


Title	Dr	First Name	Pavan	Last Name	Agrawal	
Designation	Associate Professor					
Dept. Name	Biotechnology					
Address:	G. B. Pant Institute of Engineering & Technology, Pauri, Garhwal, Uttarakhand					
Phone No.	9410704377					
Email	1.p_k_agarwal@rediffmail.com		2.pavan78agrwal@gmail.com			
Web Page (if any)						
Subjects Taught	Microbiology, Microbial Technology, Immunology, Genetics, Cell and Tissue Culture, Animal Biotechnology, Vaccine technology, Environmental Biotechnology					
Areas of Interest/Specialization	Microbial Biotechnology, Agriculture Biotechnology, Environmental Biotechnology					
Experience (in years)	Total	22				
	Industry	NA				
	Teaching	18				
	Research	14				
Educational Qualifications	UG	Zoology, Botany, Chemistry				
	PG	Microbiology				
	Doctorate	Biotechnology				
	Any other	NET Qualified				
Research Publications in Journals	<ol style="list-style-type: none"> 1. Agrawal PK, Upadhyay P, Shrivastatava, R, Sharma S, Garlapati, VK (2021) Evaluation of the Ability of Endophytic Fungi from <i>Cupressus torulosa</i> to Decolorize Synthetic Textile Dyes. <i>Journal of Hazardous, Toxic, and Radioactive Waste</i>. 25(1), 10.1061/(asce)hz.2153-5515.0000569 2. Bhatt A, Agrawal PK (2018) Studies on Ethno-veterinary Usages of Medicinal Plants by People in Garhwal Himalayan Region-A boon to Animal Husbandry. Journal of Pharmacognosy and Phytochemistry SP5: 149-153 3. Agrawal S, Bhatt M, Rai SK, Bhatt A, Dangwal P, Agrawal PK (2018) <u>Silver nanoparticles and its potential applications: A review.</u> Journal of Pharmacognosy and Phytochemistry 2018; 7(2): 930-937 					

