

Curriculum Vitae

Asha Rani
H. No. 619, Huda Colony
Hansi (125033)(Haryana)
Sainias007@gmail.com
Contact No. 09812913713

Objective:

To bring forth the best of my ability towards the attainment of a successful and satisfying career that would also serve as a progressive input to the organization along with the application of my technical skills.

Area of Specialization

Major Subject: Molecular Biology and Biotechnology
Minor Subject: Genetics and Plant Breeding

Strengths:

- Sincere and cooperative
- Hardworking and Punctual
- Team man ship spirit
- Very Disciplined and Responsible
- Positive Thinking

Research Interest

Plant tissue culture techniques:

- Micropropagation in Aloe-vera, Citrus, Sugarcane, *Azadirachita indica*
- Agrobacterium mediated Transformation
- Interspecific hybridization between *Brassica juncea* and *Brassica alba* through embryo rescue
- Anther and Microspore culture in Brassica

Molecular marker techniques

- DNA isolation
- Polymerase chain reaction technique
- Polyacrylamide Gel Electrophoresis (PAGE)
- Agarose Gel Electrophoresis (AGE)

Education

Level: Ph.D., Molecular Biology and Biotechnology (2014)

Grade: Ist Class (76.4%)

Name of Institute: CCS HAU, Hisar, Haryana

Thesis Title: Marker assisted selection for drought tolerance in pearl millet (*Pennisetum glaucum* (L.) R. Br.)

Level: M.Sc., Biotechnology and Molecular Biology (2010)

Grade: Ist Class (75.6%)

Name of Institute: CCS HAU, Hisar, Haryana

Thesis Title: Development of interspecific hybrids between Indian mustard (*Brassica juncea* Coss. & Czern) and White mustard (*Brassica alba* Moench) through embryo rescue

Level: B.Sc., Biotechnology (2008)

Grade: Ist Class (70.6%)

Name of Institute: Daya Nand College (KU, Kurukshetra)

Experience:

- Teaching experience (2014-2015) as extension lecturer in the subject of Biotechnology at Government College, Hisar.
- Research experience (2015-2016) as Senior Research Fellow in department of Molecular Biology, Biotechnology and Bioinformatics at CCS HAU, Hisar.
- Three-month teaching experience (Jan, 2017 to March, 2017) as Assistant Professor in subject of Biotechnology at Daya Nand College, Hisar.
- Teaching experience (2020-2022) as Assistant Professor in subject of Biotechnology at Daya Nand College, Hisar.

AWARDS & FELLOWSHIP:

- Qualified ASRB-NET in discipline of Agricultural Biotechnology
- Qualified JOINT CSIR-UGC test for eligibility for lectureship NET in Life Science (AIR 25th)
- GATE Qualified
- Awarded CCSHAU merit scholarship during Ph.D.
- Got 1st prize in poster presentation in National Brassica Conference, conducted at CCSHAU, Hisar.

Co-Curricular Activities:

- Participated in blood donation camp Haemcon as training/CME cum annual conference October 28-29, 2010 of Indian Society of Blood Transfusion & Immunology (Haryana State Centre) as Delegate Faculty.
- Got certificate for special skiing course from Atal Bihari Vajpayee Institute of Mountaineering and Allied Sports Manali-HP (2011).
- Participated in 17th National Adventure festival – 2011 from 2nd February to 10th February, (2011).
- Attended INDO-US workshop on Plant Genomics and Crop Improvement reference to biotic and abiotic stress at CCSHAU, Hisar, Haryana.
- Attended 1st National Brassica Conference on production barriers & technological options in oilseed brassica at CCS HAU, Hisar, Haryana.
- Attended National Seminar on Reorientation of Agricultural research to ensure national food security at CCS HAU, Hisar and presented a poster.
- Attended National Symposium on Advances in Biotechnology for Crop Improvement at Eternal University, Baru Sahib (H.P.) and presented a poster.
- Participated in the Seminar sponsored by Directorate of Arecanut and Spices Development, Calicut on New Perspectives in Aromatic and Medicinal Plants at CCS HAU, Hisar.
- Attended the Hands-on training on 'Bioinformatics tools for genomic research problems solving' organized by Bioinformatics Centre (BIF), Department of Bio and Nano Technology, Guru Jambheshwar University of Science and Technology, Hisar and sponsored by Department of Biotechnology, Ministry of Science and Technology, GOI.

