

Prof R. C. Dubey

Name : Prof. R.C. Dubey

Date of Birth : 5th January 1959

Educational Qualifications :

- Ph.D. (Botany) from Banaras Hindu University
- M.Sc (Botany) from Banaras Hindu University

Designation : Professor & Head

Specialisation : Soil Microbiology, Microbial Biotechnology

Employment History

- Professor, Department of Botany & Microbiology, Haridwar, Uttarakhand w.e.f. 12th September, 20004
- Reader, Department of Botany & Microbiology, Haridwar, Uttarakhand from 12th September, 1996 to 11th September, 2004
- Lecturer, Kumaun University, Nainital from 8th September, 1987 to 11th September, 11th September, 1996

Institution : Department of Botany & Microbiology
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Publications

Research Papers : 81

Books : 9

Research Experience : 26 Years

Number of Ph.Ds. Produced : 13

Sl. No.	Name	Year	Title of Ph.D. Thesis
1	H.S. Ginwal	1995	Studies on ectomycorrhizae in different Central Himalayan oak forests and their role in nursery practices
2	P.S. Rawat	1998	Biology of ectomycorrhiza associated with chir-pine and deodar in Kumaun Himalaya.
3	Mukund D. Behara	2000	Biodiversity characterisation at landscape level in subansari District, Arunachal Pradesh (Eastern Himalay) using remote sensing and GIS
4	Sunita Pandey	2001	Studies on fungitoxic properties of Neem extracts on <i>Macrophomina phaseolina</i> (Tassi) Goid. Causing root rot of soybean
5	Manoj Bhatt	2002	Studies on artificial co-inoculation of Deodar seedlings with some ectomycorrhizal fungi and mycorrhizosphere bacteria
6	Anurag Yadav	2002	Studies on artificial co-inoculation of Oak (<i>Quercus leucotrichophora</i>) seedlings with some ectomycorrhizal fungi and mycorrhizosphere bacteria
7	Shivani Bhatia	2002	Biological control of <i>Sclerotium rolfsii</i> causing collar rot of sunflower (<i>Helianthus annuus</i> L.) Through <i>Pseudomonas</i>
8	Himanshu Vashishtha	2002	Antimicrobial properties of some bryophytes against selected human pathogens
9	Sangita Saini	2005	Antimicrobial effects of essential oils of some higher plants
10	Anika Rana	2006	Antimicrobial properties of essential oils of some locally available medicinal plants
11	Varun Kumar	2007	Enhancement of productivity of <i>Sesamum indicum</i> through nutrient management and <i>Azotobacter</i> inoculation
12	Kamlesh Choure	2008	Role of microbial consortium and N, P, K & S in control of fusarial wilt of <i>Cajanus cajan</i>
13	Satyajeet Khare	2009	Isolation of bacilli from disease-suppressive soils and their role against deleterious phytopathogens
14.	Shailu Dalal	2010	Bioremediation of industrial effluents by phenol- and cyanide- degrading bacteria
15.	B.S. Grover	Registered 2005	Enhancement of penicillinase production by <i>Bacillus cereus</i> through nutrient supplements
16.	Harish Kumar	Registered 2007	Plant growth promoting rhizobia in enhancement of productivity of medicinal legume (<i>Trigonella foenu-graceum</i> L.)
19.	Pankaj Kumar	Registered 2007	Screening of plant growth promoting rhizobacteria from <i>Phaseolus vulgaris</i> L. and

			their exploitation for enhancement of growth and yield
21	Pradeep Kumar	Registered 2008	Biocontrol of <i>Macrophomina phaseolina</i> (Tassi) Goid. Causing charcoal rot in <i>Lycopersicon esculentum</i> L. by using multi-species bacterial consortium
22	Umesh Luthra	Registered 2009	Optimization of lipstatin production by <i>Streptomyces toxytricini</i> ATCC19813 in submerged fermentation
23	Raghvendra Pratap Singh	Registered 2010	Decipherization of Structural and Functional Diversity of Chickpea <i>Rhizobia</i>

Number of Students Registered : 06

Any honour/award : A 'Certificate of Merit' from the Vice Chancellor (B.H.U.)

