

Dr. Pavan Kr Agrawal, Ph.D, NET
Associate Professor, dep't of Biotech
GB, Pant Inst. of Engg. & Tech, Ghurdauri
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com

Career Objective

To make a mark for myself in the field of academic and research development and to provide my highest level of service to organization/society.

Professional experience

- **Working as Associate Professor** in Department of Biotechnology, G.B. pant Engineering college , Pauri, Garhwal from March, 2012 to till date.
- **Working as Assistant Professor and Head, from 1st August, 2008- October, 2011** in Department of Biotechnology, Sai Institute of Paramedical and Allied Sciences, Dehradun.
- **Working as Senior lecturer from 1st August, 2007 – July, 08** in Department of Biotechnology, Sai Institute of Paramedical and Allied Sciences, Dehradun.
- **Lecturer, September 2001-June, 2003** in Department of Microbiology and Biotechnology, Janta College, Bakewar (Etawah) ,C.S.J.M. University, Kanpur, U.P. India

Educational Achievement

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- **Ph. D in Biotechnology January, 2008** from Department of Biotechnology, Barkatullah University, Bhopal-462026, India (**Topic: Functional and Genetic characterization of bacterial isolates from mushroom compost**).
- **M. Sc. in Microbiology, September, 2001** from College of Basic Science and Humanities, G.B. Pant University of Agriculture and Technology, **Pantnagar**, Uttaranchal. India (**Topic: Phosphate solubilizing bacteria from soil of Central Himalayan region**).
- **B.Sc. in CBZ, August, 1998 from** B.N V. Degree College, Bundelkhand University, Jhansi, U.P. India Major subject- Zoology, Botany and Chemistry.

Research Experience

- **Trainings Attended:** Trainings Attended on ‘**Soil Biofertilization**’ at Research Institute of Organic Agriculture (FiBL), Frick, **Switzerland from 2nd Aug-15th October, 2006.**
- **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. (P.I. Prof. B.N. Johri)

- **Trainings Attended: DNA fingerprinting and Sequencing’** held in the Department of Microbiology, from **24th September, 03-1st October, 03** G. B. Pant University of agriculture & Technology, **Pantnagar**, India
- **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. (P. I. Prof. B.N. Johri)

Awards/Member

- Qualified **National Eligibility Test** for Assistant Professor in Microbiology 2004 conducted by ICAR, New Delhi, recognize by UGC/CSIR
- Reviewer of National academy of biological science, Annal Microbiology, Current Microbiology, Bioresource Technology, 3 Biotech etc.
- Appointed as an **External Examiner** in H.N.B Garhwal University, Srinagar, Garhwal, Uttarakhand, Kumaoun University, Nainital, Utrakhand Technical University

List of M.tech Biotech student supervised till July, 2018: Total no (20)

S.No.	Name of student and registration number	Thesis Title	Year of Completion
1.	Shubham Singh	Evaluation of bioactive compounds from mushroom <i>Pleurotus ostretus</i>	2018
2.	Sharad Raghuvanshi	Detoxification of Pulp and paper mill effluents by the fungi isolated from sludge of of pulp and paper mill effluents, Lalkaun	2017
3.	Rinki Bisht	Biological activities and identification of bioactive metabolites of endophytic fungi isolated from <i>Cupressus torulosa</i> D.Don growing in Pauri, Garhwal, region	2016
4.	Sheetal Chanyal	Evaluation of biocontrol potential of endophytic fungi isolated from <i>Cupressus torulosa</i> D.Don	2016
5.	Mahfooj	Antimicrobial activity of fungal endophytes isolated from <i>Cupressus torulosa</i>	2016
6.	Jyoti Verma	Degradation of polycyclic aromatic hydrocarbons by endophytic fungi isolated from <i>Cupressus torulosa</i> D.don	2016
7.	Kavish Rajput	Fungal and plant mediated biosynthesis of silver nanoparticles, characterization and applications	2016
8.	Ankita Sharma	Antibacterial and enzymatic activity of endophytic fungi	2015
9.	Deeksha Sharma	Extraction and identification of bioactive	2015

