

Mamta Baunthiyal
Associate Professor
Deptt. of Biotechnology
G B Pant Engineering College
Ghurdauri, Pauri Garhwal (Uttarakhand)
E-Mail: mamtabaunthiyal@yahoo.co.in

Employment

- Presently working as a Associate Professor in the department of Biotechnology, G B Pant Engineering college, Pauri Garhwal , Uttarakhand India (Since 2010)
- Earlier was Associate Professor in the department of Bioscience and Biotechnology , Banasthali University, Banasthali, Distt. Tonk, Rajasthan, India (From 1995-2010).
Undergraduate teaching experience 22 years
Postgraduate teaching experience 22 years

Education

- *Bansthali University, Banasthali, Rajasthan India*
Ph.D in Biotechnology, 2008, Ph.D thesis topic: Screening of local flora for bioremediation of fluoride rich soil and water.
- *Kurukshetra University, Haryana, India*
MSc. Biochemistry, 1994
BSc. Biology, 1992

Research Experience

Doctoral Research

Department of Bioscience and Biotechnology, Bansthali University, Banasthali, Rajasthan India. (Supervisor: Prof. Vinay sharma)

Social Research

Pioneered efforts to aware the nearby villagers about fluoride toxicity in their water sources. My research work is on fluoride phytoremediation. I created awareness among the local

villagers of Newai tehsil of Tonk district of Rajasthan, the area where soil and water sources are contaminated with fluoride. I gave lectures during NSS camps. I had fluoride testing ion selective electrode in my lab and I used to test all the samples that the villagers would bring in order to test the potability of the water.

Research Guidance

- One student has been awarded Ph.D in Biotechnology under my supervision. **Topic** of thesis is Molecular mapping of kernel dimension traits in Basmati rice.
- Presently four students are registered in Ph.D under my supervision
- Supervised about 25 MSc. and 27 M.Tech students towards their dissertation.

Research Interests

- Phytoremediation technology with special reference to fluoride
- Stress physiology
- Harnessing potential of medicinal plants (from research to product).

Publications

Books

- i. Advances in Biotechnology, 2013, Indu Ravi, **Mamta Baunthiyal**, Jyoti Saxena ; Springer Publisher. ISBN 978-81-322-1553-0
- ii. Laboratory manual of Microbiology, Biochemistry and Molecular Biology, 2012 Jyoti Saxena, **Mamta Baunthiyal**, Indu Ravi ; Scientific Publishers, Jodhpur (India), 380 pp. ISBN No. 8172337663, 9788172337667

Research Articles

1. Saril Mamgain, Shalini Dhiman, Rajesh Kumar Pathak, **Mamta Baunthiyal** (2018) *In silico* identification of agriculturally important molecules against bacterial blight disease in Soybean (*Glycine max*) *Journal of Agricultural Science* 151(02):98-105 (2018) ISSN:1836-3644 doi: 10.21475/ajags.18020098
2. Pathak, R. K., **Baunthiyal, M.**, Pandey, D., Kumar, A. Crop Productivity through interventions of OMICS



technologies in India: Challenges & Opportunities. 3 Biotech [Springer] (Under revision).

