Practical Examination of SPPU

**PERSONAL DETAILS**

D.O.B.: 07/01/1986

Gender: Female

Languages Known: Hindi & English

Nationality: Indian

**Declaration:** I hereby declare that the information given above is true as per my knowledge

**Place:** Pune

**Monica Jamla**

**Date:** 26 July 2024