		compounds from endophytic fungi isolated from leaves of <i>Cupressus torulosa</i> L.	
10.	Pooja Upadhyay	Identification and optimization of dye decolorizing endophytic fungi from <i>Cupressus torulosa</i>	2015
11.	Rishi Kundan	Screening and characterization of Toluene degrading rhizobacterial Isolated from the rhizosphere of Brinjal Plant (<i>Solanum longena</i>)	2015
12.	Alok Somvanshi	Isolation and Characterization of bacterial strains from the polluted Ganga water for sewage degradation	2015
13.	Akansha bhardwaj	Antimicrobial and enzymatic activity of endophytic fungi isolated from <i>Pinus roxburghii</i>	2014
14.	Garima Pant	Isolation and characterization of plant growth promoting rhizobacteria from rhizosphere of Medicinal plant	2014
15.	Meghali Joshi	Assessment of PGPR from tomato (<i>Solanum lycopersicum</i>) rhizosphere	2014
16.	Neha Bhatt	Molecular diagnosis of human brain meningitis IGIB- CSIR, New Delhi, IGIB, New Delhi	2014
17.	Aditi Mondal	Agrobacterium mediated transformation of rice with mitogen activated protein kinase gene. NIPGR, NewDelhi	2013
18.	Vidushi Bhatt	Molecular characterization of selective population of oak (<i>Quercus leucotrichophora A. camus</i>) through PCR based molecular marker. FRI, Dehradun	2013
19.	Rohit Chamoli	Relative virulence and molecular variability of <i>Alternaria arborescence</i> isolates causing leaf spot disease in eucalyptus, FRI, Dehradun	2013
20.	Anil Unihal	Antagonistic interaction between fluorescent Pseudomonads & poplar pathogen. FRI, Dehradun	2013

Research Paper Published

Research Papers in International Journal (Published)

1. Shruti Agrawal, Manoj Bhatt, Sumit Kumar Rai, Arun Bhatt, Pranshu Dangwal and **Pavan Kumar Agrawal** (2018) Silver nanoparticles and its potential applications: A review. **Journal of Pharmacognosy and Phytochemistry** 2018; 7(2): 930-937
2. Kavish Rajput, Shruti Agrawal, Jyoti Sharma, and **Pavan Kr. Agrawal** (2017) Mycosynthesis of silver nanoparticles using endophytic fungus *Pestalotiopsis versicolor* and investigation of its antibacterial and azo dye degradation efficacy. **KAVAKA**49: 65-71

3. Sheetal Chanyal and **Pavan Kumar Agrawal** (2017) decolorization of textile dye by laccase from newly isolated endophytic fungi *daldinia* sp. **Kavaka (Published): 48(1): 33-41**
4. Mohd Mahfooz , Sushmita Dwedi, Arun Bhatt , Sharad Raghuvanshi, Manoj Bhatt P K Agrawal, (2017) Evaluation of Antifungal and Enzymatic Potential of Endophytic Fungi Isolated from *Cupressus torulosa* D. Don. *Int.J.Curr.Microbiol.App.Sci.* 6(7): 4100
5. Rishi Kundan, Sharad Raghuvanshi, Arun Bhatt, Manoj Bhatt, **P K Agrawal** (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
6. Kavish Rajput, Sharad Raghuvanshi, Arun Bhatt, Sumit Kumar Rai and **Pavan Kumar Agrawal** (2017) A Review on Synthesis Silver Nano-Particles. *Int.J.Curr.Microbiol.App.Sci* 6(7): 1513-1528
7. Deeksha sharma, Avijit Pramanik and **Pavan Kumar Agrawal** (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.
8. J Verma , A Bhatt, **PK Agrawal** (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
9. Rinky Bisht, arun Bhatt, **Pavan Kumar Agrawal** (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**
10. **Pavan Kumar agrawal**, Sheetal Chanyal (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**
11. K Rajput, A Bhatt, **PK Agrawal** (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
12. Kavish Rajput, Sheetal Chanyal, Pavan Kumar Agrawal (2016) Optimization of protease production by endophytic fungus, *Alternaria alternata* isolated from medicinal plant- *Cupressus torulosa* D.Don. *WJPPS* (published).
13. Rinki Bisth, Deeksha Sharma, Pavan kumar Agrawal (2016) Antimicrobial and Antidiabetic Activity of *Penicillium oxalicum* Isolated from *Cupressus torulosa*. *International Journal of Biotechnology and Biomedical Sciences* 2 (2), 119-122
14. Rinki Bisth, Deeksha Sharma, Pavan kumar Agrawal (2016) Antagonistic and antibacterial activity of endophytic fungi isolated from *Cupresus torulosa* D.don. *Asian Journal of Pharmaceutical and clinical research* 9 (3) : 282-288.
15. Rinki Bisth, Sheetal Chanyal, Pavan kumar Agrawal (2016) Antimicrobial and phytochemical analysis of leaf extract of medicinal fruit plants. *Asian Journal of Pharmaceutical and clinical research* 9(4): 131-136.