3. Mangain, S., Dhiman, S., Pathak, R.K., & **Baunthiyal, M.** (2018). *In silico* identification of agriculturally important molecule(s) for defense induction against bacterial blight disease in Soybean (*Glycine max*). Plant Omics (Accepted).
4. Pathak, R. K., Gupta A., Shukla, R., & **Baunthiyal, M.** (2018). Identification of new drug-like compounds from millets as Xanthine oxidoreductase inhibitors for treatment of Hyperuricemia: A molecular docking and simulation study. Computational Biology & Chemistry 76, 32-41.
5. D Srivastava, **M Baunthiyal**, A Kumar, K Yadav, D Yadav, S Kumar (2018) Comparative study on the Effect of Different Lead Concentrations on Two varieties of *Triticum aestivum* L.(Wheat) Journal of Pharmacognosy and Phytochemistry 7 (1), 479-483.
6. Pathak, R. K., **Baunthiyal M.**, Pandey, N., Pandey, D., Kumar, A. (2018). New model provides clues for fighting fungal disease in oilseeds. Nature India doi:10.1038/nindia.2018.36
7. P Semwal, V Rawat, P Sharma, **M Baunthiyal** (2018) Actinobacteria from Cow Feces: Isolation, Identification and Screening for Industrially Important Secondary Metabolites. Microbiology and Biotechnology letters 46 (1), 68-76
8. M Tasleem, **M Baunthiyal**, G Taj (2017) Induction of MPK3, MPK6 and MPK4 Mediated Defense Signaling in Response to *Alternaria* Blight in Transgenic *Brassica Juncea*. Biosciences Biotechnology Research Asia 14 (4), 1469-1474
9. M Tasleem, **M Baunthiyal**, A Kumar, G Taj (2017) Determination of antioxidant activity in overexpressed MPK3 transgenic *Brassica juncea* for induction of defense against *Alternaria* blight disease Journal of Pharmacognosy and Phytochemistry 6 (6), 2579-2582.
10. Pathak, R. K., **Baunthiyal, M.**, Pandey, N., Pandey, D., Kumar, A. (2017). Modeling of the jasmonate signaling pathway in *Arabidopsis thaliana* with respect to pathophysiology of *Alternaria* blight in *Brassica*. Scientific Reports, DOI:10.1038/s41598-017-16884-3.
11. Arvind Kumar Bhandari, **Mamta Baunthiyal**, Vinod Kumar Bisht, Jagdish Chandra Kaim and Bir Singh Negi (2017) Chemometric Resolution for Baseline Identification of *Amomum subulatum* Roxb. Essential Oils through FT-IR Spectroscopy Technique

12. Arvind Kumar Bhandari, **Mamta Baunthiyal**, Vinod Kumar Bisht, Jagdish Chandra Kaim and Bir Singh Negi (2017) Influence of Plant Growth Regulators and Media strength on In vitro Propagation of *Amomum subulatum* Roxb Research Journal of Medicinal Plants (4): 160-166. (ISSN 1819-3455 DOI: 10.3923/rjmp.2017.160.16611)
13. Pathak, R. K., **Baunthiyal M.**, Shukla, R., Pandey, D., Taj, G., Kumar, A. (2017). Hormone tweak to boost mustard yield. Nature India doi:10.1038/nindia.2017.103
14. **M Baunthiyal**, V Singh, S Dwivedi (2017) Insights of Antioxidants as Molecules for Drug Discovery, International Journal of Pharmacology 13 (7), 874-889.
15. **Baunthiyal, M.** and Sharma, V. (2017) 'Phytoremediation potential of selected hydrophytes for fluoride in aquatic environment', World Review of Science, Technology and Sustainable Development, Vol. 13, No. 2, pp.133–144. ISSN online: 1741-2234 , ISSN print: 1741-2242
16. Pathak Rajesh, **Baunthiyal Mamta**, Shukla Rohit, Pandey Dinesh, Taj Gohar, Kumar Anil 2017 In Silico identification of mimicking molecules as defense inducers triggering jasmonic acid mediated immunity against Alternaria blight disease in Brassica species. Frontiers in Plant Science | doi: 10.3389/fpls.2017.00609. **Impact factor 4.495.**
17. Arvind K. Bhandari*, **Mamta Baunthiyal** , Vinod K. Bisht , Bir S. Negi and Jagdish C. Kaim 2017 Assessment of Intra-Specific Variation in Essential Oil Composition in Amomum Subulatum Roxb. Cultivated in Uttarakhand, India Asian Journal of Chemistry and Pharmaceutical Sciences, Vol 2(1), 1-5 ISSN (Online): 2456-2688
18. Priyanka and **Mamta Baunthiyal** (2016) An ethno-botanical study of medicinal plants of Ghurdauri region, Uttarakhand, India Journal of Medicinal Plants Studies Volume 4, Issue 5, Part C 200-205 ISSN 2320-3862
19. Arisha Mutahir, Monika Bisht , **Mamta Baunthiyal** (2016) Comparative assessment of fluoride tolerance in two genotypes of Zea mays Journal of Medicinal Plants Studies 2016; 4(5): 253-258 ,ISSN 2320-3862
20. Shweta Ranghar and **Mamta Baunthiyal** (2016) Ecological damage in the vicinity of two industrial areas of Uttarakhand Environment Conservation Journal. 16(1&2) 179-186, ISSN 2278-5124 (online) 0972-3099 (print).

