

Dr Monica Sharma

Associate Professor

Specialization: Vegetable, Fruit and Forest Pathology;
Molecular Plant Pathology

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Ongoing Research Projects

- Development of multiplex PCR for important soil borne pathogens of sandalwood and their management funded by Department of Biotechnology, Govt. of India for ₹ 34.67 lakhs from March, 2022 to March, 2025 (Principal Investigator).

Important Research Publications

- Sood, D., Sharma, M. and Sharma A. 2023. Induction of resistance in tomato against bacterial wilt using abiotic resistance inducers. *Journal of Plant Pathology* <https://doi.org/10.1007/s42161-023-01322-3>.
- Gupta, S. K., Sharma, M. and Mukherjee, S. 2022. Buckeye rot of tomato in India: Present status, challenges and future research perspectives. *Plant Disease* 106:1085-1095
- Sharma, A., Sharma, I.M., Sharma, M., Sharma, K. and Sharma, A. 2021. Effectiveness of fungal, bacterial and yeast antagonists for management of mango anthracnose (*Colletotrichum gloeosporioides*). *Egyptian Journal of Biological Pest Control* 31:135 (11 pages)
- Thakur A., Sharma N., Bhatti, M., Sharma, M., Trukhanov A.V., Panina L.V., Astapovich, K. A., and Thakur P. 2020. Synthesis of barium ferrite nanoparticles using rhizome extract of *Acorus Calamus*: Characterization and its efficacy against different plant phytopathogenic fungi. *Nano-Structures and Nano-Objects* 24: 100599.
- Sharma, P., Sharma, A. Sharma, M., Bhalla, N., Estrela, P., Jain, A., Thakur, A., Thakur, P. 2017. Nanomaterial Fungicides: *In vitro* and *in vivo* antimycotic activity of cobalt and nickel nanoferrites on phytopathogenic fungi. *Global Challenges* 1 (9): 1700041 (1-7). DOI: 10.1002/gch2.201700041.
- Hilbert, M., Voll, L. M., Ding, Y., Hofmann, Y., Sharma, M. and Zuccaro, A. 2012. Indole derivatives production by the root endophyte *Piriformospora indica* is required for biotrophic colonization of barley but not for growth promotion. *New Phytologist* 196(2): 520-534.

- Sharma, M., Schmid, M., Rothballer, M., Hause, G., Zuccaro, A., Imani, J., Kämpfer, P., Domann, E., Schäfer, P., Hartmann, A. and Kogel, K. H. 2008. Detection and identification of bacteria intimately associated with fungi of the order *Sebacinales*. *Cellular Microbiology* 10 (11): 2235-2246.
- Waller, F., Mukherjee, K., Deshmukh, S., Achatz, B., Sharma, M., Schäfer, P. and Kogel, K. H. 2008. Systemic and local modulation of plant responses by *Piriformospora indica* and related *Sebacinales* species. *Journal of Plant Physiology* 165: 60-70.
- Deshmukh, S., Hüchelhoven, R., Schäfer, P., Imani, J., Sharma, M., Weiss, M., Waller, F. and Kogel, K. H. 2006. The root endophytic fungus *Piriformospora indica* requires host cell death for proliferation during mutualistic symbiosis with barley. *Proceedings of National Academy of Sciences USA* 103 (49): 18450-18457.
- Sharma, M., Gupta, S. K. and Sharma, T. R. 2005. Characterization of variability in *Rhizoctonia solani* by using morphological and molecular markers. *Journal of Phytopathology* 153: 449-456.

Books and Manuals

- Gupta, S. K. and Sharma, M. 2023. French Bean diseases: Diagnosis, epidemiology and their management. Scientific Publishers, New Pali Road, Jodhpur-342001, Rajasthan.
- Gupta, S. K., Sharma, R. C. and Sharma, M. 2017. Diseases of vegetable, ornamental and spice crops. Scientific Publishers, New Pali Road, Jodhpur-342001, Rajasthan. 193 p. ISBN: 978-93-86102-74-4.
- Gupta, S. K. and Sharma, M. (eds). 2014. Approaches and Trends in Plant Disease Management, Scientific Publishers, New Pali Road, Jodhpur-342001, Rajasthan. 429 p. ISBN: 978-81-7233-887-9.
- Sharma, R., Sharma, M., Thakur, S. and Singh, N.B. 2013. Laboratory Manual on Tissue culture and Molecular Biology. Directorate of Extension Education, Dr YS Parmar University of Horticulture & Forestry, Nauni, Solan. 51p. ISBN: 978-81-927930-2-7.

Awards & Recognitions

- Recipient of 3rd Best Poster Award in ISMPP 42nd Annual Conference and National symposium on 'Plant Health Management: A way forward for Food Safety, Security and Sustainability w.e.f. May 10-12, 2023 held at Anand Agriculture University, Anand, Gujarat.
- **Best Poster presentation** for presentation in IPSCONF2022 IPS 8th

International Conference (Hybrid mode) Plant Pathology: Retrospect and Prospects w.e.f. March 23-26, 2022 at SKN Agriculture University, Jobner-Jaipur, Rajasthan, organized by Indian Phytopathological Society.

- Third rank for the oral paper presented in the session on “**Molecular diagnostics**” at National symposium on ‘Perspectives in Plant health management’ organized by IPS, at Anand Agriculture University, Anand, Gujarat, 2010.
- **Certificate of Merit** for securing First Position in M. Sc.
- **Certificate of Honour** during M. Sc.
- **Gold Medal from "Himotkarsh"** - an academy for Literature, Culture and Public Welfare, Una, Himachal Pradesh for excellence in Academics as Topper in M. Sc. Horticulture Exam-2004.
- **Prof. K.P.V. Menon Best Poster Paper Award** of Indian Phytopathological Society, New Delhi - Commendation Certificate, 2004.
- **Prof. M.J. Narasimhan Academic Merit Award** of Indian Phytopathological Society, New Delhi - Commendation Certificate, 2004.
- **P.P. Singhal Memorial Pesticides India Award** of Indian Society of Mycology and Plant Pathology, Udaipur, Rajasthan, 2003.
- **University Gold Medal** for obtaining highest marks in M. Sc.
- STIBET fellowship funded by **DAAD (Deutscher Akademischer Austauschdienst-German Academic Exchange Service)** during Ph.D. (2005-2008).
- **Post-doctorate fellowship** at Institute of Phytopathology and Applied Zoology (IPAZ), Justus-Liebig University, Giessen, Germany (2008-2009).