4. Rajput K, Agrawal S, Sharma J, **Agrawal PK**(2017) Mycosynthesis of silver nanoparticles using endophytic fungus *Pestalotiopsis versicolor* and investigation of its antibacterial and azo dye degradation efficacy. **KAVAKA49**: 65-71
5. Chanyal S, **Agrawal PK** (2017) decolorization of textile dye by laccase from newly isolated endophytic fungi *daldinia* sp. **Kavaka (Published): 48(1): 33-41**
6. Mahfooz M, Dwedi S, Bhatt A, Raghuvanshi S, Bhatt M, Agrawal PK, (2017) Evaluation of Antifungal and Enzymatic Potential of Endophytic Fungi Isolated from *Cupressus torulosa* D. Don. *Int.J.Curr.Microbiol.App.Sci.* 6(7): 4084-4100
7. Kundan R , Raghuvanshi S, Bhatt A, Bhatt M, **Agrawal PK**(2017)Toluene Degrading Bacteria from the Rhizosphere of *Solanum melongena* Contaminated with Polycyclic Aromatic Hydrocarbon. *Int.J.Curr.Microbiol.App.Sci* 6(4): 2060-2079
8. Rajput K, Raghuvanshi S, Bhatt A, Rai SK, **Agrawal PK**(2017) A Review on Synthesis Silver Nano-Particles. *Int.J.Curr.Microbiol.App.Sci* 6(7): 1513-1528
9. sharma D, Pramanik A, **Agrawal PK** (2016) Evaluation of Bioactive secondary metabolites from endophytic fungus *Pestalotiopsis neglecta* BAB-5510 isolated from leaves of *Cupressus torulosa* D.Don. *3biotech.* 6(210): 1-10.
10. Verma J, A Bhatt, **Agrawal PK** (2016) In-vitro study on bioaccumulation and tolerance of heavy metals by endophytic fungi *Alternaria alternata* isolated from *Cupressus torulosa* D.don. *Octa Journal of Environmental Research* 4(2)-146:154
11. Bisht R, Bhatt A, **Agrawal PK**(2016) Antimicrobial, Antioxidant Activity and Phytochemical Analysis of An Endophytic Fungi *Penicillium oxalicum* Isolated from a Gymnosperm Tree *Cupressus torulosa* D.Don.Of Garhwal Region. **International Journal of Science, Engineering and Management (IJSEM).** **1(2): 90-95**
12. **Agrawal PK**, Chanyal S (2016) Preliminary screening for laccase producing endophytic fungi from *Cupressus torulosa* D.Don. **International Journal of Science , Engineering and Management (IJSEM) 1(2): 90-95**
13. Rajput K, A Bhatt, **Agrawal PK** (2016) Plant mediated biosynthesis, characterization and application of silver nanoparticles by leaves extract of *Cupressus torulosa*. *International Journal of Advanced Research.* 4(7): 1199-1207
14. Rajput K, Chanyal S , **Agrawal PK** (2016) Optimization of protease production by endophytic fungus, *Alternaria alternata* isolated from medicinal plant- *Cupressus torulosa* D.Don. *WJPPS*,5(7): 1034-1054.
15. Rinki Bisth, Deeksha Sharma, **Agrawal PK** (2016) Antimicrobial and Antidiabetic Activity of *Penicillium oxalicum* Isolated from *Cupressus torulosa*. *International Journal of Biotechnology and Biomedical Sciences* 2 (2), 119-122
16. Bisth R, Sharma D, **Agrawal PK** (2016) Antagonistic and antibacterial activity of endophytic fungi isolated from *Cupressus torulosa* D.don. *Asian Journal of Pharmaceutical and clinical research* 9 (3) : 282-288.
17. Bisth R, Chanyal S, **Agrawal PK** (2016) Antimicrobial and phytochemical analysis of leaf extract of medicinal fruit plants. *Asian Journal of Pharmaceutical and clinical research* 9(4): 131-136.
18. Upadhyay, P., Shrivastava, R. & Agrawal, P.K. Bioprospecting and biotechnological applications of fungal laccase. *3 Biotech* **6**, 15 (2016). <https://doi.org/10.1007/s13205-015-0316-3>

19. Agrawala S, Bhatt A, Rai SK, **Agrawal PK** (2015) physiochemical and microbiological analysis of ganga water at kanpur with special reference to bioremediation. Oct. Jour. Env. Res. Vol. 3(4): 264-271
20. Bhardwaj A, Sharma D, Jodan N, **Agrawal PK (2015)** Antimicrobial and Phytochemical screening of Endophytic Fungi isolated from spikes of *Pinus roxburghii*. *Archievs of Clinical Microbiology*. 6(3):1-9
21. **Agrawal PK**, Agrawal S(2015) *In vitro* antibacterial activity of methanolic extract from some herbal plants. **Journal of Biological science and scientific Oppinion**. 3 (3).
22. **Agrawal PK**, Kundan R, Agrawal S (2015) Characterization of *Pseudomonas* spp from rhizosphere of Tomato plants (*Lycopersicon esculentum*) and its efficacy on plant growth promotion. **Journal of Biological science and scientific Opinion**. 3 (3). 2
23. **Agrawal PK**, Agrawal S, Srivastav R(2015) Modern molecular approaches for analyzing microbial diversity from mushroom compost ecosystem. **3 Biotech**. 5(6): 853-866
24. Kundan R, Pant G, Jodan N, **Agrawal PK** (2015) plant growth promoting rhizobacteria: mechanism and current prospective. **Journal of fertilizer and pesticides** 6(2): 1-9
25. Bhardwaj A, Upadhyay P, Sharma D , **Agrawal PK (2015)** Optimization of culture condition for amylase production by *Penicillium frequentans* AVF2. *KAVAKA*. 44:45-49
26. **Agrawal PK**, Johri BN(2014) Phylogenetic characterization of plant growth promoting rhizobacteria from soil of Himalayan region. *Octa journal of Biological science*. 2(2):69-75
27. **Agrawal PK**, Agrawal S, Kundan R, Bhatt M(2014). Application and perspective of plant growth promoting rhizobacteria in development of sustainable agriculture. **International Journal of Current Research**. 6(10): 9044-9051
28. Bhardwaj A, Sharma D, **Agrawal PK (2014)** Isolation and Characterization of endophytic fungi from spikes of *Pinus roxburghii* growing in Himalayan region. **World journal of Pharmaceutical Research**. 3(9): 568-579
29. Pant G, **Agrawal PK** (2014) Isolation and characterization of Indole Acetic Acid (IAA) producing Plant growth promoting rhizobacteria from rhizospheric soil of *Withnia somnifera* . **Journal of biological and scientific opinion**. 2(1): 45-50
30. Bhardwaj A, **Agrawal PK (2014)**. Fungal endophytes: as a store house of bioactive compound. **World journal of Pharmacy and Pharmaceutical science**. 3(9): 228-237
31. **Agrawal PK (2014)** Microbial ecology of compost ecosystem: with special reference to mushroom compost. **Journal of biological and scientific opinion**. 2(1): 45-50
32. Pant G, **Agrawal PK**, O P Jangir (2014). Influence of vitamin-A on corneal regeneration in tadpoles. **International journal of pharmaceutical and drug analysis**, 2(7): 572-576
33. **Agrawal PK**, Agrawal S(2013) Characterization of *Bacillus* sp. strains isolated from rhizosphere of tomato plants (*Lycopersicon esculentum*) for their use as potential plant growth promoting Rhizobacteria. **International Journal of Clinical and Applied Microbiology**, 2(10): 406-417.
34. **Agrawal PK**, Agrawal S, Rai S, Chandra H(2013) Study of Genotypic diversity of Rhizobia from legume crops and its application as a bioinoculant in sustainable agriculture development. **Asian Journal of Experimental Biology**, 4 (3):437-441

