

FACULTY PROFILE



Name: Dr. SORABH CHAUDHARY

Designation: Assistant Professor

E_Mail: sorahc@srmist.edu.in

Professional Qualification:

- B. Tech. (Biotechnology)
- M. Tech. (Biotechnology)
- Ph. D. (Biotechnology)

Publications (Journals & Conferences):

Research Articles in Journals:

1. Lal M, Yadav S, **Chaudhary S**, Sharma S and Kumar M (2023). Morphological and pathological variability of intra-field *Rhizoctonia solani* isolates in a rice-potato rotation and their sensitivity to fungicides. Potato Research (**Accepted**) (**Impact Factor: 2.5**).
2. **Chaudhary S**, Lal M, Sagar S, Sharma S, Meena AL and Kumar M (2023). Variation in oxalic acid production, mycelial compatibility and pathogenicity amongst isolates of *Sclerotinia sclerotiorum* causing white mold disease. Vegetos, 36: 435-447.
3. Lal M, Kumar A, **Chaudhary S**, Singh R. K., Sharma S and Kumar M (2022). Antagonistic and growth enhancement activities of native *Pseudomonas* spp. against soil and tuber-borne diseases of potato (*Solanum tuberosum* L.). Egyptian Journal of Biological Pest Control, 32:22 (Impact Factor: 2.06)
4. **Chaudhary S**, Sagar S, Lal M, Tomar A, Kumar V, Kumar J and Kumar M (2022). Morpho-genetic variability of *Rhizoctonia solani* population causing sheath blight disease in rice (*Oryza sativa* L.). J Environ Biol., 44(1): 108-121 (Impact factor: 0.78)

5. Lal M., **Chaudhary S.**, Rawal S., Sharma S., Kumar M., Chakrabarti SK (2021) Evaluation of bio-agents and neem based products against late blight disease (*Phytophthora infestans*) of potato. Indian Phytopathology, 1-7
6. Lal, M., **Chaudhary, S.**, Kumar, M., Sharma, S. and Chakrabarti, S.K. (2020). First report of collar and stem rot caused by *Rhizoctonia solani* AG1-IA on *Sesbania sesban* in India. Plant Disease. 104(12): 3251 (Impact factor: 4.44)
7. **Chaudhary S**, Lal M, Sagar S, Tyagi H, Kumar M, Sharma S, Chakrabarti SK (2020). Genetic diversity studies based on morpho-pathological and molecular variability of the *Sclerotinia sclerotiorum* population infecting potato (*Solanum tuberosum* L.). World J Microbiol Biotechnol 36:177 (Impact factor: 4.22)
8. **Chaudhary S**, Sagar S, Lal M, Tomar A, Kumar V, Kumar M (2020) Biocontrol and growth enhancement potential of *Trichoderma* spp. against *Rhizoctonia solani* causing sheath blight disease in rice. J Environ Biol 41:1034-1045. (Impact factor: 0.78)
9. **Chaudhary, S.**, Sushma, S., Mukesh, K., Lal, M., Vinay, K. and Akash, T. (2020). Molecular cloning, characterization and semi-quantitative expression of endochitinase gene from the mycoparasitic isolate of *Trichoderma harzianum*. Res J Biotech, 15:4.
10. Murti, S., Singh, R., Lal, M., **Chaudhary, S.**, Kumar, S., Kumar, A., Singh, Y. and Ali, M. (2020). Effect of Carbon, Nitrogen and Vitamins on epidemiological components of sheath blight of rice caused by *Rhizoctonia solani* Kuhn. Int J Curr Microbiol App Sci, 9(7): 1325-1332
11. Ali, M., Singh, R., Lal, M. and **Chaudhary, S.** (2019). Determination the role of weeds hosts in spreading of sheath blight from weeds to rice crop in western plain zone of Uttar Pradesh, India. Int. J. Curr. Microbiol. Appl. Sci., 8(9): 972-982.
12. Lal M, **Chaudhary S**, Yadav S, Sharma S, Chakrabarti SK and Kumar M. (2019). Development of spray schedules for management of late blight of potato using new chemicals. J Mycol PI Pathol 49 (4): 405-412.
13. **Chaudhary S.**, Kumar M., Sengar RS, Chand P., Mishra P, Tomar A (2018) Effect of nutrient status, temperature and pH on mycelial growth, sclerotial production and germination of *Rhizoctonia solani* isolated from paddy fields. Progressive Agriculture, 18: 82-91
14. Kumar M., Gangwar R., Sagar S., **Chaudhary S.**, Kumar Y, Kumar V. (2018) Micro-propagation of Safed Musli (*Chlorophytum borivilianum*)- an endangered medicinal herb. Technofame, 7: 26-31.
15. **Sorabh Chaudhary**, Mukesh Kumar, R.S. Sengar, Pooran Chand, Prashant Mishra and Akash Tomar (2017). Antioxidative response in susceptible and resistant cultivars of *Oryza sativa* L. in response to infection by *Rhizoctonia solani*. South Asian J. Food Technol. Environ., 3(1): 507- 515.