- Attended National Conference of Biodiversity and Sustainable development at Chhaju Ram Memorial Jat College, Hisar
- Attended National Symposium on Transgenic Crops in India: Progress and Challenges at CCSHAU, Hisar, Haryana.
- Attended workshop on 2D electrophoresis, western blotting and quantitative PCR, conducted at CCSHAU, Hisar, Haryana.
- Participated in the National online Workshop on “Human Values and Professional Ethics” organized by Internal Quality Assurance Cell (IQAC) at DayaNand College, Hisar on March 16-18, 2021.
- Participated in a three-day international webinar on “Translating Physiological Tools to Augment Crop Breeding” organized by ICAR–Indian Institute of Wheat and Barley Research, Karnal, Haryana, India during 17-19 March, 2021.
- Participated in the National Webinar on “Biotechnology: Applications and Perspectives” organized by Department of Biotechnology on 1 st to 2nd March, 2021.

Personal Profile:

Date of Birth : August 15, 1987
 Gender : Female
 Nationality : Indian

Publications

1. Neelam R. Yadav, Jyoti Taunk, **Asha Rani**, Bharti Aneja and Ram C. Yadav. 2014. Transcription factors and their role in abiotic stress tolerance in crop plants. Wiley-VCH Verlag GmbH & Co. KgaA: Climate Change and Plant Abiotic Stress Tolerance: DOI: 10.1002/9783527675265.ch23.
2. Teena Rani, Ram C. Yadav, Neelam R. Yadav, **Asha Rani**, Dhiraj Singh. 2013. Genetic transformation in oilseed brassicas - A review. *Indian Journal of Agricultural Sciences* **83**(4): 367-373.
3. Ripu D. Kaur, Ram C. Yadav, Neelam R. Yadav, **Asha Rani**, Prince Saini and D. Singh. 2013. *In vitro* regeneration from anthers of Indian mustard. *Cruciferae Newsletter* **32**: 8-10.
4. Ram C Yadav, **Asha Rani**, Sombir, Teena Rani, Zeenat Wadhwa and Neelam R. Yadav. 2014. GM crops and their role in pest management. Novel Approaches in Pest and Pesticide Management in Agro-Ecosystem (Ed. R. K. Saini, G. S. Yadav and Beena Kumari). Centre of Advanced Faculty Training, Department of Entomology, CCS HAU, Hisar. pp 266-277.
5. Neelam R. Yadav, Sumit Jangra, Disha Kamboj, **Asha Rani**, Monika, Rekha Patel and Ram C. Yadav. 2016. Effect of GM crops on biotic environments. Ecologically Based Pest Management for Quality Food Production (Ed. Ram Singh, Pala Ram and Sunita Yadav). Centre of Advanced Faculty Training, Department of Entomology, CCS HAU, Hisar. pp 270-275.
6. Ram Avtar, Babita Rani, Minakshi Jattan, Manmohan, Nisha Kumari and **Asha Rani**. 2016. Genetic diversity analysis among elite gene pool of Indian mustard using ssr markers and phenotypic variations. *The BioScan* 11(4): 3035-3041.

7. Raj Rani, Sumit Jangra, Zeenat Wadhwa and **Asha Rani**. 2017. Various metabolic changes during differentiation in callus culture of *Chlorophytum borivilianum*. *International Journal of Agriculture, Environment and Biotechnology* 2(2): 251-257.
8. **Asha Rani**, Monika, Jyoti Taunk, Neelam R. Yadav and Ram C. Yadav. 2018. Biotechnologies approaches to improve abiotic stress tolerance (Ed. Bhav Kumar Sinha and Reena). New India Publishing Agency: Abiotic and biotic stress management in plants. ISBN: 978-93-86546-57-9.
9. Jyoti Taunk, **Asha Rani**, Neelam R. Yadav, DevVart Yadav, Ram C. Yadav, Kushal Raj, Ramesh Kumar and H.P. Yadav. 2018. Molecular breeding of ameliorating pearl millet hybrid for downy mildew resistance. *Journal of genetics*. [HTTP://doi.off/10:1007/s12041-018](http://doi.off/10:1007/s12041-018).
10. Ram C Yadav, Dhiraj Singh, **Asha Rani**, Ajit Singh Rathi, Rajesh Arya, Rajinder Singh, Neelam R Yadav, Amit Singh and Ramavtar. 2018. Development of Alternaria blight resistant lines through interspecific hybridization between Indian mustard (*Brassica juncea* L.) and white mustard (*Brassica alba*) through embryo rescue. *Journal of Oilseed Brassica*. 9 (2): 104-113.
11. Sumit Jangra, **Asha Rani**, Ram C Yadav, Neelam R Yadav and Devvart Yadav. 2019. Introgression of terminal drought stress tolerance in advance lines of popular pearl millet hybrid through molecular breeding. *Plant Physiology reports*. 24: 359-369.
12. **Asha Rani**, Jyoti Taunk, Sumit Jangra, Ram C Yadav, Neelam R Yadav, Devvart Yadav and HP Yadav. 2021. Development of advance pearl millet lines tolerant to terminal drought stress using marker assisted selection. *Vegetos*. <https://doi.org/10.1007/s42535-021-00284-0>.
13. Sumit Jangra, **Asha Rani**, Devvart, Ram C Yadav and Neelam R Yadav. 2021. Promising versions of a commercial pearl millet hybrid for terminal drought tolerance identified through marker-assisted selection. *Journal of genetics*. 100:88. <https://doi.org/10.1007/s12041-021-01337>.
14. Poonam, **Asha Rani**, Ritu Saharan, Twinkle Chaudhary, Kanchan Makkar, RajRani and Vivek Srivastava. 2022. Bacterial flora of vegetables collected from Supermarket and Vegetable Market. *International Journal of Tropical Disease and Health*. 43(13): 11-19.\
15. Mamta Sharma, Asha Rani, Ritu Saharan, RajRani, Kanchan Makker and Vivek Srivastava. 2023. Nanoparticles- Their advantages and applications: A review. *International Journal of Recent Scientific Research*. 14(4): 2980-2984.