	<p>35. Agrawal PK, Agrawal S, Singh U, Katiyar N, Verma SK (2012) Phenotypic Characterization of Rhizobia from Legumes and its Application as a Bioinoculant. International journal of agriculture technology, 8(2): 703-714</p> <p>36. Agrawal PK, Shruti Agrawal S , Verma SK(2011) Methods for studying microbial diversity from soyabean rhizosphere by phenotypic and molecular approach. Advances-in-applied-science 2(5):538-545</p> <p>37. Agrawal PK, Chaudhary DK, Prakash A, Johri BN (2011) Bacterial diversity in a bagasse-based compost prepared for the cultivation of edible mushrooms <i>Agaricus bisporus</i>. International journal of agriculture technology 7(5): 2103-2111</p> <p>38. Agrawal PK, Agrawal S, Verma SK, Singh SK , Shukla K (2011) Characterization of plant growth promoting rhizobacteria from soil of central and upper Himalayan region. International journal of applied biology and pharmaceutical technology 2(1): 363-369 .</p> <p>39. Singh AK, Singh SK, S K Verma, H.V. Singh, A.K. Mishra, Agrawal PK, A. Mathur and Md. A. Siddiqui (2011) Accumulation of Natural Antioxidants in Ferns Exposed to Mutagenic Stress. International Journal of Chemical, Environmental and Pharmaceutical Research 2(1): 52-55.</p> <p>40. Agrawal PK, Agrawal S, S K Verma, S K Singh, Shukla K(2011)Molecular Characterization of plant growth promoting bacteria from soil of central and upper Himalayan region (Published Asian Journal of Pharmaceutical and Clinical Research, 4(1) : 98-99 .</p> <p>41. Mathur A, R. Bhat, G.B.K.S. Prasad, V.K. Dua, S K. Verma, Agrawal PK (2010) Antimicrobial activity of some plants traditionally used as medicines against some pathogens. Rasayan Journal of Chemistry 3(4) :615-824.</p> <p>42. Choudhary DK, Agrawal PK, Johri BN(2009). Evaluation of functional activity of casing soil during growth cycle of mushroom <i>Agaricus bisporus</i> (Lange) Imbach employing community level physiological profile. Indian Journal of Microbiology 50(1): 19-26 .</p> <p>43. Choudhary DK, Agrawal PK, Johri BN (2009) Characterization of functional activity in composted casing amendments used in cultivation of <i>Agaricus bisporus</i> (Lange) Imbach. Indian Journal of Biotechnology 8: 97-109.</p>
Papers Published in Conference Proceedings	<p style="text-align: center;">National Conference</p> <ol style="list-style-type: none"> 1. Upadhyay P, Agrawal PK (2019) Evaluation of endophytic fungi from <i>Cucurbiturum torulosa</i> leaves for decolourization ability of textile synthetic dyes. <u>Poster presentation</u> at 13th Uttarakhand State Science and Technology Congress , Dehradun dated 26-28th February, 2019 2. Agrawal PK and Deek sha Sharma (2018) evaluation of bioactive secondary metabolites from endophytic fungus <i>Alternaria alternata</i> bab-5445 isolated from leaves of <i>Cucurbiturum torulosa</i> d.don. <u>Oral presentation</u> at 12th Uttarakhand State Science and Technology Congress , Dehradun dated 7-9th March, 2018 3. Shubham singh and Agrawal PK (20018) Evaluation of antimicrobial and phytochemical activity of edible mushroom (<i>PLEUROTUS OSTREATUS</i>) <u>Poster presentation</u> at 12th Uttarakhand State Science and Technology

