

## DR. GEETA SAXENA

Professor | geetasaxena@ss.du.ac.in

35 years of experience in Teaching Botany at University of Delhi. 40 years of Research experience in the areas of Mycology and Plant Pathology, Nematophagous fungi and Biological control.

### EDUCATION

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Ph. D Botany	Banaras Hindu University	1985
M.Sc. Botany	Banaras Hindu University	1980
B.Sc. (Hons.) Botany	Banaras Hindu University	1978
Certificate Course in German		
(Zertifikat Deutsch als Fremdsprache)	Goethe Institut ,Mannheim, Germany	1991

### FELLOWSHIPS AND AWARDS

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1. Post-doctoral fellow at Institute of Cell and Molecular Biology, University of Edinburgh, Scotland, U.K. 1995-96.
2. DAAD (German Academic Exchange Service) Post-doctoral fellow at Institut fur Systematische Botanik und Pflanzengeographie, Freie Universitat, Berlin, Germany, 1991-92.
3. UNESCO Young Scientist Award in the field of “Biotechnology-Mycology and Plant Pathology”, 1989.
4. Research Associate of Council of Scientific and Industrial Research, India at University of Delhi, 1987.
5. Senior Research fellow of Council of Scientific and Industrial Research, India at University of Delhi, 1985-86.

6. Junior Research fellow of Council of Scientific and Industrial Research, India at Banaras Hindu University, 1984-85.
7. Banaras Hindu University Research fellowship, 1982-83.
8. Banaras Hindu University prize for standing I in Botany at B.Sc. (Hons.) Pt III examination, 1978.

## RESEARCH GUIDANCE

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Dr. Renuka Rawat awarded Ph.D. from University of Delhi in 2000 on the thesis entitled 'Nematophagous fungi in Biocontrol'.

## RESEARCH PROJECTS

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1. Investigator of the Innovation project entitled "Solid state fermentation of urban waste into food, through *Pleurotus* cultivation" Project Code SSNC-301 financed by University of Delhi, 2015-16.
2. Investigator of the Innovation project entitled " Isolation, Identification and process optimization of fungal Lipases for their potential applications in industry" Project Code SSNC-201 financed by University of Delhi, 2013-15.
3. Principal Investigator of the major research project entitled "Biocontrol of Nematodes using Nematophagous fungi financed by University Grants Commission, Jun 1994- Aug 1999.

## RESEARCH PUBLICATIONS

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1. Geeta Prasad, P.R. Singh & R. Dayal (1984) "Studies in nematophagous fungi VI: Two new records from India". Nat. Acad. Sci. Letters, 7(12):363-365.  
ISSN 0250-541X
2. Geeta Prasad, P.R. Singh & R. Dayal (1984) "Studies in nematophagous fungi VII: Two new records from India". Proc. Nat. Acad. Sci. India, Section B: Biological Sciences, 54(III): 163-166. ISSN 0369-8211

3. Geeta Prasad & R. Dayal (1985), "Studies in nematophagous fungi IX: *Myzocyrtium papillatum* – a new record from India". Current Science, 54(6):286-287.

ISSN 0011-3891

4. Geeta Prasad & R. Dayal (1985), "*Stylopage rhyncospora* – nematophagous fungus from India". Science & Culture, 51(2): 51-52. ISSN 0036-8156
5. Geeta Prasad & R. Dayal (1986), "Studies in nematophagous fungi VIII: Two parasites on *Amphidorylaimus* sp." Proc. Nat. Acad. Sci. India, Section B: Biological Sciences, 56(B) I: 46-48. ISSN 0369- 8211
6. Geeta Prasad & R. Dayal (1986) "Studies in nematophagous fungi XI: *Meristacrum asterospermum* – a new record from India". Current Science, 55(6) : 321-322.

ISSN 0011-3891

7. Geeta Saxena & K.G. Mukerji (1986). "Formation of sclerotia in a soil strain of *Botrytis cinerea*". Plant Cell Incompatibility Newsletter, 18:28-32.
8. Geeta Saxena, R. Dayal & K.G. Mukerji (1987). "Interaction of nematodes with nematophagous fungi: Induction of trap formation, attraction and detection of attractants". FEMS Microbiology Ecology, 45 :319-327. ISSN 0168-6496
9. Geeta Saxena (1987) "Predaceous fungi". Botanica 37:11-13. ISSN 0045-2629.
10. N. Mittal, Geeta Saxena, R. Jagpal & K.G. Mukerji (1987). "Interaction between nematophagous and vesicular arbuscular mycorrhizal fungi". Plant Cell Incompatibility Newsletter, 19:54-59.
11. Geeta Saxena & K.G. Mukerji (1987). "Few nematophagous fungi from Varanasi soil". Proc. Nat. Sym. Fungal Ecol.: 39-46.
12. N. Mittal, Geeta Saxena & K.G. Mukerji (1988). "Few predators from Delhi soils". Journal of Recent Advances Applied. Sciences, 3 (1): 383-388. ISSN 0970-1990