16. Kumar, V., Chaudhary, V.P, Kumar, D., Sagar, S., **Chaudhary, S.** and Kumar, A. (2017). Efficacy of botanicals and fungicides against *Rhizoctonia solani* inciting sheath blight disease on Rice (*Oryza sativa* L.). Journal of Applied and Natural Science 9 (4): 1916 -1920.
17. Kumar, A., **Chaudhary, S.**, Sagar, S., Kumar, V. and Kumar, M. (2016). Assessment of genetic diversity among chickpea (*Cicer arietinum* L.) genotypes using EST-SSR markers and SDS- PAGE. Research Journal of Biotechnology Vol. 11 (4): 48-57.
18. Prasad, L., **Chaudhary, S.**, Sagar, S. and Tomar, A. (2016). Mycoparasitic capability of diverse native strains of *Trichoderma* spp. against *Fusarium oxysporum*. Journal of Applied and Natural Science, 8(2): 769-776
19. Bakshi A., Kumar V., Sagar S., **Chaudhary S.**, Kumar R., Kumar M. (2016). Molecular characterization of chickpea (*Cicer arietinum* L.) genotypes using sequence tagged microsatellite site (STMS) markers. J Appl Nat Sci., 8: 1068-1074.
20. Prasad L., Sagar S., **Chaudhary S.**, Kumar N., Tomar A. (2012). Determination of biodiversity using ITS-PCR-CAPS markers for *Trichoderma* sp. from rhizospheric soil of different location in India. Vegetos, 25: 336-341.
21. **Chaudhary S.** and Paul S. (2012) Antimicrobial studies of Silver nanoparticle synthesized from *Vitis vinifera* extract. J Bionanosci, 6: 104-108
22. **Chaudhary S.**, Paul S. and Sagar S. (2012). Biosynthesis of silver nanoparticles using *Vitis-vinifera* extracts and evaluation of their antimicrobial activity. Int J Bio-Tech Res, 2: 1-12
23. Prasad L., Sagar S., **Chaudhary S.** and Tomar A. (2012). A modified method of mRNA extraction from fungi. Cibtech J Bio-protocols, 1: 18-22

Review Papers:

1. **Chaudhary, S.**, Sagar, S. and Lal, M. (2019). A comprehensive overview on sheath blight disease of rice and its management. Agricultura, 111: 146-175
2. **Chaudhary, S.**, Sagar, S., Kumar, M., Sengar, R.S. and Tomar, A. (2016). The Use of Enzymes in Food Processing- An Overview. South Asian Journal Food Technol, Environ, 1 (3&4):190-210.
3. **Chaudhary, S.**, Sagar, S., Tomar, A., Sanger, R.S. and Kumar, M. (2016). Banded leaf and sheath blight: a menacing disease of maize (*Zea mays* L.) and its management. Journal of Applied and Natural Science, 8(3): 1720-1730
4. Rahul, SN., Khilari, K., Sagar S., **Chaudhary S.**, Kumar S., Vihan N., Tomar T. (2015). Challenges in postharvest management of fungal disease in fruits and vegetables- A review. SouthAsian J Food Technol Environ, 1: 126-130.

5. **Chaudhary S**, Lal M, Sagar S, Sharma S and Kumar M (2023). Black scurf of potato: an insight on understanding biology, diagnosis and detection, host-pathogen interaction and management strategies. *Tropical Plant Pathology* (Accepted) (Impact Factor: 2.4).