Manual Articles Publications

16. **Asha Rani**, Zeenat Wadhwa, Neelam R. Yadav and R.C. Yadav. 2014. Agrobacterium mediated transformation in *Brassica juncea*. MBBB Training Manual: Genomic, molecular and tissue culture approaches for genetic improvement and value addition in

- plants and microbes and Biotechnological and molecular tools for improving crop productivity and nutritional quality. CCS HAU, Hisar. pp 73.
17. Zeenat Wadhwa, **Asha Rani**, Monika, Neelam R. Yadav and R.C. Yadav. 2014. Tansgenic Plants. MBBB Training Manual: Genomic, molecular and tissue culture approaches for genetic improvement and value addition in plants and microbes and Biotechnological and molecular tools for improving crop productivity and nutritional quality. CCS HAU, Hisar. pp 6.
 18. Sumit Jangra, Virender Kumar, **Asha Rani**, Neelam R. Yadav and R.C. Yadav. 2016. GM Crops: The future of Agriculture. MBBB three weeks Training Manual: Integrating molecular and recombinant DNA technologies in crop breeding programs for food and nutritional security. CCS HAU, Hisar. pp 93-100.
 19. Sumit Jangra, Virender Kumar, **Asha Rani**, Neelam R. Yadav and R.C. Yadav. 2016. GM Crops: The future of Agriculture. MBBB six weeks Training Manual: Plant tissue culture and molecular approaches for supplementing plant breeding efforts. CCS HAU, Hisar. pp 93-100.

Abstracts

1. **Asha Rani**, Ram C. Yadav, Neelam R. Yadav, DevVart, Anil Kumar, Ramesh Kumar and H. P. Yadav. 2014. Use of molecular markers in pearl millet (*Pennisetum glaucum* (L.) R. Br.) to improve terminal drought stress. Reorientation of Agricultural research to ensure national food security, CCS HAU, Hisar, India. pp 20.
2. **Asha Rani**, Jyoti Taunk, Ram C. Yadav, Neelam R. Yadav, DevVrat, Ramesh Kumar and H. P. Yadav. 2014. Improvement of pearl millet [*Pennisetum glaucum* (L.) R. Br.] hybrid for drought tolerance using marker aided selection. In Science of omics for agricultural productivity: future prospectives, Pantnagar, India. pp 135.
3. **Asha Rani**, Ram C. Yadav, Neelam R. Yadav, Rajesh Arya, Ajit Rathi, Amit Singh and D. Singh. 2012. Development of interspecific hybrids between Indian mustard (*Brassica juncea*) and white mustard (*Brassica alba*) through embryo rescue. 1st National Brassica Conference on production barriers & technological options in oilseed brassica, CCS HAU, Hisar, India. pp 77.
4. Ram C Yadav, Neelam R Yadav, Teena Rani, **Asha Rani** and Dhiraj Singh. 2012. Genetic transformation in oilseed Brassicas. 1st National Brassica Conference on production barriers & technological options in oilseed brassica, CCS HAU, Hisar, India. pp 4.
5. Jyoti Taunk, **Asha Rani**, N.R. Yadav, R.C. Yadav, Ramesh Kumar, DevVrat and H. P. Yadav. 2014. Marker assisted selection for improving downy mildew resistance in HHB

