

CURRICULUM VITAE

Name: Dr. Jaya Arora

Current Position: **Assistant Professor**
Department of Botany
Placement Officer, UCOS
Mohan Lal Sukhadia University
Udaipur – 313001 (Rajasthan)
India

Email: jaya890@gmail.com, jayaarora@mlsu.ac.in

Phone: +91-9887133437 (M), +91- 294-2413955 (Extn. 2217) (O)

Academic Qualification

M.Sc. (Botany), CSIR-NET-JRF-SRF, Ph.D.

Training courses

Sr. No.	Course	Organized by	Duration	Date
1.	Training Program on Research Methodology	Dean, P.G. Studies, MLSU, Udaipur	7 days	21.4.2012 to 27.4.2012
2.	Orientation Course	UGC Academic staff college, Rajasthan University, Jaipur	27 days	27.10.2014 to 22.11.2014
3.	Faculty development Programme for Research methodology and Data analysis using advanced statistical tools.	Pacific Academy of Higher Education and Research University	7days	21 st -27 th December 2014
4.	Refresher Course in Environmental Studies (ID)	UGC Academic staff college, MDS University, Ajmer in Collaboration with MLSU,	21 days	29.9.2015 to 19.10.2015

		Udaipur		
5.	Faculty Development Programme for Promotion of Entrepreneurship Amongst Students from	Entrepreneurship Development Institute of India, Gandhi Nagar Under DST-NIMAT project 2015-2016 and organized by the Entrepreneurship Development Cell, Mohanlal Sukhadia University, Udaipur.	15days	4 th January 2016 to 16 th January 2016
6.	Workshop on e-resources	University central library	10 days	20-02-2017-28-02-2017
7.	Advanced Faculty Training on Next Generation Sequencing and its Applications in Crop Science	ICAR-National Research Centre on Plant Biotechnology, IARI, Pusa Campus, New Delhi.	21 days	(1-21 Dec, 2017),
8.	Computational techniques for education and research	Mathematics and Statistic Department, MLSU, Udaipur	5 days	19 to 23 November 2018
9.	IBRO-ARPC-MLSU ASSOCIATE SCHOOL OF NEUROSCIENCE	IBRO-ARPC-MLSU associate school of neuroscience, held at department of pharmaceutical science, MLSU, Udaipur, Rajasthan, India	7 days	5-11 August 2019

Research Projects:

S.No.	Role	Title	Funding Agency	Time Duration	Amount
1.	JRF & SRF	Studies on cell and transformed root culture of <i>Cayratia trifolia</i> and <i>Withania somnifera</i>	CSIR-NET-JRF & SRF	(2008-2011) 5 Years	8.50 lacs
2.	Principal Investigator	Effect of growth retardants on isoflavonoids	UGC-Start up grant for Newly	2013-2015 2 Years	6 lacs

		accumulation during seedlings growth of three pulses as potent functional food. UGC, New Delhi via letter no. F.20-25/2013 (BSR), Dated: 9 December 2013	Recruited Faculty		
3.	Mentor	“Modulation of Growth, secondary metabolites production and genetic transformation of <i>Pueraria tuberosa</i> ” vide DST letter no. SR/Wos-A/LS-231/2016(G)	Women Scientists Scheme-A project funded by Ministry of Science and Technology, DST	2016-2019	18.70 Lacs

Proficiency Forte:

Functional

Hairy root culture Bioreactor technology Optimization of metabolites *in vitro*
 Lyophilization Cloning and cell culture HPLC Handling and Trouble shooting
 Spectroscopy Microscopy Column Chromatography, HPTLC
 Electrophoresis Refrigerated Centrifuges Gel Documentation System,
 PCR based genetic Diversity studies

Managerial

Communication skills Training / Development Bills and Accounts
 Team Management Usage of Statistical analysis software like PRISM,SPSS

Attainments

1. Maharana Fateh Singh Award,2000
2. Gargi Award and Scholarship for matriculation by Gov. of Rajasthan, India, 2000
3. NET –JRF, SRF, Council of Scientific & Industrial Research (CSIR), India, 2008-2011

List of Publications:

Highlights

- **Total Impact Factor: 23.55, Citations 199**
- **h- index 9**
- **i10-index 10**
 - Total Publications: Research Paper: **9**
 - Review articles: **6**
 - Chapters in edited books: **15**
 - 1 e-book, 2 edited books, 1 text book