21. Monika Goel, Pushpendra Sharma and **Mamta Baunthiyal** (2016) Isolation, Evaluation and Characterization of *Pseudomonas* sp. from Rhizospheric Soil of Marigold Plant with Biocontrol Activity against *Rhizoctonia solani* under *in vitro* conditions Indian Journal of Natural Sciences (IJONS) Volume V(6) June 2016 CODEN: IJONS (36) 11204-11213 ISSN: 0976 - 0997
22. Pathak RK, Taj G, Pandey D, Kasana VK, **Baunthiyal M**, Kumar A (2016) Molecular modeling and docking studies of phytoalexin(s) with pathogenic protein(s) as molecular targets for designing the derivatives with anti-fungal action on *Alternaria* spp. of Brassica. *Plant Omics* 9(3):172-182 (2016) ISSN:1836-3644 DOI: 10.21475/poj.16.09.03.p7654.
23. Amritan Kachru, Monika Bisht and **Mamta Baunthiyal** (2016) In vitro evaluation of anti-nephrolithiatic activity of leaves and seeds of *Macrotyloma uniflorum* on dissolution or removal of kidney stones *Research Journal of Pharmacognosy and Phytochemistry*, Vol8(1) Print ISSN : 0975-2331. Online ISSN:0975-4385. Article DOI : 10.5958/0975-4385.2016.00002.9
24. Arisha Mutahir , Harish Chandra and **Mamta Baunthiyal** (2015) Green synthesis of silver nanoparticles from different parts of the plant *Macrotyloma uniflorum* *Octa Journal of Biosciences* ISSN 2321 – 3663 International peer-reviewed journal Dec. 2015 Octa. J. Biosci. Vol. 3(2):58-61
25. D. Jeena, **M. Baunthiyal**, D. Pandey and A.K. Gupta 2015 ATMPK4 and ATMPK6 Transcript and Protein Profiling in *Arabidopsis thaliana* Plants Challenged with Zeatin and *Alternaria brassicae* *Plant Pathology Journal* 14 (3): 97-112, 2015 ISSN 1812-5387
26. Kumari Jyoti , **Mamta Baunthiyal** , Ajeet Singh (2015) Characterization of silver nanoparticles synthesized using *Urtica dioica* Linn. leaves and their synergistic effects with antibiotics, *Journal of Radiation Research and Applied Sciences* <http://dx.doi.org/10.1016/j.jrras.2015.10.002>
27. Saril Mangain, Pushpendra Sharma Rajesh Kumar Pathak, **Mamta Baunthiyal** (2015). Computer aided screening of natural compounds targeting the E6 protein of HPV using molecular docking. *Bioinformation*. 11(5): 236-242. ISSN 0973-2063 (online) 0973-8894 (print).
28. **Mamta Baunthiyal** Deepika Rai, Shweta Ranghar (2015) Water quality assessment and mapping of natural and ground water resources in Pauri region of Uttarakhand

Environment Conservation Journal 16(1&2) 51-56,2015 ISSN 2278-5124 (online) 0972-3099 (print).