16. Pooja Upadhaya, Rahul Shrivastava, Pavan Kumar Agrawal (2016) Bioprospecting and Biotechnological Applications of Fungal Laccase. **3 Biotech 6(15): 1-12.**
17. Shruti Agrawala , Arun Bhatt , Sumit Kumar Rai , Pavan Kumar (2015) physiochemical and microbiological analysis of ganga water at kanpur with special reference to bioremediation. Oct. Jour. Env. Res. Vol. 3(4): 264-271
18. Akanksha Bhardwaj, Deeksha Sharma Nitesh Jodan and Pavan **Kr Agrawal (2015)** Antimicrobial and Phytochemical screening of Endophytic Fungi isolated from spikes of *Pinus roxburghii*. **Archievs of Clinical Microbiology.** 6(3):1-9
19. Pavan Kumar Agrawal, Shruti Agrawal (2015) *In vitro* antibacterial activity of methanolic extract from some herbal plants. **Journal of Biological science and scientific Opinion.** 3 (3).
20. **Pavan Kumar Agrawal,** Rishi Kundan, Shruti Agrawal (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
21. **Pavan Kumar Agrawal,** Shruti Agrawal, Rahul Srivastav (2015) Modern molecular approaches for analyzing microbial diversity from mushroom compost ecosystem. **3 Biotech. 5(6): 853-866**
22. Rishi Kundan, Garima Pant, Nitesh Jodan and **Pavan Kumar Agrawal (2015)** plant growth promoting rhizobacteria: mechanism and current prospective. **Journal of fertilizer and pesticides 6(2): 1-9**
23. Akanksha Bhardwaj, Pooja Upadhyay, Deeksha Sharma and **Pavan Kr Agrawal (2015)** Optimization of culture condition for amylase production by *Penicillium frequentans* AVF2. *KAVAKA.* 44:45-49
24. **Pavan Kumar Agrawal,** B N Johri (2014) Phylogenetic characterization of plant growth promoting rhizobacteria from soil of Himalayan region. *Octa journal of Biological science.* 2(2):69-75
25. **Pavan Kumar Agrawal,** Shruti Agrawal, Rishi Kundan, Manoj Bhatt (2014). Application and perspective of plant growth promoting rhizobacteria in development of sustainable agriculture. **International Journal of Current Research.** 6(10): 9044-9051
26. Akanksha Bhardwaj, Deeksha Sharma, **Pavan Kumar Agrawal (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
27. Garima pant and **Pavan Kumar Agrawal (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
28. Akanksha Bhardwaj and **Pavan Kumar Agrawal (2014).** Fungal endophytes: as a store house of bioactive compound. **World journal of Pharmacy and Pharmaceutical science.** 3(9): 228-237
29. **Pavan kumar Agrawal (2014)** Microbial ecology of compost ecosystem: with special reference to mushroom compost. **Journal of biological and scientific opinion.** 2(1): 45-50