13. N. Gupta, Geeta Saxena, V.P. Singh & K.G. Mukerji (1988). "Factors affecting distribution of nematophagous fungi in Delhi". *Acta Botanica Indica*, 16(1):46-50. ISSN 0379-508X.
14. Geeta Saxena, R. Dayal & K.G. Mukerji (1988), "Studies on colony interaction between nematophagous and some selected soil fungi". *Allionia*, 28:185-191. ISSN 0065-6429
15. Geeta Saxena, R. Dayal & K.G. Mukerji (1989), "*Arthrobotrys superba* as a mycopathogen" *Acta Botanica Indica*, 17:220-221. ISSN 0379-508X.
16. Geeta Saxena, R. Dayal & K.G. Mukerji (1989). "Nutritional studies on nematode-trapping fungi" *Folia Microbiologica*, 34(1):42-48. ISSN 0015-5632
17. N. Mittal, Geeta Saxena & K.G. Mukerji (1989). "Ecology of nematophagous fungi: Distribution in Delhi" *Journal of Phytological Research*, 2(1): 31-37. ISSN 0970-5767
18. Geeta Saxena, R. Dayal & K.G. Mukerji (1989). "Ecology of nematophagous fungi", *Journal of Recent Advances Applied. Sciences*, 4(2):624-632. ISSN-0970-1990.
19. Geeta Saxena, R. Dayal & K.G. Mukerji (1989). "Interaction between *Arthrobotrys musiformis* and some soil fungi". *Plant Cell Incompatibility Newsletter*, 21:49-58.
20. Geeta Saxena & K.G. Mukerji (1991). "Distribution of nematophagous fungi in Varanasi, India". *Nova Hedwigia*, 52(3-4):487-495. ISSN 0029-5035.
21. N. Mittal, M. Sharma, Geeta Saxena & K.G. Mukerji (1991). "Effect of VA Mycorrhiza on gall formation in tomato roots". *Plant Cell Incompatibility Newsletter*, 23:39-43.
22. N. Mittal, Geeta Saxena & K.G. Mukerji (1992). "Biological control of *Meloidogyne incognita* by *Paecilomyces lilacinus*". In: "Root Ecology and its Practical Applications", 3<sup>rd</sup> ISRR Symposium (Eds. L. Kutschera, E. Hubl, E. Lichtengger, H. Persson, M. Sobotik) Verein fur Wurrzselforschung, Klagenfurt, Austria, 547-550. ISBN 39500203-0-6.
23. N. Mittal, Geeta Saxena & K.G. Mukerji (1993). "Compatibility of nematophagous fungi and nematodes". *Plant Cell Incompatibility Newsletter*, 25 :31-34.

24. Geeta Saxena & G. Lysek (1993). "Observation of nematophagous fungi in natural soils by fluorescence microscopy and correlation with isolation". Mycological Research (Currently Fungal Biology), 97(8):1005-1011. ISSN 1878-6146.
25. Geeta Saxena & N. Mittal (1995), "Trap formation by conidia of nematode-trapping *Monacrosporium* spp". Mycological Research (Currently Fungal Biology), 99(7):839-840. ISSN 1878-6146.
26. N. Mittal, Geeta Saxena & K.G. Mukerji (1995). "Integrated control of root-knot disease in three crop plants using chitin and *Paecilomyces lilacinus*". Crop Protection, 14(8):647-651. ISSN 0261-2194.
27. J.W. Deacon & Geeta Saxena (1997). "Orientated zoospore attachment and cyst germination in *Catenaria anguillulae*, a facultative endoparasite of nematodes". Mycological Research (Currently Fungal Biology), 101(5):513-522. ISSN 1878-6146.
28. J.W. Deacon & Geeta Saxena (1998). "Germination triggers of zoospore cysts of *Aphanomyces euteiches* and *Phytophthora parasitica*". Mycological Research (Currently Fungal Biology) 102(1):33-41. ISSN 1878-6146.
29. N. Mittal, Geeta Saxena & K.G. Mukerji (1999) "Biological control of root-knot nematode by nematode-destroying fungi". In: From Ethnomycology to Fungal Biotechnology: Exploiting Fungi from Natural Resources for Novel Products. (Eds. J. Singh & K.R. Aneja), Kluwer Academic, Plenum Publishers USA, 163-171.
- ISBN 978-1-4615-4815-7
30. R. Rawat, A. Pandey, Geeta Saxena & K.G. Mukerji (1999) "Rhizosphere biology of root-knot diseased *Abelmoschus esculentus* in relation to its biocontrol". In: From Ethnomycology to Fungal Biotechnology : Exploiting Fungi from Natural Resources for Novel Products. (Eds. J. Singh & K.R. Aneja) Kluwer Academic, Plenum Publishers USA, 173-183. ISBN 978-1-4615-4815-7