Congress , Dehradun dated 7-9th March, 2018

4. **Arun Bhatt and Agrawal PK (2018)** GENETIC STUDIES ON CORRELATION AND DIVERSITY IN FABA BEAN (VICIA FABA L.) GENOTYPES UNDER MID HILL CONDITIONS OF UTTARAKHAND. Poster presentation at **12th Uttarakhand State Science and Technology Congress** , Dehradun dated 7-9th March, 2018
5. Sumit Kr Rai, Kavish Rajput **Agrawal PK (2016)** IN SILICO DRUG DESIGNING FOR NEISSERIA GONORRHOEAE USING DERIVATIVES OF ITS GENERIC DRUG Poster presentation at 10th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 9-11th February, 2016
6. Sheetal Chanyal **Agrawal PK (2016)** BIODEGRADATION OF NAPHTHALENE BY ENDOPHYTIC FUNGI ALTERNARIA ALTERNATA BAB 5446 ISOLATED FROM CUPRESSUS TORULOSA D. DON Poster presentation at 10th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 9-11th February, 2016
7. Sheetal Chanyal **Agrawal PK (2016)** Laccase catalyzed-dye detoxification by endophytic fungi daldinia sp.bab 5448 from *Cupressus torulosa* L. growing in pauri, garhwal region Poster presentation at 10th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 9-11th february, 2016
8. Rinky Bisht, and **Agrawal PK (2015)** Antibacterial activity of endophytic fungi daldina SP BAB 5448 associated with Cupressus torulosa d.don. Poster presentation at 10th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 9-11th february, 2016
9. Rishi Kundan, Shruti Agrawal and **Agrawal PK (2015)** Characterization of Pseudomonas spp from rhizosphere of tomato plant and its efficacy on plant growth promotion. Poster presentation at 9th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 26-28 february, 2015
10. Garima Pant and **Agrawal PK (2015)** Isolation and characterization of plant growth promoting rhizobacteria from rhizosphere of medicinal plant. Poster presentation at 9th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 26-28 february, 2015
11. Akanksha Bhardwaj, Deeksha Sharma, Pooja Upadhyay **Agrawal PK (2015)** Phytochemical screening of endophytic fungi isolated from spikes of *Pinus roxburghii*. Poster presentation at Mycological research-Emerging trends, application and prospects and 41st annual meeting on mycological society of India Punjabi University, patiyala dated 23-24 february, 2015
12. Akansha Bhardwaj, Rishi Kundan and **Agrawal PK (2014)** Antimicrobial activity of endophytic fungi. Poster presented in Workshop on Advance in Biotechnology and its application in conservation Biology organized by

Department of biotechnology, Dolphin PG institute of Biomedical and Allied science, Coloration with WII and ZSI, Dehradun dated 16-17 October, 2014.

