Department of Botany



DR. Jitender Kumar, Ph.D: CSIR-NET- JRF, ICAR-ASRB- NET, SLET, HPTET)

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<u>Educational Qualification</u>: B.SC., M.Sc.(Botany), B.Ed, Ph.D. (Botany, specialization with Mycology and Plant Pathology)

Other Qualification:

- 1. HP-TET (Teacher Eligibility Test) in the subject of TGT Medical.
- 2. CSIR-UGC NET in the subject of LIFE SCIENCES under ELIGIBILITY FOR LECTURESHIP (NET).
- 3. CSIR-UGC NET JRF in the subject of LIFE SCIENCES under CSIR fellowship scheme and ELIGIBILITY FOR LECTURESHIP (NET)..
- 4. HP-SET (Himachal Pradesh State Eligibility Test for Lectureship) in the subject of LIFE SCIENCES
- 5. ICAR-ASRB-NET (Agricultural Scientists Recruitment Board, ICAR, New Delhi)

Fellowships:

- 1. ICAR-SRF: January 2012- August 2012
- 2. CSIR-JRF: August 2014 August 2016 [09/140(0159)/2014-EMR-1].
- 3. CSIR-SRF: September 2016- April 2017 [09/140(0159)/2014-EMR-1].

Experience:

- 1. Worked as a SRF at ICAR-NBPGR (National Bureau of Plant Genetic Resources) Regional Station Shimla Phagli, Himachal Pradesh from January 2012- August 2012
- 2. Research experience of almost 6 years in the Department of Botany, Punjabi University, Patiala in the field of "Collection, Characterization and Identification of Ectomycorrhizal Fungi; Isolation of Pure Cultures from fruiting bodies, roots and soil samples; Molecular

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Characterisation; Spawn and inoculums preparation, in vitro mycorrhizal synthesis and Characterization and Identification of Ectomycorrhizal roots through morphology and anatomical features and evaluation of effect of artificial synthesis of ectomycorrhizae on growth and establishment of seedlings."

3. Teaching experience of almost 7 years in the Department of Higher Education.

Membership of Professional Bodies/Organisations:

- 1. Life Member, Mycological Society of India (MSI), Chennai, India
- 2. Life Member, MycoAsia, Andhra Pradesh, India

National and International Conferences attended:

National

- National Symposium on Emerging Trends in Botanical Sciences organized by Department of Botany, Punjabi University, Patiala from 17th-18th February, 2014.
- 2. National Symposium on Mycological Research- Emerging Trends, Applications and Prospects and 41st Annual Meeting of Mycological Society of India held at Department of Botany, Punjabi University, Patiala from 23rd-24th February, 2015 (Poster presentation)
- National Conference on Basic and Applied Researches in Plants and Microbes at Department of Botany, Punjabi University, Patiala from 3rd – 5th November, 2016 (Oral Presentation)
- 4. National Symposium on Mushrooms: Trends and Innovations in Mushroom Science, held at ICAR Directorate of Mushroom Research, Solan (H.P.) from 27th-28th April, 2017 (Oral Presentation).
- 5. Diversity of Ectomycorrhizal Agarics from Sal forest of North West India. National Conference on Himalayan Biodiversity and Bio resource Utilisation. Organised by Department of Biosciences, Himachal Pradesh University, Shimla, On 23rd March, 2018 (Oral Presentation)
- 6. Attended two days online National conference on Advances in fungal biotechnology (NOCAIFB-2021)-2021, Organized by SCHOOL OF LIFE SCIENCES in collaboration with MYCOLOGICAL SOCIETY OF INDIA, MUMBAI UNIT (MSI) held on 23-24 January, 2021.
- 7. Attended National conference on fungal biotechnology and 43rd annual meeting of mycological society of India. Birla Institute of Scientific Research, Jaipur (India).

International

- Asian Mycological congress held at Department of Botany, Goa University from 7th to 10th October, 2015 (Oral Presentation)
- 2. International conference titled "Resilience Futures: adapting to Climate Variability in Agriculture, Economy and Enviornment, held on 28th to 29th December 2023 at SCVB Govt. College Palampur, (H.P.) India (Oral Presentation)
- 3. International conference titled 'Recent Trends and Innovations for a Greener Future held on 9th to 10th February 2024 at Department of chemistry, NSCBM, Govt. College Hamirpur, (H.P.) India (Oral Presentation)