Fellow of the Academic Bodies:

- Life member and Fellow of the Indian Botanical Society (FBS)
- Life member and Fellow of the Indian Phytopathological Society (FPSI)
- Life member and fellow of the International Society for Conservation of Natural Resources (FNRS)

Any other information:

- Associate Editor - The Journal of the Indian Botanical Society (JIBS) (2000-2003)
- Member (2005-2008) Editorial Board - Environmental Biology and Conservation
- Member – (2008) Academic and Evaluation Committee, State Biotechnology Programme, Govt of Uttarakhand.
- Convenor- (Oct, 2007) Biotechnology Fundamental Glossary- CSTT, HRD Ministry, Gov. of India

Seminar Organised:

1. Organising Secretary of the National Seminar on ***Bioinoculants for Holistic Sustainable Rural Development***, organised jointly with Deen Dayal Upadhyay Institute for Rural development, U.P. Govt., Oct., 23-25, 1998.
2. Co-coordinator of Workshop on ***Molecular and Applied Microbiology*** at Gurukul Kangri University, Sponsored by Uttarakhand state council for Science & Technology, Dehradun, Department of Science & Technology, 10th-19th Feb, 2008
3. Co-coordinator of Hands on Training on ***Microbial Fermentation & Inoculant Preparations at*** Gurukul Kangri University, Sponsored by State Biotechnology Programme, Government of Uttarakhand, (U.S. Nagar), 10th-19th Feb, 2008.
4. Joint-coordinator of a 15-days Summer School in ***Recent Trends in Biotechnology*** (Sept 16 - 30, 2008).

5. Joint-coordinator of a Workshop on *Microbial fermentation and microbial inoculant preparation for organic farming* (Feb. 6-10, 2009)
6. Organised *Gurukul Microbiology Alumni Meet* on Feb. 8, 2009

Seminar/ Conference Attended/ Delivered lectures:

1. 19th All India Botanical at Gurukul Kangri University, Dec. 26-28, 1996.
2. National Seminar on “Role of Microbes in Environmental Protection and rural development” at Shilong (NEHU), Oct. 23-25, 1998.
3. International Symposium on “Microbial Biotechnology for sustainable development and productivity” at R.D. University, Jabalpur, Nov. 14-16, 1998.
4. 22nd All India Botanical Conference and National symposium on “Recent advances in Plant Sciences” at Mithibai college, Mumbai, Oct. 23-25, 1999.
5. 23rd All India Botanical Conference and National Symposium on “Microbes and Human welfare (Microbe 2000)” at C.C.S. University, Meerut, Oct. 14-16, 2000.
6. 24th All India Botanical Conference at Osmania University, Hyderabad, Nov. 19-21, 2001.
7. National Seminar on “Plant and Microbe” at Rajasthan University, Rajasthan, March, 15-16, 2002.
8. 25th All India Botanical Conference at MJP Rholikhand University, Bareilly, Oct. 26-28, 2002.
9. Seminar on “Alternative fuel for new Millennium” in India at CDC, Haridwar, Feb. 8, 2003.
10. Refresher Course at M.J.P. Rholikhand University, Bareilly Oct. 10-12, 2004
11. Refresher Course at MS College Mothari, Bihar, Dec.31 – Jan. 6, 2004.
12. National conference on Biodiversity and sustainable development at MLK (PG) College, Balrampur, March 4-6, 2005.
13. National Seminar on “Biopesticides for Sustainable Agriculture” at Bilaspur, Oct. 11-13, 2006.
14. National Seminar on “Application of microbial inoculant for enhanced crop yield” at Gorakhpur, Nov. 18-19, 2006.
15. National Seminar on “Pseudomonas as potential PGPR for enhanced crop yield” at Bikaner Dec. 25-27, 2006.
16. National Seminar on “Plant pathogens: Exploitation and Management” at Jabalpur, Jan. 16-18, 2007.
17. National Seminar on “Biopesticides” at Ujjain Feb. 28-March, 1, 2007.
18. 30th All India Botanical Conference at Jiwaji University, Gwalior, Nov. 28-30, 2008.
19. Act as Judge in National Teacher Conference at Dehra Dun, Sep. 2007.
20. Act as Judge in Bhartiya Vigyan Sammelan at Bhopal Nov. 23-26, 2007.
21. National Seminar on Mycotic diseases in 21st Century at Kanchipuram (T.N.) Feb. 28-29, 2008.
22. 11th Manipur Science Congress at Manipur University, Imphal, March, 28-30, 2008.
23. National Seminar on Biopesticides at Dolphin (PG) Institute, Dehra Dun, April, 16, 2009.
24. Delivered lecture in refresher course at Kumaun University, Nainital, Oct. 5, 2009.
25. Workshop on Microbial Technology and its Applications at FRI, Dehradun, Oct. 11, 2009
26. National Seminar on Green Revolution to Gene Revolution: GM crops at Nagpur, Jan. 2, 2010.
27. National Workshop on Recent Trends in Biotechnology at Vardhaman Mahavir Open University, Kota, Rajasthan, March, 8-10, 2010.