13. Shruti Agrawal and **Agrawal PK** (2012) Characterization of Plant Growth Promoting Rhizobacteria from Tomato rhizosphere. Poster presentation at 7th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun
14. Shilpa Guleria, Shruti Agrawal and **Agrawal PK** (2011) Characterization of Plant Growth Promoting Rhizobacteria from Tomato rhizosphere. Poster presentation at 6th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS Almora.
15. Antara Roy, Purnima Sharma, Aditi Grover, **Agrawal PK**, Satish Kumar Verma(2011) Biodiversity of endophytic fungi isolated from aerial parts of *Calotropis procera*. Regional seminar on Current Trends in Pharmaceutical and Biopharmaceutical Industries at Graphic Era university, Dehradun May 23,2011, pg 38
16. Preeti, Manik Ghosh, Anita Gigoo, Neema Tufchi, **Agrawal PK** (2011) Study of biochemical properties of Medicinal plant *Adhatoda vasica* . Regional seminar on Current Trends in Pharmaceutical and Biopharmaceutical Industries at Graphic Era university, Dehradun May 23,2011, pg 39
17. **Agrawal PK**, Devendra K. Choudhary, Anil Prakash, Bhavdish N. Johri (2006) Effect of bacterial inoculum on mushroom yield. Poster presentation at 47th annual conference on Association of Microbiologist of India (2006) Bhopal.pg 255
18. Devendra K. Choudhary, **Agrawal PK**, Bhavdish N. Johri (2005) *In situ* characterization of bacterial community succession in casing soil based on community Level physiological Profile Poster presentation at 46th annual conference on Association of Microbiologist of India Hedrabad. pg 266
19. Devendra K. Choudhary, **Agrawal PK**, Anil Prakash, Bhavdish N. Johri (2005) bacterial community succession in mushroom compost ecosystem based on community Level physiological Profil Poster presentation at 75th annual session by National Acadmy of science, Pondicherry(December 8-9,) pg 2-3
20. Rawat S, **Agrawal PK**, Malik T, Kumar S, Maheshwari G, **Chandra H**, Dhewa T and B.N. Johri (2005). Fungal diversity and community succession in mushroom compost. National Symposium on Recent Advances in Sciences: A prospective at Dolphin (P.G.) Institute of Biomedical and natural Sciences, Manduwala, Dehradun, June 3-5,. pg.96.

International Conference

1. Deeksha Sharma, Pavan Kumar Agrawal (2015) Identification and characterization of Bioactive compounds from endophytic fungus *Penicillium oxalicum* isolated from *Cupressus torulosa* D.Don. of Himalayan region. **Poster Presentation:** 56th Annual conference on “Emerging discoveries on Microbiology” at Jawahar Lal Nehru University, New Delhi during December 7-10, 2015.Pg
2. Pavan Kumar Agrawal, Sumit Kumar Rai, Shruti Agrawal (2015) BIOREMEDIAL TECHNOLOGIES FOR TREATMENT OF POLLUTED GANGA WATER. Poster presentation: a National conference on monitoring

