

**Centre for Biotechnology
M.D. UNIVERSITY, ROHTAK**



Darshna Chaudhary

Assistant Professor,
Centre for Biotechnology,
MD University, Rohtak-124001,
Haryana, INDIA
E-mail : darshnarajan@gmail.com

Education

- | | |
|------|---|
| 2010 | Ph.D. in Biotechnology at Centre for Biotechnology, M. D. University, Rohtak, India. |
| 2003 | M.Sc. Biotechnology from M. D. University, Rohtak. |
| 2001 | B.Sc. (Medical) from M. D. University, Rohtak. |

Awards and Scholarship

- | | |
|------|---|
| 2005 | Qualified National Eligibility Test for lectureship conducted by CSIR, New Delhi |
| 2006 | Awarded University Research Fellowship by M. D. University, Rohtak. |
| 2007 | Awarded Senior Research Fellowship by CSIR, New Delhi. |

Teaching Activity

Teaching M.Sc. Agriculture Biotechnology

Research area

Plant genetic Engineering

Research advisory

No. of students Registered for Ph. D.: 3

No. of students supervised for P.G (Dissertation): 35+

Projects

1. "Generating Insect resistant cowpea plants". Funded by UGC, New Dehli, India (2013-2017)(As Principal Investigator).
2. "Expression of decaprenyldiphosphate synthase gene in rice (*Oryza sativa* L.) for

biosynthesis of coenzyme Q10". Funded by DST-SERB, Govt. of India. (2014-2017) (As Principal Investigator).

3. "Development of yellow mosaic virus resistance in blackgram (*Vigna mungo* L. Hepper) and cowpea (*Vigna unguiculata*)". Funded by DBT, Govt. Of India (2011-2013)(Co-PI)

No. of Conference / Seminar /workshops attended & presented research papers -70

Membership of Academic Societies

- Life time member of Association of Microbiologists of India (AMI).
- Life time member of society for plant biochemistry and biotechnology, India.

Publications

1. **Chaudhury D**, Madanpotra S, Jaiwal R, Sani R, Kumar PA and Jaiwal P K (2007) *Agrobacterium tumifaciens* –mediated high frequency genetic transformation of an Indian Cowpea (*Vigna unguiculata* L. Walp) cultivar and transmission of transgenes into progeny. Plant Sci. 172:692-700. **Impact Factor: 3.437**
2. **Chaudhary D**, Sainger M, Sahoo L and Jaiwal P K(2009). Genetic transformation of *Vigna* species:Current status and future prospects.14th international workshop on "Genetic Resources and Comparative Genomics of Legumes (Glycine and *Vigna*)" organized by National Institute of Agrobiological Sciences (NIAS), Tsukuba,Japan
3. Gulshan Chhabra, **Darshna Chaudhary**, Madan Lal and Pawan K. Jaiwal(2008) "TDZ induces the shoot organogenesis and somatic embryogenesis on cotyledonary node explants of lentil (*Lens culinaris* Medik.)" Physiol. Mol. Biol. Plant. 14(4)1-7. Impact Factor: 0.883
4. Yadav M, **Chaudhary D**, Singh RP and Jaiwal P K (2010) *Agrobacterium* mediated genetic transformation of (*Sesamum indicum*) Plant Cell Tiss. Org. Cult. 103: 377-386. **Impact Factor: 2.00**
4. Chhabra G, **Chaudhary D**, Sainger M and **Jaiwal P K** (2011) Genetic transformation of an Indian isolate of *Lemna minor* by *Agrobacterium tumefaciens* and recovery of transgenic plants. Physiol. Mol. Biol. Plants. 2011 17(2): 129–136. **Impact Factor: 0.883**
5. Parmar SS, Sainger M, **Chaudhary D**, Jaiwal PK(2012). Plant regeneration from mature embryo of commercial Indian bread wheat (*Triticum aestivum* L.) cultivar. Physiol. Mol. Biol. Plants 18: 177-183. **Impact Factor: 0.883**
5. Chhikara S, **Chaudhury D**, Dhankher OP and Jaiwal PK (2012) Combined