Books Published: 09

1. Sati, S.C.; Saxena, J. and R.C. Dubey 1997. *Himalayan Microbial Diversity*. Vol. I & Vol. II, Today and Tomorrow's Printers & Publishers., New Delhi.
2. Maheshwari, D.K.; Dubey, R.C.; Prasad, G. and Navneet. 2000. *Microbiology: Agriculture, Industry & Environment*. Bishen Singh Mahendra Pal Singh, Dehra Dun, p. 269.
3. Maheshwari, D.K. and Dubey, R.C. 2001. *Innovative Approaches in Microbiology*. Bishen Singh Mahendra Pal Singh, Dehra Dun, p. 485
4. Dubey, R.C. and Maheshwari, D.K. (2006). *Practical Microbiology*. 2nd ed., S. Chand & Co. Ltd, Ram Nagar, New Delhi, p. 352.
5. Dubey, R.C. 2006. *A Textbook of Biotechnology*. 4th ed., S. Chand & Co, Ram Nagar New Delhi, p. 732.
6. Maheshwari, D.K.; Dubey, R.C. and Kang, S.C. (eds) 2006. *Biotechnological applications of microorganisms- a techno-commercial approach*. I.K. International Publ. House P Ltd, New Delhi, p. 400.
7. Maheshwari, D.K. and Dubey, R.C. (eds) (2008). *Potential microorganisms for sustainable Agriculture*. I.K. International Publ. House P Ltd, New Delhi, pp. 483.
8. Maheshwari, D.K., Dubey, R.C. and Saravanamuthu, R. (eds) (2010). *Industrial Exploitation of Microorganisms*. I.K. International Publ. House P Ltd, New Delhi, pp. 436.
9. Dubey R.C. and Maheshwari, D.K. 2010. *A Textbook of Microbiology*. 3rd ed., S. Chand & Co, Ram Nagar, New Delhi, p. 1034.

Research/Review Papers: 81

1. Dubey, R.C. and Dwivedi, R.S. 1985. Toxicity of cadmium on the growth of *Macrophomina phaseolina* causing root rot of soybean as influenced by kaolinite, ph, zinc and manganese. *Proc. Indian Natl Sci. Acad.* B51: 259-264.
2. Dubey, R.C. and Dwivedi, R.S. 1986. Destructive mycoparasitic behaviour of *Fusarium solani* (Mart) Appl & Wool. Against *Mucor spinosus* van Tiegh. *Microbios Letters*. 32: 123-127.
3. Dwivedi, R.S. and Dubey, R.C. 1986. Effect of volatile and non-volatile fractions of two medicinal plants on germination of *Macrophomina phaseolina* sclerotia. *Trans Br. Mycol. Soc.* 87: 326-328.
4. Dwivedsi, R.S. and Dubey, R.C. 1987. Effect of soil solarization on population dynamics of *Macrophomina phaseolina* and general soil mycoflora. *Int. J. Tropical Plant Diseases*.5: 147-152.