Book Chapters:

1. Kumar V, Srivastava A, Jain L, **Chaudhary S**, Kaushal P and Soni R (2022). Harnessing the potential of genetically improved bioinoculants for sustainable agriculture: Recent advances and perspectives. In: Soni R, Suyal D C, Yadav A N and Goel R (Eds.) *Trends of Applied Microbiology for Sustainable Economy*, Academic Press, Elsevier, pp. 319-341

2. Lal, M., **Chaudhary, S.**, Sharma, S., Subhash S. & Kumar, M. (2022). Bio-Intensive Management of Fungal Diseases of Potatoes. In: Chakrabarti, S.K., Sharma, S., Shah, M.A. (eds.) *Sustainable Management of Potato Pests and Diseases*. Springer, Singapore, pp. 453- 493.

3. Kumar V, Jain L, **Chaudhary S** and Soni R (2022). Endophytes as Potential Plant Growth Promoters in Forestry. In: *Microbes in Agri-Forestry Biotechnology*, Taylor and Francis Publication, pp. 241-261.

Abstract Published in Proceedings of Conferences/Symposia:

1. Sagar, S., Kumar, N., **Chaudhary, S.**, Kumar, R., Purusottam, Tomar, A. and Prasad, L. (2011). "Morphological & Molecular Characterization of Native Strain of *Trichoderma*."- In: National Conference on Recent advance in Fungal Biotechnology" at FRI, Dehradun.

2. Sagar, S., **Chaudhary, S.**, Kumar, N., Kumar, R., Purusottam, Tomar, A. and Prasad, L. (2011). Biological Control Activity of Native Strain of *Trichoderma*."- Published in National Conference on Recent advance in Fungal Biotechnology, at RFI, Dehradun.

3. Tomar, A., **Chaudhary, S.**, Sagar, S., Prasad, L. Tomar, A. and Purushottam (2011). "A simple and fast technique for fungal flora isolation from soil samples". In: International Conference on "Issues for Climate Change, Land use Diversification and Biotechnological Tools for Livelihood Security" at S.V. Patel Univ. of Agric & Tech, Meerut (U.P.), India, on 8-10 October, 2011

4. Prasad, L. Sagar, S; **Chaudhary, S.** and Tomar, A. (2012). "Determination of biodiversity using ITS-PCR-RFLP of *Trichoderma* spp. Collected from various rhizospheric soils of different locations". In: International Conference on Plant Biotechnology for Food Security: New Frontiers, during Feb., 21-24, 2012 at NRCPB, NASC, IARI, New Delhi.

5. Sagar, S., **Chaudhary, S.**, Sengar, R. S., and Kumar, M. (2013) "what are processed food and their effect on health?" Published in National Conference on "Bioactive compound and functional foods in health and disease management" at NIFTEM, Sonapat, Haryana, India, on 15-16 Nov, 2013.