31. Geeta Saxena (2008) "Observations on the occurrence of nematophagous fungi in Scotland". *Applied Soil Ecology*, 39: 352-357. ISSN 0929-1393.
32. Hemant Pandey, Apurwa Kestwal, Diksha Chauhan, Sangeeta Kumari, Vaishali Dhalwal, Gursharan J. Singh, Puja Singh, Parul Mann, Akanksha Sharma, Geeta Saxena, Anjana Kapoor and Bhoopander Giri (2015) "Isolation and screening of potential fungi and standardization of a process for the production of extracellular lipase". *DU Journal of Undergraduate Research and Innovation*, 1(1):116-123. ISSN 2395-2334.
33. P. Garg, Geeta Saxena, S. Kanodia, S. Gupta, V. K. Goel and S.K. Sagar (2016) "Conversion of dried fallen leaves of Ashoka tree (*Polyalthia longifolia*) into food by *Pleurotus* cultivation". *Global Journal of Applied Agricultural Research*, 6(1):1-3. ISSN 2248-9991.
34. P. Garg, Geeta Saxena, S. Kanodia, S. Gupta, V. K. Goel, Rajan, Gaurav, Siddhant, Mohini, Nidhi, Mohit, Ankush, Juned, Akanksha & Priyanka (2017) "Conversion of urban waste into highly nutritious food by *Pleurotus* cultivation". *IOSR Journal of Biotechnology and Biochemistry*, 3 (4): 15-18. ISSN 2455-264X.
35. Geeta Saxena (2021) "Scanning electron microscopic and energy dispersive X-ray spectroscopic studies of *Drechmeria coniospora*, an endoparasitic nematophagous fungus". *Sydowia: An International Journal of Mycology*, 74: 133-142  
ISSN: 0082- 0598, DOI 10.12905/0380.sydowia74-2021-0133.
36. B. Giri, R. Rawat, Geeta Saxena, P. Manchanda, Q.S. Wu & A. Sharma (2022) "Effect of *Rhizoglyphus fasciculatus* and *Paecilomyces lilacinus* in the biocontrol of root-knot nematode, *Meloidogyne incognita* in *Capsicum annuum* L." *Communicative & Integrative Biology*, 15(1) :75-87. ISSN: 1942-0889, DOI: 10.1080/19420889.2021.

## CHAPTERS IN EDITED BOOKS

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1. Geeta Prasad, R. Dayal & K.G. Mukerji (1986) "Nematophagous fungi". In: *Frontiers in Applied Microbiology Vol. II* (Eds. K.G. Mukerji, V.P. Singh & K. L. Garg) Print House. India, 257-280. ISBN 8185009201.
2. Geeta Saxena & K.G. Mukerji (1988) "Biological control of nematodes". In: *Biocontrol of Plant Diseases Vol. I* (Eds. K.G. Mukerji & K.L. Garg). C.R.C. Press Inc. U.S.A. 113-127. ISBN 0-8493-4595-2.
3. R. Dayal, Geeta Saxena & Abdul Rashid (1988). "Nematophagous fungi as biocontrol agents" – An overview". In: *Perspectives in Mycology and Plant Pathology*. Prof. B.S. Mehrotra festschrift (Eds. V.P. Agnihotri, A.K. Sarbhoy & Dinesh Kumar) Malhotra Publishing House, New Delhi, India, 546-553. ISBN 9788185048093
4. Geeta Saxena, N. Mittal, K.G. Mukerji & D.K. Arora (1991). "Nematophagous fungi in biological control of nematodes". In: *Handbook of Applied Mycology: Humans, Animals and Insects. Vol. II* (Eds. D. K. Arora, L. Ajello & K. G. Mukerji) Marcel Dekker Inc. New York, USA 707-733. ISBN 0-8247-8435-9.
5. N. Mittal, Geeta Saxena, K.G. Mukerji & R.K. Upadhyay (1996). "Biocontrol of nematodes by nematode-destroying fungi". In: *IPM System in Agriculture: Biocontrol in Emerging Biotechnology, Vol. II* (Eds. R.K. Upadhyay, K.G. Mukerji & R.L. Rajak ), Aditya Books Pvt. Ltd., New Delhi, India. 453-502. ISBN 81-85353-40-9.
6. Geeta Saxena & N. Mittal (1997). "Ecology of nematode - destroying fungi". In: *New Approaches in Microbial Ecology* (Eds. J.P. Tewari, Geeta Saxena, N. Mittal, I. Tewari & B.P. Chamola) Aditya Books Pvt. Ltd., New Delhi, India 39-85. ISBN 81-85353-37-9.
7. Geeta Saxena & N. Mittal (1999). "Nematophagous fungi with special reference to interaction with nematodes". In: *Advances in Microbial Biotechnoogy* (Eds. J. P. Tewari, T. N. Lakhanpal, J. Singh, R. Gupta & B. P. Chamola), APH Publishing Corporation., New Delhi, India 485-507. ISBN 81-7648-078-9.

8. Geeta Saxena (2004) "Biocontrol of nematode-borne diseases in vegetable crops". In: Disease Management of Fruits and Vegetables: Fruit & Vegetable Diseases. Vol. I (Ed. K.G. Mukerji) Kluwer Academic Publishers. The Netherlands 387-450.  
  
ISBN 1-4020-1976-9.
9. Geeta Saxena (2007) Nematophagous fungi as biocontrol agents of plant-parasitic nematodes". In: Management of Nematode and Insect-borne Plant Diseases. (Eds. Geeta Saxena & K.G. Mukerji,) The Haworth Press, Taylor & Francis Group, New York, 165-194. ISBN 978-1-56022-134-0. 387-450.
10. Geeta Saxena (2018) "Biological control of Root-knot and Cyst nematodes using Nematophagous fungi". In: Root Biology, Soil Biology 52 (Eds. B. Giri, R. Prasad & A. Varma). Springer International Publishing AG. Switzerland, 221-237.  
  
ISBN 978-3-319-75909-8.