5. Dwivedi, R.S. and Dubey, R.C. 1987. Effect of fungicides on survival of *Macrophomina phaseolina* in soil and in soybean stems in soil. *Int. J. Tropical Plant Disease*. 5: 67-73.
6. Mishra, R.C.; Dubey, R.C. and Dwivedi, R.S. (1987) Some new records of parasitic fungi. *Proc. Natl. Acad. Sci. India*. 57B: 319-320.
7. Dubey, R.C. and Dwivedi, R.S. 1987. Effect of heavy metals on seed germination and seedling growth of soybean. *Natl. Acad. Sci. Letters*. 10: 121-123.
8. Dubey, R.C.; Pandey, G.K.; Mishra, R.C. and Dwivedi, R.S. 1987. Stem blight and fruit rot of *Solanum incanum* caused by *Phomopsis vexans* - a new record. *Proc. Natl. Acad. Sci. India*. 57B: 197-198.
9. Dubey, R.C. and Dwivedi, R.S. 1988. Antagonism between *Macrophomina phaseolina* and some rhizosphere microfungi of soybean. *Int. J. Tropical Plant Diseases*. 6: 89-94.
10. Dubey, R.C. and Dwivedi, R.S. 1988. Antifungal properties of some higher plants against charcoal rot of soybean. *Natl. Acad. Sci. Letters*. 11: 1-2.
11. Dubey, R.C. and Dwivedi, R.S. 1988. Effect of heavy metals on growth and survival of *Macrophomina phaseolina* (Tassi) Goid. *Biology Fertility Soils*. 6: 311-314.
12. Dubey, R.C. and Dwivedi, R.S. 1988. Antifungal properties of some phenolic compounds against *Macrophomina phaseolina*, a root rot pathogen of soybean. *J. Sci. Res. (BHU)*. 38: 109-112.
13. Dubey, R.C. and Dwivedi, R.S. 1988. Population dynamics of microfungi in root region of soybean with reference to growth stages and environmental factors. *J. Indian Bot Soc*. 67: 154-162.
14. Dubey, R.C. and Dwivedi, R.S. 1988. Essentiality of trace elements for the growth of *Macrophomina phaseolina* causing root rot of soybean. *Proc. Natl. Acad. Sci. India*. 57BII: 271-274.
15. Dubey, R.C. and Dwivedi, R.S. 1988. *In vitro* production of pectolytic, cellulolytic, amylolytic and proteolytic enzymes by *Macrophomina phaseolina*. *Acta Botanica Indica*. 16: 175-181.
16. Dubey, R.C.; Pandey, L; Gaur, Rajeev and Dwivedi, R.S. 1988. Effect of plastic mulching of soil on survival of *Macrophomina phaseolina*. *Natl. Acad. Sci. Letters*. 11: 175-181.
17. Gaur, Rajeev; Pandey, L. And Dubey, R.C. 1989. A new record of *Macrophomina phaseolina* on *Uraria picta* from India. *Acta Botanica Indica*. 17: 132.
18. Dubey, R.C. 1989. Effect of some antibiotics on *Macrophomina phaseolina*, a charcoal rot fungus of soybean. *Hindustan Antibiotic Bull*. 31(1-2): 38-39.

19. Dwivedi, R.S.; Dubey, R.C. and Dwivedi, S.K. 1989. Biology of the rhizosphere with reference to microbial interactions. In *Plant-Microbe Interactions* (ed. K.S. Bilgrami), *Focal Theme (Botany), ISCA Symposium 1987*, pp. 217-238, Narendra Publ. House, Delhi.
20. Pandey, L; Tripathi, D.S.; Dubey, R.C. and Mishra, R.C. 1990. Two new records of parasitic fungi on solanums from India. *Acta Botanica Indica*. 18: 18.
21. Gaur, Rajeev; Mishra, S. And Dubey, R.C. 1990. Cellulase activity at different sites in two fungal species, *Trichoderma harzianum* and *Penicillium funiculosum*. *Acta Botanica Indica*. 18: 141-143.
22. Dubey, R.C. 1991. Effect of pesticides on saprophytic survival of *Macrophomina phaseolina* in soybean stems in soil. *Acta Botanica Indica*. 19: 36-40.
23. Dubey, R.C. 1991. Fungicidal effect of essential oils of three higher plants on sclerotia of *Macrophomina phaseolina*. *Indian Phytopath.* 44: 241-244.
24. Dubey, R.C. and Dwivedi, R.S. 1991. Fungitoxic properties of some plant extracts against vegetative growth and sclerotial viability of *Macrophomina phaseolina*. *Indian Phytopath.* 32: 275-279.
25. Dubey, R.C.; Pandey, L. And Gaur, Rajeev. 1992. On some aspects of microbial activity in soil. In *Microbial Activity in the Himalaya* (ed. R.D. Khulbe), pp. 53-82, Shree Almora Book Depot.
26. Dubey, R.C. 1992. Effect of soil solarization on survival of *Macrophomina phaseolina* in fungicide-amended and unamended soils. *Tropical Sci.* 32: 275-279.
27. Pandey, R.R.; Arora, D.K. and Dubey, R.C. 1993. Antagonistic interactions between fungal pathogens and phylloplane fungi of guava. *Mycopathologia*. 124: 275-279.
28. Ginwal, H.S.; Rawat, P.S.; Singh, R.P. and Dubey, R.C. 1993. Distribution of ectomycorrhizae in Central Himalayan Deodar forests in relation to soil depth. *Indian J. Tropical Biodiversity*. 1: 81-87.
29. Ginwal, H.S.; Rawat, P.S.; Singh, R.P. and Dubey, R.C. 1994. Occurrence of *Loranthus* spp. On oak in Kumaun Himalaya. *Indian Forester*. 120 (3): 248-253.
30. Sah, R.; Shail, S. And Dubey, R.C. 1994. Fungistasis and community dynamics of microfungi in soils of banj-oak, chir-pine and cypress forests in Kumaun Himalaya. *Int. J. Tropical Plant Diseases*. 12 (2): 159-169.
31. Dubey, R.C. and Kaur, Rajendra 1995. Antagonistic activities against *Sclerotium rolfsii* of some fungi from sclerotial surfaces and rhizosphere of soybean. *J. Indian Bot. Soc.* 74: 135-138.
32. Dubey, R.C. and Negi, C.M.S. 1995. Seasonal occurrence of VA-mycorrhizal fungi on roots of cypress trees in relation to edaphic factors. *Acta Botanica Indica*. 23: 173-175.