- expression of barley class II chitinase and type I ribosome inactivating protein in transgenic *Brassica juncea* provide protection against fungus *Alternaria brassicae*. Plant Cell Tiss. Org. Cult. 108: 83-89. **Impact Factor: 2.00**
6. Chikkara S, **Chaudhary D**, Sainger M. and Jaiwal P K(2012) A non-tissue culture approach for generating the transgenics of Indian mustard (*Brassica juncea*). In Vitro Cellula Developmental Biol. Plants 48:7-14. . **Impact Factor: 0.853**
 10. Deep Shikha Birla, Kapil Malik, Manish Sainger, **Darshna Chaudhary**, Ranjana Jaiwal, Pawan K. Jaiwal Progress and challenges in improving the nutritional quality of rice (*Oryza sativa* L.) **Critical reviews in food science and nutrition**. VOL. 57, NO. 11, 2455–2481 (2015). **Impact Factor: 6.077**
 11. Sainger M, **Chaudhary D**, Dahiya D, Jaiwal R and Jaiwal PK(2015). Development of an efficient in vitro plant regeneration system amenable to Agrobacterium- mediated transformation of a recalcitrant grain legume blackgram (*Vigna mungo* L. Hepper). Physiol Mol Biol Plants *Physiol. Mol. Biol. Plants*, 21: 505-517. **Impact Factor: 0.883**
 12. Manish Sainger, Anjali Jaiwal, Poonam Ahlawat Sainger, **Darshna Chaudhary**, Ranjana Jaiwal and Pawan K. Jaiwal Advances in genetic improvement of Camelina sativa for biofuel and industrial bio-products. Renewable and Sustainable energy reviews. 68(1): 623–637 (2016) **Impact Factor: 8.050**.
 13. Jaiwal, A. **Chaudhary, D.** and Jaiwal, Ranjana (2014), Genetically modified crops for developing countries. Proc. Natl. Seminar on “Next Generation Sciences: Vision 2020 and Beyond (NGSV)” 324-334, ISBN: 978-81-920945-4-0 (2014).
 14. **Darshna Chaudhary**, Manish Sainger, Anil Kumar, Honey Yadav, Meenakshi Sindhu and Ranjana Jaiwal (2015) Transient gus assay to optimize *agrobacterium* mediated genetic transformation of cowpea (*Vigna unguiculata* L.walp) Proc. Natl. Seminar on “Innovative Researches in Life Science”, 26-30, ISBN: 978-81-920945-5-7 (2015).
 15. Manish Sainger, Poonam Ahlawat Sainger, Anil Kumar, Honey Yadav, Meenakshi Sindhu and **Darshna Chaudhary** (2015). Optimization of parameters for Agrobacterium mediated genetic transformation of mungbean (*Vigna radiata* L. Wilczek). Proceeding of National Seminar on Innovative Research in Life Sciences, Deptt. of Zoology, MDU,Rohtak 68-74, 2015 ISBN: 978-81-920945-5-7
 16. Kapil Malik,Deepshikha Birla,Honey Yadav,Manish Sainger,**Darshna Chaudhary**,Pawan K. Jaiwal(2017). Evaluation of carbon sources, gelling agents, growth hormones and additives for efficient callus induction and plant regeneration in Indian wheat (*Triticum aestivum*L.) genotypes using mature embryos. Journal of Crop Science and Biotechnology.20(3): DOI: 10.1007/s12892-017-0046-0.

1. Savita, **Chaudhary D.** *et al.* “Biofortification of crop plants (Eds. Jaiwal P. K., Singh R. P. and Dhanker O. P.) In ‘*Plant membrane and vacuolar transporters*’ CAB international UK (2007) pp 1-30.
 2. Kapoor S, Parmar SS, Yadav M, **Chaudhary D**, Sainger M, Jaiwal R and Jaiwal P K *Agrobacterium*-mediated sesame (*Sesamum indicum* L.) transformation. In: ‘*Agrobacterium* Protocols’, **Methods in Molecular Biology**, Kan Wang (ed.) Springer, pp. 1-13.
 3. Sainger M, Sainger PA, **Chaudhary D**, Jaiwal R, Singh RP, Dhankher OP, Jaiwal PK. GM Crops for Developing World in the Era of Climate Change: For Increase of Farmer’s Income, Poverty Alleviation, Nutrition and Health. In *Genetic Manipulation in Plants for Mitigation of Climate Change 2015* (pp. 223-241). Springer India.
-