## BOOKS EDITED

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1. "Recent developments in Biocontrol of Plant diseases" (1992) Eds. K. G. Mukerji, J. P. Tewari, D. K. Arora & Geeta Saxena, Aditya Books Pvt. Ltd., New Delhi, India, pp 195. ISBN 81-85353-11-5.
2. "New Approaches in Microbial Ecology" (1997) Eds. J.P. Tewari, Geeta Saxena, N. Mittal, I. Tewari & B. P. Chamola, Aditya Books Pvt. Ltd., Delhi, pp 642. ISBN 81-85353-37-9.
3. "Management of Nematode and Insect-borne Plant Diseases" (2007) Eds. Geeta Saxena & K.G. Mukerji, The Haworth Press, Taylor and Francis Group, New York, USA, pp 290. ISBN 978-1-56022-134-0.

## PAPER PRESENTATION – INTERNATIONAL

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1. Geeta Saxena & K.G. Mukerji (1990) "Distribution of nematophagous fungi in Varanasi, India", 4<sup>th</sup> International Mycological Congress, Regensburg, Germany, 28<sup>th</sup> Aug. – 3<sup>rd</sup> Sept. 1990.



2. Geeta Saxena, R. Dayal & K. G. Mukerji (1988) "Studies on colony interaction between nematophagous and some selected soil fungi." International Conference on Researches in Plant Sciences and its relevance to future. 7-11<sup>th</sup> March 1988 INSA, Delhi.
3. N. Mittal, Geeta Saxena & K.G. Mukerji (1997) "Biological Control of root-knot nematode *Meloidogyne incognita* by nematode-destroying fungi *Paecilomyces lilacinus* in *Lycopersicon esculentum*". International Conference "From Ethnomycology to Fungal Biotechnology" 15-16<sup>th</sup> Dec.1997 Holiday Home, Shimla.
4. R. Rawat, A. Pandey, Geeta Saxena & K.G. Mukerji, (1997) "Rhizosphere biology of *Abelmoschus esculentus* in the soil infested with root-knot nematode. International Conference "From Ethnomycology to Fungal Biotechnology" 15-16<sup>th</sup> Dec. 1997 Holiday Home, Shimla.

#### PAPER PRESENTATION –NATIONAL

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1. Geeta Prasad & R. Dayal (1982) "Three species of *Arthrobotrys* capturing nematodes" 52<sup>nd</sup> Annual Session of National Acad. of Sciences, India, 1982, Madurai.
2. Geeta Prasad & R. Dayal (1982) "Some Hyphomycetes preying on nematodes" 35<sup>th</sup> Annual Session of Indian Phytopathological Society, 27-29 Dec, 1982, CFTRI, Mysore.
3. Geeta Prasad & R. Dayal (1984) "Two species of endoparasites capturing nematodes" 36<sup>th</sup> Annual Session of Indian Phytopathological Society, 16-18 Feb, 1984, Hisar.
4. Geeta Prasad & R. Dayal (1984) "Nematophagous fungi: Two new records of *Myzocyttium*" 54<sup>th</sup> Annual Session of National Academy of Sciences, India 11-13 March 1984, Madurai.
5. Geeta Prasad & R. Dayal (1984) "Studies in nematophagous fungi X: *Arthrobotrys superba* – a mycopathogen. National Symposium on Soil Pest & Soil Organisms. 29-31 Oct, 1984, Banaras Hindu University, Varanasi

6. Geeta Prasad (1985) "Factors affecting occurrence of nematophagous fungi". National Symposium on Environment and Plant Diseases and 37<sup>th</sup> Annual Session of Indian Phytopathological Society, 8-10 Jan, 1985, Lucknow University, Lucknow.
7. Geeta Prasad & R. Dayal (1985) "Induction of Trap formation and attraction of nematodes towards nematophagous fungi." National Seminar on Recent Advances in Plant Pathological Research, 23-25 Sept., 1985 Banaras Hindu University, Varanasi.
8. Geeta Prasad, N.Srivastava & K.G. Mukerji (1986). Microbial Ecology in India. Indian Association for History Philosophy of Science. Vigyan Bharti 13:18-19.
9. Geeta Saxena (1986) "Food delicacy and microbes". National Seminar on interaction between researches in universities and industries. 9-11 Jul, 1986. Vigyan Bhawan, New Delhi.
10. Geeta Saxena (1987) "Few nematophagous fungi from Varanasi soil". National Symposium on Fungal ecology in relation to human welfare. 28-30 Nov. 1987, Osmania University, Hyderabad.
11. R. Rawat, Geeta Saxena, K.G. Mukerji, N.Mittal & Mamta Sharma (1997)" Biological control of root-knot disease in *Capsicum annum* using *Paecilomyces lilacinus* and *Glomus fasciculatum*." National Symposium on Microbes in Plant Improvement and Environment Protection. 23-24<sup>th</sup> Dec, 1997, University of Delhi, Delhi.
12. P. Garg, Geeta Saxena, S. Kanodia, S. Gupta, V. K. Goel, Gaurav, Rajan, Mohit Satija, Ankush Sharma, Junaid Ali, Priyanka, Akanksha, Nidhi, Siddhant and Mohini (2016) "Smart way of creating fertile soil by mushroom cultivation" National workshop on smart agriculture: A blend of ancient wisdom and modern technology, organized by Aditi Mahavidyalaya, University of Delhi, 29-31 March,2016. (Poster)
13. P. Garg, Geeta Saxena, S. Kanodia, S. Gupta, V. K. Goel, Gaurav, Rajan, Mohit Satija, Ankush Sharma, Junaid Ali, Priyanka, Akanksha, Nidhi, Siddhant and Mohini (2016) "Bioconversion of garden grass (*Cynodon dactylon*) into protein by mushroom

(*Pleurotus*) cultivation. "National conference in Chemistry: Environment and harmonious development, organized by Shyam Lal college, University of Delhi 7-8 Apr, 2016 .(Received Best Poster award).