29. Divya Srivastava, Ajeet Singh, **Mamta Baunthiyal** (2015) Lead Toxicity and Tolerance in Plants. *Journal of Plant Science & Research* 2(2): 123 ISSN 2349-2805.
30. **Mamta Baunthiyal**, Shweta Ranghar (2014) Physiological and biochemical responses of plants under fluoride stress: an overview *Fluoride* 47(4): 287–293. ISSN2253-4083 (online) and ISSN 0015-4725 (in print).
31. **Mamta Baunthiyal**, and Vinay Sharma (2014) Response of fluoride stress on plasma membrane H⁺-ATPase and vacuolar H⁺-ATPase activity in semi-arid plants. *Indian Journal of Plant Physiology*. DOI :10.1007/s40502-014-0103-x Print ISSN 0019-5502 Online ISSN 0974-0252.
32. Rajesh Kumar Pathak, **Mamta Baunthiyal**, Gohar Taj & Anil Kumar (2014) Virtual screening of natural inhibitors to the predicted HBx protein structure of Hepatitis B Virus using molecular docking for identification of potential lead molecules for liver cancer. *Bioinformation* 10(7): 428-435. ISSN 0973-2063 (online) 0973-8894 (print).
33. **Mamta Baunthiyal**, and Vinay Sharma (2014) Response of Three Semi-Arid Plant Species to Fluoride; Consequences for Chlorophyll Florescence. *International journal of Phytoremediation*. Vol. 16, (4): 397-414
34. **Mamta Baunthiyal**, Arun Bhatt and Shweta Ranghar (2014) Fluoride and its effects on Plant metabolism. *Journal of Agricultural Technology* 2014 Vol. 10(1):1-27 ISSN 1686-9141
35. **Mamta Baunthiyal**, Shweta Ranghar 2013 Accumulation of Fluoride by Plants: Potential for Phytoremediation,, *CLEAN – Soil, Air, Water* Online ISSN: 1863-0669, DOI: 10.1002/clen.201300353.
36. Deepti Anand, **Mamta Baunthiyal**, S. Gopala Krishnan, N. K. Singh, K.V. Prabhu, A. K. Singh 2013 Novel InDel variation in GS3 locus and development of InDel based marker for marker assisted breeding of short grain aromatic rices *J. Plant Biochem. Biotechnol.* DOI 10.1007/s13562-013-0243-5, Published online 9 Nov. 2013.
37. A. K. Bhandari, **M. Baunthiyal**, V. K. Bisht, N. Singh, J. S. Negi 2013 A quick bud breaking response of a surface model for rapid clonal propagation in *Centella asiatica* (L.) *International Journal for Biotechnology and Molecular Biology Research*, Vol. 4(6) pp. 93-97, DOI: 10.5897/IJBMBR2013.0167, ISSN 2141-2154.

38. A. K. Bhandari, V. K. Bisht, J. S. Negi and M. Baunthiyal (2013) 1, 8-Cineole: A predominant component in the essential oil of large cardamom (*Amomum subulatum* Roxb.) *Journal of Medicinal Plants Research*. Vol 7(26) pp. 1957-60. ISSN 1996-0875 ©2013.
39. Arun Bhatt, Piyusha Singh., Vineet Kumar, **Mamta Baunthiyal** 2013, Documentation of Ethno - Veterinary Practices used for Treatments of Different Ailments in Garhwal Himalayan Region
J. Environ. Nanotechnol., Volume 2, pp. 20-27 (Special Communerative Issue on 3rd NCISSET-2013, NPL, New Delhi) ISSN(Print):2279-07 48; ISSN(Online):2319-5541
40. Saini, P., Khan, S., **Baunthiyal, M.** and Sharma, V. 2013 Effects of fluoride on germination, early growth and antioxidant enzyme activities of legume plant species *Prosopis juliflora*. *Journal of Environmental Biology*, Vol 34, 205-209.
41. Poonam Saini, Suphiya Khan, **Mamta Baunthiyal**, and Vinay Sharma 2012 “Organwise accumulation of fluoride in *Prosopis juliflora* and its potential for phytoremediation of fluoride contaminated soil” *Chemosphere* **89** , pp. 633-635
42. **Suphiya Khan, Mamta Baunthiyal**, Alka Kumari and Vinay Sharma, 2012 “Effect of Fluoride Pollution on Genetic Diversity of a Medicinal Tree, *Syzygium cumini*.” *Journal of Environmental Biology*, 33, 745-750.
43. **Mamta Baunthiyal** and Abhilasha Pandey 2012 “Organofluorine metabolism in plants” *Fluoride* 45 (2) 78-85. Online (ISSN2253-4083) and in print (ISSN 0015-4725).
44. Poonam Saini, Suphiya Khan, **Mamta Baunthiyal** and Vinay Sharma, 2012. Mapping of Fluoride endemic area and assessment of F-1 accumulation in soil and vegetation. *Journal of Environmental Monitoring and Assessment*. Online First™, 26 May 2012. ISSN: 0167-6369 (print version)
ISSN: 1573-2959 (electronic version) 2013, 185 (2), 2001-2008.
45. **Baunthiyal M.** and Sharma V. 2012 Phytoremediation of fluoride contaminated water and soil: A search for fluoride hyperaccumulators. *Journal of Agricultural Technology* 8(6):1965-1975.
46. Deepti Anand, **Mamta Baunthiyal**, Ashutosh Singh, S. Gopala Krishnan, N. K. Singh, K.V. Prabhu, A. K. Singh **2012** Validation of gene based marker-QTL association for grain dimension traits in rice, *Journal of Plant Biochemistry and Biotechnology*. Online First™, 28 Nov 2012.