33. Mer, G.S. and Dubey, R.C. 1996. Formation of sclerotial spawn, conidia and fruiting body initials in *Morchella esculenta*. *Vasundhara*. 1: 35-38.
34. Ginwal, H.S.; Dubey, R.C. and Singh, R.P. 1996. Diversity of ectomycorrhizal fungi in different Himalayan oak forests. *Annals Forestry*. 4(1): 65-69.
35. Dubey, R.C. and Pandey, Sunita. 1997. Microbial decomposition of two coniferous leaf litter in Kumaun Himalaya. *J. Indian Bot. Soc.* 75: 83-85.
36. Shail, S. And Dubey, R.C. 1997. Seasonal changes in microbial community in relation to edaphic factors in banj-oak and chir-pine forests of Kumaun Himalaya. In *Himalayan Microbial Diversity* (eds. Sati, S.C., Saxena, J. And Dubey, R.C.), pp. 381-391, Today and Tomorrow's Printers & Publ., New Delhi.
37. Dubey, R.C. and Ginwal, H.S. 1997. Prospects of mycorrhizal fungi in the Himalaya: forms, function and management. In *Himalayan Microbial Diversity*. Today and Tomorrow's Printers & Publ., New Delhi, pp. 317-338.
38. Pandey, R.R.; Arora, D.K. and Dubey, R.C. 1997. Effect of environmental conditions and inoculum density on infection of guava fruits by *Colletotrichum gloeosporioides*. *Mycopathologia*. 137: 165-172.
39. Dubey, R.C.; Pandey, Sunita and Tripathi, Pramila. 1998. Influence of nutrients on formation and growth of ectomycorrhiza. In *Trends in Microbial Exploitation*, (ed. Bharat Rai, R.S. Upadhyay and N.K. Dubey), International Society for Conservation of Natural Resources, Varanasi, pp 56-70.
40. Dubey, R.C. and Pandey, Sunita. 1998. Effect of pH, temperature and the fungicide Bavistin on cellulase activity of *Macrophomina phaseolina*. *J. Indian Bot. Soc.* 77. 243-244.
41. Dubey, R.C.; Shail, Sushma and Sah, Rashmi. 1998. Prospects of soybean cultivation in agricultural economy of India. In *Managing Agriculture for Better Tomorrow*. (ed. D.C. Pande), M.D. Publications, New Delhi, pp.435-446.
42. Maheshwari, D.K. and Dubey, R.C.. 1999. Hyperthermophiles: trends and prospects: In *Microbial Biotechnology for Sustainable Development and Productivity*, (ed. R.C. Rajak), Scientific Publ, Jodhpur, pp. 262-272.
43. Gupta, C.P.; Sharma, A.; Dubey, R.C. and Maheshwari, D.K. 1999. *Pseudomonas aeruginosa* GRC₁ as a strong antagonist of *Macrophomina phaseolina* and *Fusarium oxysporum*. *Cytobios*. 99: 183-189.
44. Dubey, R.C.; Saxena, J. And Pandey, N. 2000. Mycoparasitism among some seed-borne fungi. *Indian Phytopath.* 53: 109-111.
45. Dubey, R.C.; Sharma, V.K and Pandey, Sunita. 2000. Biocontrol potential of some fungicide-tolerant soil fungi against *Rhizoctonia solani* causing rot of soybean. In *Microbiology: Agriculture, Industry & Environment*. Pp. 107-113, Bishen Singh Mahendra Pal Singh, Dehra Dun.