14. B. Giri, B. Saxena and Geeta Saxena (2016) "Role of mycorrhizal fungi in mitigation and adaptation to global climate change" National conference on Climate Change adaptation and Sustainable Development, organized by Swami Shraddhanand College, University of Delhi 28-29 Sept, 2016.
15. P. Garg, Geeta Saxena, S. Kanodia, S. Gupta, V. K. Goel, Gaurav, Rajan, Mohit Satija, Ankush Sharma, Junaid Ali, Priyanka, Akanksha, Nidhi, Siddhant and Mohini (2016) " Sustainable Development through Mushroom cultivation" National conference on Climate Change adaptation and Sustainable Development, organized by Swami Shraddhanand College, University of Delhi, 28-29 Sept,2016. (Poster)
16. P. Garg, Geeta Saxena, S. Kanodia, S. Gupta, V. K. Goel, Gaurav, Rajan, Mohit Satija, Ankush Sharma, Junaid Ali, Priyanka, Akanksha, Nidhi, Siddhant and Mohini (2016) " Mushroom cultivation: An effective Bio-conversion technology for transforming Lignocellulosic waste into Protein rich food by sustainable agriculture" National seminar on Emerging issues of climatic change: Sustainability and economic implications, organized by Sri Aurobindo College, University of Delhi, 21-22 Oct ,2016. (Poster)
17. Geeta Saxena, P. Garg, S. Kanodia, S. Gupta and V. K. Goel (2016)" *Pleurotus* cultivation: An economical technology to convert garden waste ( grass - *Cynodon dactylon* )into a protein rich food". National Seminar on advances, breakthroughs, challenges and developments in Foodomics-2016" organized by Community College, Government College, Rajamahendravaram, East Godavari District, Andhra Pradesh, 10-11 Nov ,2016.
18. Geeta Saxena ( 2019) "Nematophagous fungi: Biocontrol agents of nematodes" in National Symposium on " Microbes and Nanotechnology in Sustainable environment" organized by Department of Botany, Kirori Mal College , University of Delhi and Indian Society of Analytical Scientists – Delhi Chapter, 7 Feb,2019.

## MEMBER OF LEARNED BODIES

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1. Life member of Delhi University Botanical Society, India
2. Life member of Association of Microbiologists of India

## TALKS AND VISITS-INTERNATIONAL

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1. Presented paper in 4<sup>th</sup> International Mycological Congress at University of Regensburg, Germany. August 28- September 3, 1990.
2. Delivered invited talk on “Nematophagous fungi: Distribution, interaction and application” at Institut für Systematische Botanik und Pflanzengeographie, Freie Universität Berlin, Germany. Nov, 1991.
3. Visited and learned techniques at Royal Veterinary and Agricultural University, Institute of Hygiene and Microbiology, Frederisberg C, Copenhagen, Denmark, May, 1992.
4. Delivered invited talk on “Ecology of nematophagous fungi and their uses in biological control” at Department of Microbial Ecology, University of Lund, Helgonavagen, Lund, Sweden, May, 1992.
5. Delivered invited talk on “Nematophagous fungi and their applications” at Institute of Cell and Molecular Biology, University of Edinburgh, Scotland, U.K. 9 April, 1996.
6. Delivered talk on “Encystment and germination of zoospores of *Catenaria anguillulae* on nematodes” in Scottish Agricultural College, Edinburgh, Scotland, U.K. 29 May, 1996.
7. Visited Julius Kuhn Institute, Federal Research Centre for Cultivated Plants, Berlin, Germany, June, 2008.
8. Visited Institut für Systematische Botanik und Pflanzengeographie, Freie Universität, Berlin, Germany, June, 2008.

## TALKS –NATIONAL

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1. Delivered a talk on “Nematophagous fungi: Biocontrol agents of nematodes”, Refresher Course in Life Sciences entitled “Microbial Biotechnology” held at CPDHE, University of Delhi, 23 Dec 1998 – 12 Jan 1999.
  2. Delivered a talk on “Microbes and their applications” at Kendriya Vidyalaya, Ashok Vihar, Delhi, to PGT teachers, September, 2008.
  3. Delivered Plenary lecture on “Fungal biological control agents: an alternative to pesticides” in National conference on Emerging Environmental challenges and sustainable development, organized by Swami Shraddhanand College, University of Delhi and Society for Environment and Development (India) 21-23 Mar, 2018.
  4. Delivered a talk on “Rashtriya Shiksha Niti -2020 aur Vigyan Vishay par Charcha – Paricharcha” organized by Swami Shraddhanand College and Shiksha Sanskriti Utthan Nyas, Delhi, 14 August, 2021.
  5. Delivered a talk on “An introduction to Mushrooms” in the “30 Hours Add – on course on Mushroom cultivation” organized by Department of Botany, Swami Shraddhanand College, 14 March – 7 April , 2022.