	<p>and Management of Drinking water quality & XXVIII annual conference of National Environmental Science academy, held at Uttarakhand State Council for Science and Technology, Vigyan Bhavan, Dehradun during 21-23 December, 2015. Pg</p> <ol style="list-style-type: none"> 3. Alok somvanshi, Pavan Kumar Agrawal, Pratibha saini and pooja upadhaya (2014) Actinomycetes isolated from soil and evaluate its antimicrobial activities for the antibiotic production: Preliminary study poster presentation at International Conference on Soft Computing Techniques for Engineering and Technology-2014 (ICSCTET-2014)" organized by Graphic Era Hill University, Bhimtal (Nainital-263132), Uttarakhand, India 4. Pavan K. Agrawal, Seema Rawat,Devendra K. Choudhary, Anil Prakash, Bhavdish N. Johri (2005) Functional and genetic diversity of bacteria in mushroom compost. <u>Poster presentation</u> at International conference on "Microbial Diversity: Current Perspectives and Potential Applications" New Delhi,pg 226 5. Devendra K. Choudhary, Pavan K. Agrawal, Bhavdish N. Johri (2005) Genotypic diversity of casing soil bacteria. Poster presentation at International conference on "Microbial Diversity: Current Perspectives and Potential Applications" New Delhi,Pg 86 6. Pavan K. Agrawal, Supriya Sharma, Sushma Rani. and. Bhavdish N. Johri (2003) Phenotypic and genotypic characterization of PGPRS from soils of Leh and Central Himalayas. <u>Poster presentation</u> at 6th International workshop on Plant Growth Promoting Rhizobacteria. Calicut. India.
<p>Books Authored/Book Volume Chapters</p>	<ol style="list-style-type: none"> 1. Book – Kumar N, Agrawal S, and Agrawal PK, (2009). Text book on microbiology (Pragati publication) 1. Book chapter- Rawat S, Agrawal PK, Choudhary DK, Johri,BN. (2005) Microbial Diversity and Community Dynamics of Mushroom Compost Ecosystem. In: Microbial Diversity: Current Perspectives and Potential Applications (Eds, T. Satyanarayana & B.N. Johri). IK International, Pvt, Ltd., New Delhi,. Pp. 181-206. 2. Agrawal PK, Srivastava S(2014) Molecular Marker In: advance in biotechnology (Eds Jyoti saxena, Indu ravi and Mamta Bhaunthiyal) Springer (Published) 3. Khandelwal I, Sharma A, Agrawal PK, Shrivastav R, (2016) Bioinformatics Database Resources. In Library and Information Services for Bioinformatics Education and Research. (Eds. Shri Ram) IGI Global Publisher (published). 4. Shruti Agrawal, Kavish Rajput, Agrawal PK (2017) Treatment of Ganga water pollution with special reference of bioremedial technologies: In WATER BIOLOGY. (Eds. D.R. KHANNA AND R. BHUTIANI. DISCOVERY PUBLISHING HOUSE, NEW DELHI (Published) pp 95-118. 5. Agrawal PK, Verma J, Srivastava R (2018) Bioremediation approach for degradation and detoxification of Polycyclic Aromatic Hydrocarbons. In Emerging and ecofriendly approach for waste water managements eds. Bhargawa R.N and Chowdhry P) Springer Nature. Pp 91-121 6. Ranghar S, Agrawal S, Agrawal PK (2019) Microbial products: Protein,

	enzyme, secondary metabolite and chemicals. In Microbial Interventions in Agriculture and Environment vol 1 Research Trends, Priorities and Prospects eds D. P. Singh, Vijai K. Gupta, Ratna Prabha Springer Nature (accepted)		
No. of Conferences	National	Attended	Organized
		20	
	International	6	
Research Guidance	Awarded	PG	Doctorate
		22	NA
	Undergoing	01	
Research Projects	Completed	Nil	
	Undergoing	Nil	
Awards & Distinctions	<ul style="list-style-type: none"> ❖ Junior research Fellow in Department of Microbiology from 2003, July – 2005, June. in College of Basic science & Humanities, G.B.P.U.A.T, Pantnagar, Uttrakhand, India. Project title: Ministry of Environment & Forest, GOI funded project entitled “Centre for Research on Bacteria & Archaea”, an All India Coordinated Project on Taxonomy. ❖ Senior Research Fellow in Department of Biotechnology from 2005, July - 2007, July Barkatullah University, Bhopal Project title: Indo-Swiss Collaboration in Biotechnology Project entitled “Rhizobacterial inoculants for low input wheat-based Cropping systems. ❖ Trainings Attended on ‘Soil Biofertilization’ at Research Institute of Organic Agriculture (FiBL), Frick, Switzerland from 2nd Aug-15th October, 2006. Funded by DBT, New Delhi 		
Administrative Assignments Handled	Head, from 1st January, 2008- October, 2011 in Department of Biotechnology, Sai Institute of Paramedical and Allied Sciences, Dehradun.		
Association with Professional Bodies	-		
Any other Achievements	-		