6. **Chaudhary, S.,** Sagar,S., Kumar, M. and Chand, P.(2014) “Silver nanoparticle enhanced the ethanol tolerance of *Saccharomyces cerevisiae*” Published in National Conference on“ science of omics for agricultural productivity: Future prospective” at G.B. Pant Univ. of Agric& Tech, Pantnagar (Uttarakhand), India, on 4-6 march, 2014
7. Sagar, S., **Chaudhary, S.,** Sengar, R. S. and Tomar, A. (2014). “Importance of bioinformatics as a tool for sugarcane research ”Published in National Conference on“ science of omics for agricultural productivity: future prospective” at G. B. Pant Univ. of Agric& Tech, Pantnagar (Uttarakhand), India, on 4-6 march, 2014.
8. Sagar, S., **Chaudhary, S.,** Kumar, M., Kumar,N. and Rahul,S.N.(2014)“Effect of global warming on agriculture field” in 2nd International Conference on “emerging food safety risks: Challenges for developing countries” at NIFTEM, Sonapat, Haryana, India, on 4-6 Jan, 2014.
9. Sagar, S., **Chaudhary, S.** and Singh, D. (2014). “A new concept of genetic enhancement: It is a drying art” Published in National Conference on Emerging Problems and Recent Advances in Applied Sciences: Basic to Molecular Approaches. Ch. Charan Singh University, Meerut, on 8-9 Feb, 2014
10. Sagar, S., Sengar, R. S., **Chaudhary, S.,** Rahul, S. N., Vihan, N., Tomar, P., Tomar, A. and Prasad, L. (2015). “Biological control with reference to integrated pest management in sugarcane” Published in National symposium on Integrated pest management for sustainable crop protection” at Division of entomology, IARI, New Delhi, on 24-25 Feb, 2015.
11. **Chaudhary, S.,** Kumar, M., Sagar, S., Rahul, S. N., Vihan, N., Tomar, A. and Prasad, L. (2015). “Nano-pesticides: Solution for a cleaner and greener agriculture” Published in National symposium on Integrated pest management for sustainable crop protection” at Division of Entomology, IARI, New Delhi, on 24-25 Feb, 2015
12. Vihan, N., Sagar S., **Chaudhary, S.,** Rahul, S. N., Prasad, L. Tomar, P. and Tomar, A. (2015). “Genetically Modified Crop in Integrated Pest Management” Published in National symposium on Integrated pest management for sustainable crop protection” at Division of Entomology, IARI, New Delhi, on 24-25 Feb, 2015
13. Rahul, S. N., Khilari, K., Sagar, S., **Chaudhary, S.,** Kumar, S., Vihan, N., Tomar, A. and Prasad, L. (2015). “Entomopathogenic Fungus: Reliable and Effective Tools of Integrated Pest Management” Published in National symposium on Integrated pest management for sustainable crop protection” at Division of entomology, ICARI, New Delhi, on 24-25 Feb, 2015.
14. Kumar, A., Sagar, S., **Chaudhary, S.,** Rahul, S. N., Trivedi, P., Vihan, N., Yadav, M. K., Kumar, R., Dhyani, B. P., Purushottam and Tomar, A. (2016). Evaluation of Zinc solubilization potential of different native strains of Fluorescent *Pseudomonas*. 6th International conference “Plant, Pathogen and People”. February 23-27, 2016 New Delhi.Pp. 97.
15. Trivedi, P., Sagar, S., **Chaudhary, S.,** Rahul, S. N., Vihan, N., Yadav, M. K., Kumar, R., Dhyani, B. P., Purushottam and Tomar, A. (2016). Phosphorus solubilizing activity of native

Pseudomonas strains.6th International conference “Plant, Pathogen and People”. February 23-27, 2016 New Delhi. Pp. 465.

16. Vihan, N., Sagar, S., **Chaudhary, S.**, Rahul, S. N., Yadav, M. K., Kumar, R., Dhyani, B. P., Prasad, L., Purushottam and Tomar, A. (2016). Phosphorus solubilizing activity of native *Trichoderma* and other microbial strains. 6th International conference “Plant, Pathogen and People”. February 23-27, 2016 New Delhi. Pp. 465

17. Kumar, S., Kumar, S., Sagar, S., **Chaudhary, S.**, Rahul, S. N., Yadav, M. K., Kumar, R., Prasad, L., Purushottam and Tomar, A. (2016). Studies for optimization of genomic DNA extraction protocol for fungi *Trichoderma*. National conference on Plant Science Research: Looking beyond 21st Century for environmental and Agriculture Revolution. February 5- 7. Pp45.

18. Rahul, S. N., Khilari, K., Singh, R., Mishra, P., Sagar, S., **Chaudhary, S.**, Vihan, N.,Tomar, A. and Prasad, L. (2016). Molecular and ITS based molecular characterization of native *Trichoderma* isolates. National conference on Plant Science Research: Looking beyond 21st Century for environmental and Agriculture Revolution. February 5-7. Pp48.

19. Rahul, S. N., Khilari, K., Singh, R., Mishra, P., Sagar, S., **Chaudhary, S.**, Jain, K. S., Tomar, A. and Prasad, L. (2016). Study of biocontrol efficacy and plant growth promotion of twenty native isolates of *Trichoderma* spp. National conference on Plant Science Research: Looking beyond 21st Century for environmental and Agriculture Revolution. February 5-7. Pp48.