## OTHER CONTRIBUTIONS

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1. Teacher-in-Charge of Department of Botany, Swami Shraddhanand College in the years 1990-1991, 1999-2000, 2004-2005, 2014-2015 & 2020-2021.
2. Member/Convener of various committees like Academic Advisory, Admission, Cultural, Sports, Purchase, Verification, Women Development Centre, Library, Canteen, IQAC, Building, Garden , NAAC etc. of Swami Shraddhanand College.
3. Member of Theory syllabus revision and Practical guidelines framing committee for the papers (i) B.Sc.(Hons) Sem II c.c. Mycology and Phytopathology (ii) B.Sc. (Hons.) Botany / Life Sciences SEC Biofertilizers Practical

(iii) B.Sc. (Hons) Botany Sem III c.c. paper Economic Botany  
(iv) B.Sc. (Hons) Sem IV c.c. Molecular Biology  
(v) B. Sc. Applied Life Sciences Agrochemicals & Pest Control Sem V SEC paper Plant Health Diagnostics. 2017.

4. Member of Course Development Committee and Moderation Committee of Department of Botany University of Delhi. 2017.

5. Evaluator of Presentations by Participants in Orientation Program (OR-91) for University and College Teachers organized by CPDHE, University of Delhi, 14Dec, 2017.

6. Member of Organizing committee of "National conference on Emerging Environmental Challenges and Sustainable Development" jointly organized by Swami Shraddhanand College and Society for Environment and Development, New Delhi, India, 21-23 March 2018.

7. Member of revision committee of B.Sc. Applied Life Sciences with Agrochemicals and Pest management course titled "Plant Health Diagnostics and Management" (Course Code APLSS3) of University of Delhi in the light of UGC's Learning Outcome-Based Curriculum Framework (UGC-LOCF). May, 2019.

8. Member of Governing Body of Swami Shraddhanand College, 2020-2021.

9. Convener and Organizer of Webinar on "Medicinal Plants: Eternal source of health and wellness" by Prof. Anil Kumar Tripathi, Department of Biotechnology, Banaras Hindu University, organized by Department of Botany, Swami Shraddhanand College on 17 June, 2020.

10. Convener of Screening Committee for scrutinizing application for the post of Assistant Professors in Botany, Swami Shraddhanand College, Nov. 2020.

11. Member of Screening cum Evaluation Committee for Promotion in Dept. of Botany, Swami Shraddhanand College from Assistant Professor to Associate Professor, Nov. 2020.

12. Member of Selection Committee of Assistant Professor in Dept. of Botany and Environmental Studies, Swami Shraddhanand College, Feb. 2021.

13. Coordinator for practical guidelines of B. Sc. Hons Botany c.c. paper Microbiology & Phycology, March 2021.

14. Convener and Organizer of online series of talks entitled “Trichoderma and Its Potentials” on 29-09-2021; “Nanomycorrhiza: Second Generation of Research” on 30-09-2021 and “Forward Genetics to Understand Pathogenesis in Botrytis cineraria-A Broad Host Range Fungal Necrotroph” on 02-10-2021, during “Fungal Awareness Week” organized by Department of Botany and Department of Microbiology, Swami Shraddhanand College, 27 Sept. -2 Oct, 2021.

15. Member of Committee of Courses of Botany for Honours, Post-graduate and Research studies constituted by Faculty of Science, University of Delhi Dec 2021 –Nov 2023.

16. Co-convener and Organizer of “30 Hours Add-on course on Mushroom cultivation” organized by Department of Botany, Swami Shraddhanand College, 14 March – 7 April, 2022.

17. Convener of B. Sc. Hons Botany Generic Elective (GE) Botany Theory and Practical course content of paper under NEP 2022 Plant Health Diagnostics & Management, May 2022.

18. Convener of B. Sc. Hons Botany Discipline Specific Core Course (DSC) Theory and Practical course content of papers under NEP 2022 (i) Microbiology and Plant-Microbe Interactions (ii) Phycology (iii) Mycology, June 2022.

19. Convener of B. Sc. Hons Botany Discipline Specific Elective Course (DSE) Botany Theory and Practical course content of papers under NEP 2022 (i) Applied Phycology (ii) Plant Pathology, June 2022.

20. Member of B. Sc. program in Applied Life Sciences with Agrochemicals and Pest Management curriculum designing committee constituted by Faculty of Science under NEP 2022, Botany syllabus and Preamble, 2022 -2023.

21. Convener of Shatabdi Vriksharopan 2022 (Centennial Plantation) under the aegis of Azadi ka Amrit Mahotsav organized by Swami Shraddhanand College, 10 August 2022.

22. Convener of B. Sc. Hons Botany Discipline Specific Core Course ( DSC) Theory and Practical course guidelines of paper under NEP 2022 Microbiology and Plant – Microbe Interactions, May, 2023.

23. Judge in singing competitions of students in college cultural fest “ Shraddha Tarang” like Group singing, Solo singing , Indian Coir 2018, 2019, 2020 , 2022, 2023.