-
1. **Arora J**, Roat C, Goyal S, Ramawat KG (2009) High stilbenes accumulation in root cultures of *Cayratia trifolia* (L.) Domin grown in shake flasks. Acta Physiol Plant 31:1307-1312 **Impact Factor- 2.4**
 2. **Arora J**, Goyal S, Ramawat KG (2010) Biodiversity, Biology and Conservation of Medicinal Plants of Thar Desert. In: Desert Plants, Ramawat KG (ed.), Springer-Verlag Berlin Heidelberg pp3-36. DOI 10.1007/978-3-642-02550-1_1.
 3. **Arora J**, Goyal S, Ramawat KG (2010) Enhanced stilbene production in cell cultures of *Cayratia trifolia* through co-treatment with abiotic and biotic elicitors and sucrose. In Vitro Cell Dev Biol – Plant 46:430-436 **Impact Factor- 2.3**
 4. **Arora J**, Goyal S, Ramawat KG (2012) Co-evolution of Pathogens, Mechanism involved in Pathogenesis and Biocontrol of Plant Diseases. In: Plant Defence: Biological control, Merillon JM, Ramawat KG (eds.), Springer-Verlag Dordrecht, Heidelberg 3-22. DOI 10.1007/978-94-007-1933-0_1.
 5. Ramawat KG, Goyal S, **Arora J** (2012) Secondary plant products: therapeutic potential and production through plant tissue culture. In: Plant Tissue Culture: Totipotency To Transgenic, Sharma HP, Dogra JVV, Misra AN (eds.), Agrobios India 489-508.
 6. **Arora J**, Ramawat KG. Bioenergy resources of the Thar Desert. Biofuels. 4(6), 617–633 (2013). **IF: 2.96**
 7. **Arora J**, Ramawat KG (2013) Biology and Biotechnology of some Gum producing Indian trees. In: Tree Biotechnology, Ramawat KG, Merillon JM (eds), CRC Press/ Taylor & Francis, NY, Boca Raton, USA, in press pp 125-150, ISBN 9781466597143
 8. Goyal S, **Arora J**, Ramawat KG (2014) Biotechnological approaches to medicinal plants of Aravalli Hills: Conservation and Scientific validation of Biological activities. In: Biotechnology and Biodiversity, Ahuja MR and Ramawat KG (Eds.) Springerlink, vol 4, pp 203-245. ISBN 978-3-319-09380-2 (Print)

9. Kanthaliya B, Joshi A, **Arora J** (2016) Genistein content of chickpea (*Cicer aritinum* L.) sprouts in different light conditions. Z Sheikh, A Intodia, V Jain (Ed.), Proceedings of national conference on “Advances in Chemical Environment and Biological Sciences: Challenges in 21st century (pp. 36-41), Udaipur, India: Government Meera Girls college, MLSU.
10. **Arora J** (2016) Enhancement of Resveratrol content in germinated seedlings of *Arachis hypogaea*: Possible utilization in functional foods. Int. J. of Fronteirs in Sci. and Tech. 4(2):1-10
11. Sharma V, Joshi A, **Arora J** (2017) Bioethanol production from Halophytes of Thar desert : A “Green Gold” In: Global environmental Crises ,Peiman Zadni, Saikat Kumar Basu, Shahram Khademi (eds), Haghshenass publication, Iran First edition , pp 219-235
12. **Arora J**, Ramawat KG (2017) An Introduction to Endophytes. In: Endophytes: Biology and Biotechnology. Maheswari DK ed., Springer International Publishing AG ,15, DOI 10.1007/978-3-319-66541-2_1,PP 1-23
13. **Arora** and K. G. Ramawat, Bioactive Molecules, Nutraceuticals, and Functional Foods in Indian Vegetarian Diet and During Postpartum Healthcare (2018). In: Bioactive Molecules in Food, Reference Series in Phytochemistry, J.-M. Mérillon, K. G. Ramawat (Eds.), Springer International Publishing AG 2018, 1-24
14. Abhishek Joshi, Bhanupriya Kanthaliya, **Jaya Arora *** (2018) Halophytes of Thar Desert: Potential source of nutrition and feedstuff. International Journal of Bioassays 8.1 (2018) pp. 5674-5683
15. Joshi A, [Kanthaliya B](#), [Arora*](#) J (2019) Evaluation of Growth and Antioxidant Activity in *Suaeda monoica* and *Suaeda nudiflora* Callus Cultures under Sequential Exposure to Saline Conditions, Current Biotechnology 8 :48-52
DOI : [10.2174/2211550108666190507122304](https://doi.org/10.2174/2211550108666190507122304)
16. Kanthaliya, B., Joshi, A., & Arora, J. (2019). Evaluation of isoflavonoid content in context to tuber size and seed biology study of *Pueraria tuberosa* (Roxb. ex. Willd.) DC: a vulnerable medicinal plant. *Vegetos* 32 (3), 247-253
17. Arora, J., Kanthaliya, B., & Joshi, A. (2019) Evaluation of Genistein Content In Chickpea (*Cicer Arietinum* L.) And Mung Bean *Vigna Radiata* L.) Sprouts Germinated Under Different Conditions. *Current Perspectives on Medicinal and Aromatic Plants (CUPMAP)*, 2(1), 1-10. ISSN 2619-9645 | e-ISSN 2667-5722
18. Abhishek Joshi, Bhanupriya Kanthaliya and **Jaya Arora** (2019) Current Scenario of Potential Renewable Energy Sources for Sustainable Development in India. The Journal of Plant Science Research, 35(2): 205-214