30. Garima Pant, **Pavan Kumar Agrawal**, O P Jangir (2014). Influence of vitamin-A on corneal regeneration in tadpoles. **International journal of pharmaceutical and drug analysis**, 2(7): 572-576
31. **Pavan Kumar Agrawal** and Shruti Agrawal (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.
32. **Pavan Kumar agrawal** and Shruti agrawal , Sumit Rai and Harish Chandra (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
33. **Pavan Kumar agrawal**, Agrawal Shruti, Utkarsh Singh, Nidhi Katiyar and S K Verma (2012) Phenotypic Characterization of Rhizobia from Legumes and its Application as a Bioinoculant. **International journal of agriculture technology**, 8(2): 703-714
34. **Pavan K Agrawal**, Shruti Agrawal, and S K Verma (2011) Methods for studying microbial diversity from soyabean rhizosphere by phenotypic and molecular approach. **Advances-in-applied-science** 2(5):538-545
35. **Pavan Kumar Agrawal**, Devendra kumar Chaudhary, Anil Prakash, and Bhavdish N. Johri. (2011) Bacterial diversity in a bagasse-based compost prepared for the cultivation of edible mushrooms *Agaricus bisporus*. **International journal of agriculture technology** 7(5): 2103-2111
36. **Pavan K Agrawal**, Shruti Agrawal, S K Verma, S K Singh and Keshav Shukla. (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 .
37. Alok Kr Singh, S K Singh, S K Verma, H.V. Singh, A.K. Mishra, **Pavan K Agrawal**, Abhishek Mathur and Md Aslam Siddiqui (2011) Accumulation of Natural Antioxidants in Ferns Exposed to Mutagenic Stress. **International Journal of Chemical, Environmental and Pharmaceutical Research** 2(1): 52-55.
38. **Pavan K Agrawal**, Shruti Agrawal, S K Verma, S K Singh and Keshav Shukla (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 .
39. Abhishekh Mathur, R. Bhat, G.B.K.S. Prasad, V.K. Dua, S K. Verma and **Pavan K. Agarwal** (2010) Antimicrobial activity of some plants traditionally used as medicines against some pathogens. **Rasayan Journal of Chemistry** 3(4) :615-824.
40. Devendra K. Choudhary, **Pavan K Agrawal**, and Bhavdish N. Johri (2009). Evaluation of functional activity of casing soil during growth cycle of mushroom *Agaricus bisporus* (Lange) Imbach employing community level physiological profile. **Indian Journal of Microbiology** 50(1): 19-26 .
41. Devendra K. Choudhary, **Pavan K Agrawal**, and Bhavdish N. Johri (2009) Characterization of functional activity in composted casing amendments used in cultivation of *Agaricus bisporus* (Lange) Imbach. **Indian Journal of Biotechnology** 8: 97-109.

Book Chapter

1. Seema Rawat, **Pavan K Agrawal**, Devendra K. Choudhary, and Bhavdish N. Johri, Microbial (2005) 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. **Pavan kumar Agrawal and** Rahul Srivastava (2014). Molecular Marker In: advance in biotechnology (Eds Jyoti saxena, Indu ravi and Mamta Bhaunthiyal) **Springer (Published)**
3. Icxia Khandelwal, Aditi Sharma, **Pavan Kumar Agrawal**, Rahul Shrivastav, (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, **Pavan kumar Agrawal** (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. **Pavan Kumar agrawal** Jyoti Verma, Rahul Srivastava, (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

Book Published

1. Neeraj Kumar, Shruti Agrawal, and **Pavan K Agrawal**, (2009). Text book on microbiology (**Pragati publication**)

Participation in International Conferences

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) BIOREMEDIATION TECHNOLOGIES FOR TREATMENT OF POLLUTED GANGA WATER. **Poster presentation:** a National conference on monitoring 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

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. Poster presentation 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. Poster presentation at 6th International workshop on Plant Growth Promoting Rhizobacteria. Calicut. India.