24..Organiser of Field and Industry Visit of students to Microbiology Division and Krishi Unnati Mela, IARI Yakult Danone India Pvt. Ltd Sonapat, National Institute of Food Technology Entrepreneurship and Management(NIFTEM) Sonapat, Mushroom Cultivation Centers, Alipur and Palla , Mother Dairy Plant , Patparganj 2018, 2019,2023.

## **REFRESHER COURSES**

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1. Participated in 4 weeks Refresher course in Biotechnology organized by Academic Staff College, Jawaharlal Nehru University, Delhi, 20 April- 15 May, 1998.
2. Participated in 3 weeks Refresher course in Life Sciences entitled Microbial Biotechnology” organized by CPDHE, University of Delhi, 23 Dec ,1998 -12 Jan.1999.

## **ADDITIONAL TRAINING**

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1. Learned techniques in a workshop on “Biology and Technology of Cultivable Mushrooms” at Institute of Life Long Learning, University of Delhi, South Campus Feruary18-19, 2014
2. Learned techniques in a workshop on “Biofertilizers” organized by Department of Botany, Zakir Hussain Delhi College, University of Delhi, July 14-16, 2016.
3. Participated in Course Workshop on “ Ayurveda and Nutrition” organized by Value Addition Courses Committee, Univ. of Delhi in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, Univ. of Delhi. 20 Oct. 2022.

## **PARTICIPATION IN CONFERENCES**

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1. Participated in Third International Symposium on Plant Pathology held at Division of Mycology & Plant Pathology I.A.R.I., New Delhi 14-18 Dec 1981.
2. Participated in 52<sup>nd</sup> Annual Session of National Academy of Sciences, India, Madurai, 1982.
3. Participated in 35<sup>th</sup> Annual Session of Indian Phytopathological Society held at CFTRI, Mysore, 27-29 Dec. 1982.
4. Participated in 36<sup>th</sup> Annual Session of Indian Phytopathological Society, Hisar, 16-18 Feb, 1984.
5. Participated in 54<sup>th</sup> Annual Session of National Academy of Sciences, India. Madurai, 11-13 March, 1984.
6. Participated in National Symposium on Soil Pest & Soil Organisms, Banaras Hindu University, Varanasi, 29-31 Oct, 1984.
7. Participated in National Symposium on Environment and Plant Diseases and 37<sup>th</sup> Annual Session of Indian Phytopathological Society, Lucknow University, Lucknow 8-10 Jan. 1985.
8. Participated in National Seminar on Recent Advances in Plant Pathological Research, held at Dept. of Mycology and Plant Pathology, Banaras Hindu University., Varanasi, 23-25 Sept, 1985.
9. Participated in National Seminar on interaction between Researches in universities and industries. Vigyan Bhawan, New Delhi, 9-11 July, 1986.
10. Participated in National Symposium on Fungal ecology in relation to human welfare. Osmania University, Hyderabad, 28-30 Nov, 1987.
11. Participated in International Conference on Researches in Plant Sciences and its relevance to future held at Indian National Science Academy. Delhi 7-11 March, 1988.

12. Participated in 4<sup>th</sup> International Mycological Congress, Regensburg, Germany, 28 Aug. – 3 Sept. 1990.
13. Participated in “National Environment Awareness Campaign workshop on Environmental Education: Biodiversity held at Swami Shraddhanand College, University of Delhi, 8-9 Feb, 1993.
14. Participated in “NEAC workshop in Environmental Education: Montreal Protocol” held at Swami Shraddhanand College, University of Delhi, 9-10 Jan, 1995.
15. Participated in “Scottish Mycology and Plant Pathology Club Meeting” held at Scottish Agricultural College, University of Edinburgh, Scotland, U.K. 29 May, 1996.
16. Participated in “Hundred Years of Mycological Research” held at Royal Botanical Garden, Edinburgh, Scotland, U.K. June, 1996.
17. Participated in “NEAC workshop on Environmental Education: Conservation of Medicinal Plants” held at Swami Shraddhanand College, University of Delhi, 5 June 1997.
18. Participated in International Conference “From Ethnomycology to Fungal Biotechnology” organized by Oscar Faber and Plenum Publishers, U.K. held at Holiday Home, Shimla, 15-16 Dec. 1997.
19. Participated in “National Symposium on Microbes in Plant Improvement and Environmental Protection” held at Dept. of Botany, University of Delhi, 23-24 Dec 1997.
20. Participated in National Symposium on Sustainable Aquaculture” held at Department of Botany, University of Delhi, 20-21 Feb, 1998.
21. Participated in Seminar on “Emerging Trends in Biotechnology” held at Gargi College, University of Delhi, 3-4 Nov, 1999.
22. Participated in “Golden Jubilee Symposium on Biotechnological Innovations in Conservation and analysis of Plant diversity” organized by Delhi University Botanical

Society, Dept. of Botany, Univ. of Delhi held at Indian National Science Academy, New Delhi, 7-9 Feb, 2001.