46. Dubey, R.C. and Upadhyay, R.S. 2001. Survival and control of *Macrophomina phaseolina*. In *Innovative Approaches in Microbiology*. (eds. D.K. Maheshwari and R.C. Dubey), pp. 169-190, Bishen Singh Mahendra Pal Singh Dehra Dun.
47. Sharma, V.K.; Roshan Lal; Gupta, C.P.; Dubey, R.C. and Maheshwari, D.K. 2001. *Trichoderma (Gliocladium) virens*: biocontrol potential against pathogens. In *Innovative Approaches in Microbiology*. (eds. D.K. Maheshwari and R.C. Dubey), pp. 229-240, Bishen Singh Mahendra Pal Singh Dehra Dun.
48. Dubey, R.C. and Pandey, Sunita 2001. Efficacy of fungicides for the control of *Macrophomina phaseolina* causing root-rot of soybean. (eds. S.V.S. Chauhan and K.P. Singh), pp. 113-121, Print well Publ., Jaipur.
49. Gupta, C.P.; Dubey, R.C.; Kang, S.C. and Maheshwari, D.K. 2001. Antibiosis-mediated necrotrophic effect of *Pseudomonas* GRC₂ against two fungal plant pathogens. *Current Sci.* 81: 91-94.
50. Dubey, R.C.; Vashistha, H; Tripathi, Pramila and Tewari, S.D. and. 2001. Antifungal activities of three hepatics against *Macrophomina phaseolina*. *Indian Phytopath.* 54 (2): 264-266.
51. Gupta, C.P.; Sharma, A.; Dubey, R.C. and Maheshwari, D.K. 2001. Effect of metal ions on growth of *Pseudomonas aeruginosa* GRC₁ and siderophore and protein production. *Indian J. Exp. Biol.* 39: 1318-1321.
52. Yadav, A; Bhatt, M. And Dubey, R.C. 2001. Characterization of mycorrhizosphere bacteria isolated from deodar and oak seedlings from Kumaun Himalaya. *J. Indian Bot. Soc.* 80: 209-211.
53. Maheshwari, D.K., Dubey, R.C and Sharma V.K. 2001. Biocontrol effects of *Trichoderma virens* on *Macrophomina phaseolina* causing charcoal-rot of peanut. *Indian J. Microbiol.* 41: 251-256.
54. Behera, M.D.; Kushwaha, S.P.S; Roy, P.S; Srivastava, S.; Singh, T.P. and Dubey, R.C. 2002. Comparative structure and composition of coniferous forests in Subansari district, Arunachal Pradesh. *Curr. Sci.* 82: 70-76. **IF 0.6**
55. Gupta, C.P.; Dubey, R.C. and Maheshwari, D.K. 2002. Plant growth enhancement and suppression of *Macrophomina phaseolina* causing charcoal rot of peanut by fluorescent *Pseudomonas*. *Biology Fertility Soil.* 35: 399-405. **IF 1.087**
56. Deswal, V.K., Dubey, R.C. and Maheshwari, D.K. 2003 Isolation of plant growth-promoting strains of *Bradyrhizobium (Arachis)* sp. With biocontrol potential against *Macrophomina phaseolina* causing charcoal rot of peanut. *Curr. Sci.* 84: 443-448. **IF 0.694**
57. Rawat, P.S., Ginwal, H.S., Singh, R.P. and Dubey, R.C. 2003. Vertical distribution of ectomycorrhizae in deodar and chir pine forests in relation to their soil characteristics. *Indian Forester* 129: 624-630.