Participation in National Conferences

1. **Pavan Kumar Agrawal and Deek sha Sharma (2018)** evaluation of bioactive secondary metabolites from endophytic fungus *Alternaria alternata* bab-5445 isolated from leaves of *Cupressus torulosa* d.don. Oral presentation at **12th Uttarakhand State Science and Technology Congress** , Dehradun dated 7-9th March, 2018
2. **Shubham singh and Pavan Kumar Agrawal (20018)** Evaluation of antimicrobial and phytochemical activity of edible mushroom (PLEUROTUS OSTREATUS Poster presentation at **12th Uttarakhand State Science and Technology Congress** , Dehradun dated 7-9th March, 2018
3. **Arun Bhatt and Pavan Kumar Agrawal (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
4. Sumit Kr Rai, Kavish Rajput Pavan Kumar Agrawal (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
5. Sheetal Chanyal Pavan Kumar Agrawal (2016) BIODEGRADATION OF NAPHTHALENE BY ENDOPHYTIC FUNGI ALTERNARIA ALTERNATA BAB 5446 ISOLATED FROM CUPRESUS TORULOSA D. DON Poster presentation at 10th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS, Dehradun dated 9-11th February, 2016
 6. Sheetal Chanyal Pavan Kumar Agrawal (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
 7. Rinky Bisht, and Pavan Kumar Agrawal (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
 8. Rishi Kundan, Shruti Agrawal and Pavan Kumar Agrawal (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
 9. Garima Pant and Pavan Kumar Agrawal (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
 10. Akanksha Bhardwaj, Deeksha Sharma, Pooja Upadhyay and Pavan Kumar Agrawal (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
 11. Akansha Bhardwaj, Rishi Kundan and Pavan Kumar Agrawal (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.
 12. Shruti Agrawal and **Pavan K. agrawal** (2012) Characterization of Plant Growth Promoting Rhizobacteria from Tomato rhizosphere. Poster presentation at 7th

UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS,
Dehradun

13. Shilpa Guleria, Shruti Agrawal and **Pavan Kr. Agrawal** (2011) Characterization of Plant Growth Promoting Rhizobacteria from Tomato rhizosphere. **Poster presentation** at 6th UTTARAKHAND STATE SCIENCE & TECHNOLOGY CONGRESS Almora.
14. Antara Roy, Purnima Sharma, Aditi Grover, **Pavan Kumar Agrawal**, 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
15. Preeti, Manik Ghosh, Anita Gigoo, Neema Tufchi, **Pavan Kumar agrawal** (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
16. **Pavan K. Agrawal**, 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
17. Devendra K. Choudhary, **Pavan K. Agrawal**, 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
18. Devendra K. Choudhary, **Pavan K. Agrawal**, 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
19. Seema Rawat, **Pavan Agrawal**, Tripti Malik, Sanjay Kumar, Gauri Maheshwari, **Harish Chandra**, Tejpal Dhewa 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.

NCBI Gene Bank sequence Deposit (Bacterial Culture):

AY871052-63, AY940671-77, AY960691-700, AY961036-41, AY927643-AY927650, and AY944464, AY961042-AY961047, AY961049-AY961053, AY961055-AY961059, AY961061, AY967718-AY967722, AY967724, DQ074746, DQ074751-DQ074752, DQ074754-DQ074757 (**Six Endophytic fungal Culture**): KT355727, KT355728 KT355729 KT355730, KT355731& KT355732

Technology Developed:

- ❖ Eighty Strains of Bacteria (*Bacillus* spp, *Arthrobacter arilati*, *Ochrobacter*, *Stenotrophomonas maltophilia*, *Alcaligenes* sp) in Microbial Type Culture Collection (MTCC) at Institute of Microbial Technology, Chandigarh.
- ❖ Genetic stock of various microbial strain isolated from soil, industrial effluent and plants leaves prepare and preserve in Glycerol stock at -20 °C