19. **Arora J***, Joshi A, Kanthaliya B, Khan F (2020) Effect of Biotic Elicitors on Polyphenols Production in *Cayratia trifolia* Cell Suspension Cultures analyzed by HPLC. *BioTechnologia*. 101 (1) pp. 35–43 (2020) eISSN: 2353-9461 ISSN: 0860-7796 published **online 2020/03/27**
20. Joshi A., Kanthaliya B., Arora J. (2020) Halophytic Plant Existence in Indian Salt Flats: Biodiversity, Biology, and Uses. In: Grigore MN. (eds) *Handbook of Halophytes*. Springer, Cham. https://doi.org/10.1007/978-3-030-17854-3_108-1 ISBN 978-3-030-17854-3
21. Meena, S., Kanthaliya, B., Joshi, A., Khan, F., **Arora, J** (2020) *Biologia futura: medicinal plants-derived bioactive peptides in functional perspective—a review. **Biologia Futura***. 71:195-208 <https://doi.org/10.1007/s42977-020-00042-4> **IF 0.9**
22. Joshi, A., Kanthaliya, B., Rajput, V., Minkina T., **Arora J** (2020) Assessment of phytoremediation capacity of three halophytes: *Suaeda monoica*, *Tamarix indica* and *Cressa critica*. *Biologia Futura* . 71, pages301–312 <https://doi.org/10.1007/s42977-020-00038-0> **Published: 19 August 2020 IF 0.9**
23. Joshi A., Kanthaliya B., **Arora J.** (2020) Halophytes: The Nonconventional Crops as Source of Biofuel Production. In: Grigore MN. (eds) *Handbook of Halophytes*. Springer, Cham. https://doi.org/10.1007/978-3-030-17854-3_126-1 ISBN 978-3-030-17854-3
24. Joshi A, Kanthaliya B, Meena S, Khan F, **Arora J** (2021) Process consolidation approaches for cellulosic ethanol production. In: Ramesh C. Ray, editors, *Sustainable Biofuels*. Chennai: Academic Press, pp. 43-72. ISBN: 978-0-12-820297-5 Copyright © 2021 Elsevier INC. Academic Press
25. Bhanupriya Kanthaliya, Abhishek Joshi, Supriya Meena, and **Jaya Arora** (2021) Biology and Biotechnological Strategies for Conservation Management of *Pueraria tuberosa*, a Traditionally Established Medicinal Liana. In: H. M. Ekiert et al. (eds.), *Medicinal Plants, Sustainable Development and Biodiversity*, Springer Nature Switzerland AG, 28 (1): 693-719 https://doi.org/10.1007/978-3-030-74779-4_21 ISBN: 978-3-030-74778-7
26. K. G. Ramawat and **Jaya Arora** (2021) Medicinal Plants Domestication, Cultivation, Improvement, and Alternative Technologies for the Production of High Value Therapeutics: An Overview. In : H. M. Ekiert et al. (eds.), *Medicinal Plants, Sustainable Development and Biodiversity*, Springer Nature Switzerland AG 28 (1): 1-29 https://doi.org/10.1007/978-3-030-74779-4_1 ISBN: 978-3-030-74778-7
27. Abhishek Joshi, Bhanupriya Kanthaliya, and Supriya Meena, Vishnu D Rajput, and Tatiana Minkina, **Jaya Arora** (2021) Proteomic and Genomic Approaches to Study Plant Physiological Responses under Heavy Metal Stress. In: Tariq Aftab and Khalid Aftab Hakeem (Eds.) *Heavy Metal Toxicity in plants: Physiological and*