- 197, a commercialized hybrid of pearl millet. Science of omics for agricultural productivity: future prospectives, Pantnagar, India. pp 137.
6. R.C. Yadav, A.S. Rathi, **A. Rani**, N.R. Yadav, R. Avtar and D. Singh. 2015. Development of *Alternaria* blight resistant Indian mustard (*Brassica juncea* L. Czern & Coss.) lines derived from *Brassica juncea* x *Brassica alba* through conventional and embryo rescue techniques. 14th International Rapeseed Congress. Saskatoon, Saskatchewan, Canada. pp 76.
 7. N.R. Yadav, **A. Rani**, S. Jangra, V. Saroha, U. Vashisht, J. Narang, A. Chaudhary and R.C. Yadav. 2016. Plant regeneration in *Aloe vera*, *Chlorophytum borivilianum*, *Commiphora mukul* (Guggul), and *Stevia rebaudiana* for clonal micropropagation. Recent approaches to sustainable research and development of aromatic and medicinal plants, CCS HAU, Hisar. pp 117.
 8. Sumit Jangra, **Asha Rani**, Monika, Rekha Patel, Disha and R.C. Yadav. 2016. Enhancing C3 photosynthesis: A feasible intervention for crop improvement. Transgenic Crops in India: Progress and Challenges. CCS HAU, Hisar. pp 51.
 9. Rekha Patel, Monika, **Asha Rani**, Virender and R.C. Yadav. 2016. Transgenics in *Brassica juncea* for salinity tolerance. Transgenic Crops in India: Progress and Challenges. CCS HAU, Hisar. pp 46.
 10. Monika, Rekha, Sumit, **Asha Rani**, Virender and R.C. Yadav. 2016. Transgenic development for drought tolerance in Indian mustard (*Brassica juncea* L. Czern & Coss.). Transgenic Crops in India: Progress and Challenges. CCS HAU, Hisar. pp 29.
 11. Sumit Jangra, Asha Rani, R. C. Yadav, N. R. Yadav and Dev Vart. 2018. Improving HHB 226, a commercial pearl millet hybrid for drought tolerance using marker assisted selection. International conference on bio and nano technologies for sustainable agriculture, food, health, energy and industry. Guru Jambheshwar University of Science and Technology, Hisar. pp189.
 12. Asha Rani¹, Jyoti Taunk, Sumit Jangra, N. R. Yadav, R. C. Yadav, DevVart and H. P. Yadav. 2018. Pearl millet [*Pennisetum glaucum* (L.) R. Br.] hybrid improvement for drought tolerance using marker aided selection. International conference on bio and nano technologies for sustainable agriculture, food, health, energy and industry. Guru Jambheshwar University of Science and Technology, Hisar. pp 214.
 13. Sumit Jangra, Asha Rani, Rekha Patel, R. C. Yadav, N. R. Yadav and Dev Vart. 2017. Improving pearl millet hybrids for drought tolerance using microsatellite markers.

- International conference on emerging areas of environmental science and engineering. Guru Jambheshwar University of Science and Technology, Hisar. pp 290.
14. Sumit Jangra, Asha Rani, Neelan R. Yadav, Ram C. Yadav and Dev Vart. 2016. Using microsatellite markers for improving drought tolerance in pearl millet. India International Science Festival. CSIR-NPL. pp 324.
 15. Sumit Jangra, Asha Rani, R. C. Yadav, N. R. Yadav and Dev Vart. 2017. Molecular approaches for improving drought tolerance in pearl millet. National conference on food processing India. Guru Jambheshwar University of Science and Technology, Hisar. pp 90.
 16. Jangra S, Rani A, Yadav RC, Yadav NR and DevVart. 2017. Molecular breeding for drought tolerance in pearl millet [*Pennisetum glaucum* (L.) R. Br.]. InterDrought-V, Hyderabad. pp 098.

References

- a. Dr. Ram C. Yadav
Ex-Director (Technical)
Centre of Plant Biotechnology
CCS HAU, Hisar, Haryana
Mobile no. 9416336394
- b. Dr. Neelam R. Yadav
Principal Scientist
Dept. of Molecular Biology and Biotechnology
CCS HAU, Hisar, Haryana
Mobile no. 8053013070

Declaration:

I hereby declare that all the information given above is true to the best of my knowledge.

ASHA RANI

Place: Hisar