- ❖ Four strain of fungal endophytes having biodegradation ability of effluent submitted to NFCCI, Pune

Participation in Symposium, Seminar, Conference, Congress, Short term course and Workshop

1. Short Term Trainings Microbial Diversity for Human Welfare held at Department of Biochemical Engineering & Biotechnology Indian Institute of Technology Delhi under TEQIP III, from 9th April, 2018 to 11th April, 2018.
2. Short Term Trainings Eco-Technology for sustainable development sponsored by TEQIP II at GBPEC, Ghurdauri from 21st -25th Oct 2013
3. Short Term Trainings Advancements in Cloud Computing sponsored by TEQIP II at GBPEC, Ghurdauri from 27th -31st May, 2014
4. Technological revolution in Electrical Engineering sponsored by TEQIP II at GBPEC, Ghurdauri from 22nd -23rd May, 2014
5. Short Term Trainings Academic Excellence in Engineering Education sponsored by TEQIP II at GBPEC, Ghurdauri from 5th -6th May, 2014
6. Workshop on food poisoning: awareness challenges and strategies (2010) SIPAS, Dehradun organized by uttrakhand state Council for science & Technology.
7. BIOLOGIC' 10 lecture series on biotechnology (2010) Beehive college, Dehradun organized by uttrakhand state Council for science & Technology.
8. Workshop on Patent Awareness (2008), SIPAS, Dehradun organized by Ministry of HRD & PIC, Pantnagar.
9. 47th Annual conference on Association of Microbiologist of India (2006), Barkatullah University, Bhopal, India.
10. workshop on Patent Awareness (2004), G.B.P.U.A &T, Pantnagar Workshop on "GENE MINING FROM GENOMICS" (2004), G.B.P.U.A &T, Pantnagar
11. 6th International workshop on Plant Growth Promoting Rhizobacteria. (2003), Calicut, India
12. Workshop on Patent Awareness (2003), G.B.P.U.A &T, Pantnagar organized by Ministry of HRD & PIC, Pantnagar.
13. Workshop on Microbial Diversity (2001), Department of Microbiology, G.B.P.U.A&T, Pantnagar, India
14. 7th ISPBB National Symposium on 'Biotechnology for Sustainability in Agriculture' G.B.P.U.A &T, Pantnagar, (2000).

International Meetings Attended

1. ISCB SA-Biofertilizer Annual Meeting on "Rhizobacterial inoculants for low input wheat-based cropping systems" held at Pantnagar (India) on 6-9th March, 2007
2. ISCB SA-Biofertilizer Annual Meeting on "Rhizobacterial inoculants for low input wheat-based cropping systems" held at **Neuchtal, Switzerland on 8-10th October, 2006**

3. ISCB SA-Biofertilizer Annual Meeting on “Rhizobacterial inoculants for low input wheat-based cropping systems” held at Barkatullah University, Bhopal (India) 9- 11th Feb, 06
4. ISCB SA-Biofertilizer Interim Meeting on “Rhizobacterial inoculants for low input wheat-based cropping systems” held at TERI New Delhi, on 21st Oct, 05

National Meetings Attended

1. Brainstorming Session on Below ground Biodiversity with Special reference to cropping systems held at Barkatullah University, Bhopal (India) 10th March, 06
2. Microbial Diversity, 2005
3. Society of Biological Chemists, 2004

Computational skills and software Handled

Windows and Mac, MS-office (Word, Excel, Power Point), Adobe Photoshop etc., Statistical software: SPSS and excel, Photo-editing Software: Adobe Photoshop & Kodak 1D, Analysis of sequencing data using Internet: Clustal W, NCBI database search, BLAST and FASTA, Ribosomal Database Project. Use of Different Software: Analysis of DNA profiles using Total lab, Gel Compar vs 2.5, NTSYSpc package and DNAMAN version 4.0.



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(Dr. Pavan Kr. Agrawal)