58. Dubey, R.C. and Kumar, R. 2003. Efficacy of azadirachtin and fungicides on growth and survival of *Macrophomina phaseolina* causing charcoal rot of soybean. *Indian Phytopath* 56(2): 216-217.
59. Bhatia Shivani; Bhatia, Shweta, Dubey, R.C. and Maheshwari, D.K. 2003. Antagonistic effect of fluorescent *Pseudomonas* PS I and PS II against *Sclerotium rolfsii* causing collar rot of sunflower. In *Proceedings Bioscience: Advances, Impact and Relevance* (ed. V.P. Singh), Deptt of Plant Sciences, MJP Rohilkhand Univ., Bareilly, pp. 117-124.
60. Bhatia, Shveta; Bhatia, Shivani, Dubey, R.C. and Maheshwari, D K. 2003. Antagonistic effect of fluorescent pseudomonads against *Macrophomina phaseolina* that causes charcoal rot of groundnut. *Indian J. Experimental Biol.*41: 1442-1446.
61. Bhatt, M.; Yadav, A. And Dubey, R.C. 2004. Mycorrhization helper bacteria and their role in nursery practices In *Microbial Biotechnology* (ed. P.C. Trivedi), Aaviskar Pub., Jaipur, pp. 316-328.
62. Bhatia, S.; Dubey, R.C. and Maheshwari, D.K. 2005. Enhancement of plant growth and suppression of collar rot of sunflower caused by *Sclerotium rolfsii* though fluorescent *Pseudomonas*. *Indian Phytopath.* 58: 17-24.
63. Kumar, B.; Dubey, R.C. and Maheshwari, D.K. 2005. Biocontrol of *Macrophomina phaseolina* : Prospects and constraints. In *Microbial Diversity: Current Perspectives and Potential Applications* (ed. T. Satyanarayana and B.N. Johri), I.K. International, New Delhi, pp. 471-492.
64. Bhatia, S; **Dubey, R.C.** and Maheshwari, D.K. 2005. Biological control of soil-borne sclerotial pathogens using fluorescent pseudomonads. In *Microbial biotechnology in Agriculture and Aquaculture*. Vol. I (ed. R.C. Ray), Oxford & IBH Publ. Co. New Delhi, pp. 377-404.
65. Sharma, Shiwani;. Jain, V.K; **Dubey, R.C.** and Maheshwari, D.K. 2005. Effect of *Glomus fasciculatum*, fluorescent *Pseudomonas* and carbenadzim on growth of tomato seedlings. In *Plant Biodiversity- Microbial Interactions and Environmental Biology*. ((eds. S.N. Chaturvedi and K.P. Singh), Aviskar publ., pp. 121-125.
66. Bhatt, M.; Yadava, A. And Dubey, R.C. 2006. Biotechnological approaches for improvement of mycorrhizal fungi and their application in nursery practices. In *Recent Advances in Mycological Research* (ed. S.C. Sati), I.K. International, New Delhi , pp. 227-246.
68. Kumar, B.; Joshi, K.K.; **Dubey, R.C.** and Maheshwari, D.K. 2006. Constraints in commercial bioinoculant production and their quality assurance. In *Commercial Exploitation of Potential Microorganisms* (eds. D.K. Maheshwari and R.C. Dubey), 1-24.
69. Gupta, C.P., Bhavesh Kumar, **R.C. Dubey**, and D.K. Maheshwari. 2006. Chitinase-mediated destructive antagonistic potential of *Pseudomonas aeruginosa* GRC1 against

Sclerotinia sclerotiorum causing stem rot of peanut. *Biocontrol*. 51, 821-835.

IF 1.805

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Research Projects (completed/in progress)

Title of research	Funding agency	Period duration (years)	Year of completion/to be completed	Whether PI or Co-PI
Microbial decomposition of coniferous leaf litter in the Kumaun Himalaya	UGC, New Delhi	2	1989-1991	PI
Occurrence, identification and screening of aquatic macrophytes for energy generation and through biomass production of some fuel wood species in substandard soil.	CS&T (UP)	3	1996-99	Co-Pi
Mass production and application of biopesticides to control bacterial infestation associated with soil seeds	CSIR, New Delhi	3	1998-2001	Co-Pi
Field trials for integrated nutrient management protocol (N,P,K & S and <i>Pseudomonas</i> , <i>Rhizobium</i> bacteria) for optimization of yield and quality of rapeseed/mustard	CSIR, New Delhi	2	2001-2003	Co-Pi
Integrated nutrient management protocol (N,P,K & S and <i>Pseudomonas</i> and nitrogen fixing bacteria) for optimization of yield and quality of sesame under field trials	CSIR, New Delhi	2	2003-2005	Co-Pi
Role of microbial consortium and N, P, K & S on control of fusarial wilt in <i>Cajanus cajan</i> and <i>Cicer arietinum</i> and improvement of protein quality and yield.	CSIR	3	2004-2006	Co-Pi
Role of Plant growth promoting Rhizobacteria in enhancement of productivity of certain medicinal plants of Uttaranchal.	UCOST (UK)	2	2006-2010	Co-Pi