47. A. Bhatt, **M. Baunthiyal**, A. Pandey, H. Dangwal, A.K Singh 2010. Ethanobotanical uses of plants for curing diseases and ailments in human beings by people of Pauri Garhwal. *Journal of Mountain Research*, vol-5 pp129-139.

Chapter in book

- i. AK Bhandari, VK Bisht, Narayan Singh, M Baunthiyal 2016, R C Sundriyal *Cordyceps sinensis*: The illustrious history in traditional medicinal system, Climate change and Environmental issues (Eds. Dr N.Singh, Dr. AK Thakur) The Energy and Resource Institute, Delhi.
- ii. Monika Goel and Mamta Baunthiyal May 2016 Environmental Monitoring And Risk Assessment of Contaminants Water Resources Problems and Solutions. Publisher: OMICS Group Incorporation. Editor: Jonathan Y. S. Leung
- iii. Mamta Baunthiyal, Shweta Ranghar and Vinay Sharma 2015 Fluoride Tolerant Microorganisms and their possible role in Bioremediation in Environment Microbiology. I.K. International Publishing House, New Delhi
- iv. Mamta Baunthiyal 2013 Engineering plants for phytoremediation. In Advances in Biotechnology, Springer publisher. (Eds. Indu Ravi, Mamta Baunthiyal, Jyoti Saxena) ISBN 978-81-322-1553-0
- v. Poonam Saini, Suphiya Khan, Mamta Baunthiyal and Vinay Sharma 2013 Effect of Sodium Fluoride on Photosynthetic Pigments and Antioxidant Enzyme Activity in *Prosopis juliflora* Microbial, Plant and Animal Research, (Eds. R. K. Gaur, K.P. Sharma and R.S. Chundawat) Nova Publisher, USA, pp 33-40. ISBN: 978-1-62618-610-1
- vi. Anjali Aggarwal, Iti Sharma, B. N. Tripathi, A. K. Munjal, M Baunthiyal and V. Sharma 2011. "Metal toxicity and Photosynthesis" in "Photosynthesis: Overviews on recent progress and future perspective", Eds. S. Itoh; P. Mohanty and K.N. Guruprasad, I.K. International Publishers, India, pp 229-236. (ISBN 10: 9381141002 / ISBN 13: 9789381141007)
- vii. AK Bhandari, JS Negi, VK Bisht, Narayan Singh, M Baunthiyal , R C Sundriyal *Cordyceps sinensis*: One of the Major Income Generation Resources of Inhabitant of Border Districts of Uttarakhand Ethnobotany and Medicinal Plants (Eds. Dr. Pawan Kumar Bharti, Dr. Avinash Chauhan) Ancient Publishing House, Delhi , ISBN 978-93-81385-97-5

- viii. Baunthiyal, M. and Sharma, V. 2002, Phytoremediation, in: Bioresource Technology, Tripathi G (ed) C.B.S. Publishers, New Delhi pp 181-198 (ISBN: 9788123908496)
- ix. Saini, P., Khan, S., Baunthiyal, M. and Sharma, V. (2012). Defluoridation: A Current Opportunity in Environment. Biotech today the pulse of global science. 2(1), 25-26 (ISSN No: 2319-2186).

Articles in magazines

- i. Mamta Baunthiyal and Kavish Rajput “Microbial fuel cells” Energy Future, Vol 3 issue 2, July-Sept 2016 vol.4 issue 4 The Energy and Resource Institute, Delhi. ISSN:2278-7186
- ii. Priyanka Sajwan and Mamta Baunthiyal “Engineering Non-Food crops for Biodiesel Production” Energy Future, Vol 3 issue 2, Oct-Dec 2015, The Energy and Resource Institute, Delhi. ISSN:2278-7186.
- iii. Arisha Mutahir and Mamta Baunthiyal “Clean India with Biocremation” Energy Future, Vol 3 issue 2, Jan-March 2015, The Energy and Resource Institute, Delhi. ISSN:2278-7186
- iv. Mamta Baunthiyal and Divya Srivastava The status of Nanobiotechnology in India. Everyman’s Science Vol.L No.1 (April -May 2015) pp 26-30