Molecular Adaptations CRC press, Taylor and Francis, Boca Raton, New York, pp 231-248, ISBN: 9780367725075 (hbk), ISBN: 9780367725150 (pbk), ISBN: 9781003155089 (ebk)

28. Joshi, A., Verma, K.K., D Rajput, V., Minkina, T. and **Arora, J.**, 2022. Recent advances in metabolic engineering of microorganisms for advancing lignocellulose-derived biofuels. **Bioengineered, Taylor and Francis**,13(4):8135-8163(**IF=3.269**)
29. Verma, K.K., Song, X.P., Joshi, A., Tian, D.D., Rajput, V.D., Singh, M., **Arora, J.**, Minkina, T. and Li, Y.R., 2022. Recent Trends in Nano-Fertilizers for Sustainable Agriculture under Climate Change for Global Food Security. *Nanomaterials*, 12(1):173(**IF=5.076**)
30. Verma K.K., Song X.P., Joshi A, Rajput V.D., Singh M., Sharma A., Singh R.K., Li D.M., **Arora J.**, Minkina T., Li Y.R., 2022. Nanofertilizers possibilities for healthy soil, water and food in future: an overview. **Frontiers in Plant Science**, section Plant Physiology

Books

1. **Arora J**, Joshi A, Sharma V. Suaeda: A promising sustainable Halophyte of future. **2018** Lambert Academic Publishing. Germany. ISBN No. 978-613-9-82336-9
2. K. G. Ramawat and **Jaya Arora (2021)** Molecular Biology and Plant Biotechnology, A comprehensive text book for UG Students, 3rd Revised edition, Himanshu Publications, New Delhi India, PP 425 ISBN 978-81-7906-910-3
3. Ekiert, Halina Maria, Ramawat, K.G., **Arora, Jaya** (Eds.) (**2021**) Medicinal Plants: Domestication, Biotechnology and Regional Importance. Springer International Publishing. Pages:907; eBook ISBN :978-3-030-74779-4, Hardcover ISBN : 978-3-030-74778-7
4. Ekiert, Halina Maria, Ramawat, K.G., **Arora, Jaya** (Eds.) (**2022**) Reference Series in Phytochemistry. Plant Antioxidants and Health

Conferences/ webinars (organizing secretary)

1. **National webinar on genome editing: scope and opportunities in plant sciences** organized by placement cell, university college of science, mohanlal sukhadia university, udaipur (raj) dated **5th april 2021**

2. **Let's grill your knowledge: e-quiz on "about my rajasthan " Rajasthan diwas 2021**, organized by placement cell, university college of science, mohanlal sukhadia university, udaipur (raj) india date: **30th march 2021**, tuesday
3. **One day webinar on natural products as sources of new drugs** organized by department of botany, university college of science, mohanlal sukhadia university, udaipur, 313001 india **date: 29th may 2021**
4. **Anandam: state of joy, fruitfulness and socially responsible "anandam divas"** one day webinar organized by department of botany, mohanlal sukhadia university, udaipur in collaboration with govind guru tribal university, banswara, rajasthan and brahma kumari world spiritual university, mount abu, rajasthan dated **20th december 2020**
5. **An online wellness program: boosting immunity through management of food, breath and life style** organized by department of botany, mohanlal sukhadia university, udaipur dated **16th may 2021**

Computer Skills

ChemDraw, Desktop Publishing, Internet, Microsoft Office, Window Systems, Doeacc "O" level (2003, 6 months course), Statistical softwares.

Ph.D. Scholars – 5 (Registered)
Thesis Submission: 2

Proposed research area:

- Phytochemical investigation of medicinal plants in search of potent bioactive lead, characterization of molecules and possible pharmacological investigation.
- Optimization of production and development of scale-up technology for Plant Secondary Metabolites.
- Chemical diversity analysis and its correlation with genetic diversity and preparation of GIS maps.
- Study of seed biology and conservation techniques including micropropagation of medicinal plants.
- Bioactive peptides isolation, characterization and assessment of antihypertensive activity