List of Sequences submitted in NCBI GenBank:

1. Sagar, S.; **Chaudhary, S.**; Prasad, L.; and Tomar, A. (2012). Submitted ITS- rDNA sequences of *Trichoderma sp.* in GenBank under the Accession No.- KC312631- KC312654; JX23259- JX232597; KX139407- KX139409; KC121065, KT968710

2. **Chaudhary, S.**, Sagar, S., Rahul, S.N., Kumar, M., Sanger, R.S., Tomar, A. and Chand, P. (2016). Submitted ITS- rDNA sequences of *Rhizoctonia solani* in GenBank under the Accession No.- KU215866- KU215878; KT968709- KT968711; KU933588- KU933594; MF427842- MF427846

3. Rahul, S.N., Khilari, K., Tomar, A., Sagar, S., **Chaudhary, S.**, Singh, R. and Mishra, P. (2016). Submitted ITS- rDNA sequences of *Trichoderma sp.* in GenBank under the Accession No.- KU215909-KU215928.

4. Sagar, S., **Chaudhary, S.**, Rahul, S.N., Sengar, R.S., Tomar, A., Kumar, A., Singh, R., Chand P., Lal, R., Lal, S. and Panwar, L. (2016). Submitted ITS- rDNA sequences of *Colletotrichum falcatum* in GenBank under the Accession No.- KU220959- KU220963

5. Kumar, J., Kumar, M., Kumar, P., Tomar, A., Chand, P. and **Chaudhary, S.** (2021). Submitted ITS- rDNA sequences of *Trichoderma* sp. in GenBank under the Accession No. - MW776752- MW776761

Awards and Achievements

- Qualified Graduate Aptitude Test in Engineering (GATE)
- Qualified CSIR-NET
- Received 2nd prize poster presentation entitled” Morphological & Molecular Characterization of Native Strain of *Trichoderma*.”- In: National Conference on Recent advance in Fungal Biotechnology” at FRI, Dehradun.
- Received **Promising Research Scholar Award** in International Conference of Food Agriculture and Innovation (ICFAI) at Bengaluru, Karnakata, India.

Workshops/Seminars/FDPs

Workshop Organized:

- Organized 1st International Conference on “Challenges and Opportunities in Food, Pharma Biotechnology” (COFPB-22) at Department of Biotechnology, Seth Vishambhar Nath Institute of Engineering & Technology, Barabanki-Lucknow Highway from Sep. 15-17, 2022.

Workshop attended:

- Two days’ workshop on “Intellectual Property Rights, Rules for patent in Agriculture” organized by Sardar Vallabhbhai Patel University of Ag. & Tech., and UPCAR, Lucknow from Aug. 22-23, 2016.
- Workshop on “Recent Trends and Tools in Bioinformatics and Information Technology” organized by Faculty of Biological Engineering, Shobhit University, Meerut, UP from Sep. 27-28, 2013.
- National Conference on “Bioactive compounds and Functional Foods in Health and Disease Management” organized by National Institute of Food Technology Entrepreneurship and Management, Sonapat, Haryana, India from Nov 15-16, 2013
- National Conference on “Ceramics in Bio-Medical Applications” organized by Department of Ceramic Engineering, NIT, Rourkela, Orissa from Jan. 21-22, 2010

Work Experience:**Teaching:**

- As Guest Faculty (6 months) in the Department of Biological Engineering and Science at Shobhit University, Meerut, Uttar Pradesh, India
- **One Year** as Associate Professor, Department of Biotechnology, Seth Vishambhar Nath Institute of Engineering & Technology, Barabanki-Lucknow Highway, from **Dec, 2021 to Feb 2023**
- **Eight months** as Associate Professor, Department of Biotechnology, B.N. College of Engineering and Technology, Bakshi Ka Talab, Lucknow

Professional Memberships:

- Lifetime member of Society of Biological Chemist (SBC), Bangalore, India
- Lifetime member of Indian Science Congress Association (ISCA), Kolkata, India
- Lifetime member of Society for Plant Research (SPR), Noida, Uttar Pradesh, India
- Lifetime member of Society for World environment, Food and Technology (SWEFT), New Delhi, India