23. Participated in “Thermophiles 2001” International Conference on Biology and Biotechnology of thermophilic microbes”, held at Dept. of Microbiology, Univ. of Delhi South Campus, 3-7 Dec, 2001.
24. Participated in “National Convention on Transgenic Rapeseed-Mustard: An Assessment, held at India International Centre, New Delhi, 16-17 Jan, 2002.
25. Participated in “NEAC symposium on Water” – The Elixir of Life” held at Daulat Ram College, University of Delhi, 11-12 Dec, 2002.
26. Participated in National Seminar on “Climate change in India and its impact on plant diversity and productivity” organized by Delhi Univ. Botanical Society held at Institute of Economic Growth, 22-23 Dec, 2003.
27. Participated in National Seminar on “Women, Environment and Development “organized by Swami Shraddhanand College held at School of Environmental Studies, University of Delhi, 9 March, 2004.
28. Participated in Workshop on “The New Botany Syllabus – Challenges Ahead” organized by Centre for Science Education and Communication (CSEC), 29 Mar–8 Apr 2004.
29. Participated in “DBT sponsored popular lecture series” organized by S.S.N. College, University of Delhi held at School of Environmental Studies, Feb, 2005.
30. Participated in International Conference on “Environment and Development: Challenges and Opportunities” organized by S.S.N. College University of Delhi held at School of Environmental Studies, 4-6 March, 2005.
31. Participated in National Seminar on “Genetically modified organisms – Biosafety Aspects” organized by Delhi Univ. Botanical Society, University of Delhi, 10-11 March, 2005.

32. Participated in Symposium “Deliberations on Plant diseases management at the Crossroads” IPS Zonal meeting held at Division of Plant Pathology IRAI New Delhi, 13 Dec, 2005.
33. Participated in International Conference on Applied Phycology “Algae in Biotechnology and Environment” held at University of Delhi, 14-15 Feb, 2006.
34. Participated in National Seminar on Current Trends in Plant Sciences organized by Delhi Univ. Botanical Society, University of Delhi, 15-16 Feb, 2007.
35. Participated in” Workshop on Sustainable Resource Management” organized by DAAD (German Academic Exchange Service) at India International Centre (Annexe), New Delhi ,27April, 2007.
36. Participated in International Conference on “Biodiversity, Environment and Sustainability: Challenges for Future” organized by Swami Shraddhanand College, University of Delhi, 4-6 Sep, 2008.
37. Participated in 49 AMI Conference on “Microbial Biotechnology: Diversity, Genomics and Metagenomics” organized by the Association of Microbiologists of India and the American Society for Microbiologists at University of Delhi, 18-20Nov, 2008.
38. Participated in National Symposium o “ Biotechnology in the Post Genomic Era” organized by Sri Venkateshwara College, University of Delhi, 9-10 Apr, 2009.
39. Participated in 5<sup>th</sup> International Conference on Plant Pathology: Plant Pathology in the Globalized Era at Indian Agricultural Research Institute, 10-13 Nov, 2009.
40. Participated in BIOTIKOS’11 workshop on “Impact of Biotechnology on Man and Environment” at TERI University, 10Mar, 2011.
41. Participated in a workshop on “Biology and Technology of Cultivable Mushrooms” at Institute of Life Long Learning, University of Delhi, South Campus, 18-19 Feb, 2014.

42. Participated in “1<sup>st</sup> Himalayan Conclave-2015” organized by Institute of Bioresources and Sustainable Development, Department of Botany, University of Delhi, Himalayan Environmental Studies and Conservation Organization and Institute of Himalayan Bioresource Technology, India at University of Delhi, 9-10 Sep, 2015.
43. Participated in “National workshop on smart agriculture: A blend of ancient wisdom and modern technology” organized by Aditi Mahavidyalaya, University of Delhi, 29-30 Mach, 2016.
44. Participated in “National conference in Chemistry: Environment and harmonious development” organized by Shyam Lal college, University of Delhi 7-8 April, 2016.
45. Participated in a workshop on “Biofertilizers” organized by Department of Botany, Zakir Hussain Delhi College, University of Delhi, 14-16 July, 2016.
46. Participated in “National conference on” Climate Change adaptation and Sustainable Development” organized by Swami Shraddhanand College, 28-29 Sep, 2016.
47. Participated in “National seminar on Emerging issues of climatic change: Sustainability and economic implications” organized by Sri Aurobindo College, University of Delhi, 21-22 Oct, 2016.
48. Participated in “National Seminar on advances , breakthroughs, challenges and developments in Foodomics-2016” organized by Community College, Government College Rajamahendravaram, East Godavari District, Andhra Pradesh, 10-11 Nov ,2016.
49. Participated in “National conference on Emerging Environmental challenges and sustainable development” organized by Swami Shraddhanand College & Society for Environment and Development (India), University of Delhi, 21-23 Mar, 2018.
50. Participated in National Symposium on “ Microbes and Nanotechnology in Sustainable environment” organized by Department of Botany, Kirori Mal College , University of Delhi and Indian Society of Analytical Scientists – Delhi Chapter, 7 Feb,2019.

51. Participated in various online seminars, conferences and symposia organized by different national and international bodies. April 2020 –Sep 2021.

52.Participated in One day International ( Online ) conference on “Insights into the latest developments in Fungal Biology ( ILDFB – 2022)” organized by Dept. of Botany and Research & Development Cell in collaboration with Mahatma Hansraj Faculty Development Centre, Hansraj College, Univ. of Delhi. 3 Sept. 2022.