Research Papers published / Accepted/ communicated for Publication

Research Paper Published

- 1. **Kumar, J. and Atri, N.S. 2016.** Characterization of ectomycorrhizae of Russula and Lactifluus (Russulaceae) associated with Shorea from Indian Shiwaliks. **Nova Hedwigia** 2016 Vol.103 No.3/4 pp.501-513.
- Kumar, J. and Atri, N.S. 2018. Studies on Ectomycorrhiza: An Appraisal. Botanical Review, 84(2):108-155. https://doi.org/10.1007/s12229-017-9196-z.
- 3. **Kumar, J. and Atri, N.S. 2019.** Characterization and Identification of ectomycorrhizae of *Russula* Pers.(*Russulaceae*; *Basidiomycota*) associated with *Shorea robusta* from North West India. The **Journal of Tropical Forest Science,**31(1):114-124. https://doi.org/10.26525/jtfs2019.31.1.114124.
- 4. **Kumar, J. and Atri, N.S. 2020.** New records of lamellate mushrooms associated with Sal from Shiwaliks, India. **Kavaka,** 54: 30-37. https://doi.org/10.36460/Kavaka/54/2020/30-37
- 5. **Kumar, J. and Atri, N.S. 2020.** Ectomycorrhizal biology of *Shorea robusta* roots in association with Russula Pers. from foothills of Himalayas, India. **Annals of Plant Sciences** Vol. 9, Issue 4, pp. 3798-3811. DOI: http://dx.doi.org/10.21746/aps.2020.9.4.3
- 6. **Kumar, J. and Atri, N.S. 2021.** Characterisation and identification of ectomycorrhizae formed by the species of Asproinocybe (Tricholomataceae) and Inocybe (Inocybaceae) with the roots of the tropical sal tree *Shorea robusta* (Dipterocarpaceae). **Ukrainian Botanical Journal** 78(2): 112-122. DOI:10.15407/ukrbotj78.02.112
- 7. **Kumar, J. and Atri, N.S. 2021.** Morphology and phylogeny of one new species of Lactarius (Family Russulaceae) associated with Shorea from the foothills of Himalayas, India. **Nova Hedwigia** 112(3-4): 413-427. DOI: 10.1127/nova_hedwigia/2021/0621

- 8. **Kumar, J. and Atri, N.S. 2022.** Two new varieties of Russula Pers. (Basidiomycota: Russulaceae) from Sal forests of Shiwaliks, India. **Journal of Threatened Taxa** 14(5): 21076-21083. DOI: https://doi.org/10.11609/jott.6721.14.5.21076-21083
- 9. **Kumar, J. and Atri, N.S. 2023.** Selection of efficient ectomycorrhizal fungi for improved growth, Biomass and nutrient uptake of Shorea robusta seedling. **Nordic journal of Botany 12:**e04024. DOI: https://doi.org/10.1111/njb.04024

Book Chapters

- 1. Kumar J., Malik N.A., Atri N.S. (2021) Aromatic and Medicinal Plants for Phytoremediation: A Sustainable Approach. In: Aftab T., Hakeem K.R. (eds) Medicinal and Aromatic Plants. Springer, Cham. https://doi.org/10.1007/978-3-030-58975-2 20
- 2. Malik N.A., Kumar J., Wani M.S., Tantray Y.R., Ahmad T. (2021) Role of Mushrooms in the Bioremediation of Soil. In: Dar G.H., Bhat R.A., Mehmood M.A., Hakeem K.R. (eds) Microbiota and Biofertilizers, Vol 2. Springer, Cham. https://doi.org/10.1007/978-3-030-61010-4_4

Awards:

- 1. Got meritorious award in matriculation.
- 2. Got "Dr. M.J. Thirumalachar Young Scientist Award" for best Presentation on February 2015 during National symposium on mycological research- Emerging Trends, Applications and Prospects and 41st Annual Meeting of Mycological Society of India.

FIP/Refresher/FDP

- 1. Participated in one month FIP (FIP-07) organized by UGC-HRDC, Himachal Pradesh University, Shimla, from 24-09-2021 to 23-10-2021.
- 2. Participated in One week FDP on Financial Administration organized under the aegis of IQAC, RGGDC, Chaura Maidan, held from 15-02-2021 to 20-02-2021.
- Participated in Induction training programme organized by State Council of Educational Research and Training (SCERT) Solan, Himachal Pradesh held from 25-07-2022 to 06-08-2022
- 4. Participated in One week FDP on "How to create your own MOOCs" organized by TLC Rananujan College, New Delhi, held from 28 May- 03 June, 2022.
- 5. Participated in One week faculty development programme organized by RGGDC, Chaura Maidan, Shimla-04 held from 23-03-2023 to 29-03-2023
- 6. Participated in UGC sponsored Two-Week Refresher Course in Botany (FDP-309) organized by Teaching Learning Centre, Ramanujan College, University of Delhi held from

Workshops/ Trainings:

- 1. One week workshop on "Techniques in Ectomycorrhizal Fungi- Collection, Characterization and Identification of Ectomycorrhizal Fungi; Isolation of Pure Cultures from fruiting bodies, roots and soil samples; in vitro mycorrhizal synthesis and Characterization and Identification of Ectomycorrhizal roots through morphology and anatomical features" under the guidance of Dr. V. Mohan, Scientist-F, Forest Protection Division, Institute of Forest Genetics and tree breeding, Coimbatore (Tamil Nadu)
- 2. Attended DAVCB-CUPB-INYAS workshop on Zero Waste, organised by DAV College Bathinda, Central University of Punjab, Bathinda and Indian National Young Academy of Sciences, New Delhi, from 16th -18th June 2020.
- **3.** Participated in the workshop on **Microbial Phylogeny-Bacteria**, **Fungi and Virus**, organised by BEST, Pune and SAGE University Bhopal, From 16 -18 December, 2021.
- **4.** Attended Glorius Science week workshop, funded by star college scheme, Department of Biotechnology, Ministry of Science and Technology, Government of India New Delhi, at GDC Sanjauli, held From 22nd to -28th February, 2024.