Conference Proceedings (in India)

1. Paper published in Proceeding at Govt P.G.College, Seminar at Landsdown “Ecological Consciousness in Literature Study on Biodiversity in Garhwal Himalayan Region and Conservation Strategies” Arun Bhatt, Mamta Baunthiyal and Preeti Nautiyal (2012) pp 164-175.
2. Paper presentation entitled “New source of energy: Electricity generation from bacteria in terms of bioelectricity production” by A.K. Bhandari and Mamta Baunthiyal in National conference on technological revolution in electrical engineering -2014, held at GB Pant Engineering College, Ghurdauri, Pauri from 22-23 May, 2014.

Conference/Workshops /Seminars (Organised in India)

- i. Organized one day workshop on the topic “Parthenium Management with Special reference to Bio agent (Mexican Beetle)” in collaboration with Directorate of Weed Science Research, Jabalpur on 10th October 10, 2012.

- ii. Organized one week TEQIP sponsored short term course on the topic “Eco-Technology for sustainable development” in collaboration with department of Applied Science and Civil Engineering from 21st October -25th October, 2013.

Poster/Paper presentation in seminar/conferences (in India)

- 1 Paper presentation entitled “*In vitro* evaluation of fluoride accumulation by indigenous flora of Rajasthan” by Mamta Baunthiyal and Vinay Sharma in International Conference on Molecular Biology and Biotechnology ICMBB- 2008, organized by Department of Bioscience and Biotechnology, Banasthali University, Banasthali (October19-21, 2008).
- 2 Paper presentation entitled “Science Career for Women: Global and Indian Scenario” in Jubilee Conference on Women’s Education: Vision & Mission of Women’s University in a global Society, organized by Banasthali University, Banasthali (November 11-13, 2008).
- 3 Poster Presentation entitled “Fluoride Distribution in Ground Water and Local Flora of Newai Tehsil (Distt. Tonk)” by Mamta Baunthiyal, Poonam Saini and Vinay Sharma in International Conference on Current Trends in Biotechnology and its implications in Agriculture & Technology organized by Sardar Vallabh Bhai Patel University of Agriculture and Technology Meerut (February 19- 21, 2009)
- 4 Poster Presentation entitled “Organwise and subcellular accumulation of fluoride by some tree species of semi-arid region of Rajasthan , India” by Mamta Baunthiyal and Poonam Saini, in 5th World Congress of Cellular and Molecular Biology (WCCMB-2009) organized by School of Biotechnology, DAV, Indore and World Society of Cellular and Molecular Biology, France (November 2-6, 2009).
- 5 Poster Presentation entitled “Effects of Fluoride on Plasma membrane ATPase and Vacuolar ATPase Activity in semi-arid plants of Rajasthan, India” by Mamta Baunthiyal and Vinay Sharma, in International conference on Biotechnology and Bioinformatics (ICBB-2014), held in Pune from 1-2 February 2014.
- 6 Paper presentation for National conference on “Recent advances in Chemical and Environmental Engineering” RACEE-2012” organized by department of chemical engineering, NIT Rourkela on “Fluoride Removal from Water by Sodium Fluoride Tolerant Hydrophytes” (January 20-21, 2012).
- 7 Paper presentation for National Seminar on “Emerging pollutants and pathogens: Challenges and risk reduction” organized by CSIR- Indian Institute of Toxicology

- Research, Lucknow and The Academy of Environmental Biology, Lucknow entitled “ (September 20-22, 2012).
- 8 Paper presentation for 7th Uttarakhand State Science and Technology Congress 2012 Dehradun, on “Women in Science: The Indian Scenario” organized by UCOST (November 21-23, 2012).
 - 9 Paper presentation in National Seminar on Environmental Management and Biodiversity Conservation Jointly organized by Action for Sustainable Efficacious development and Awareness and MANU-International Council for Man and Nature held at Omkarananda Institute of Management and Technology, Rishikesh (26th-27th Feb 2011).
 - 10 Paper presentation entitled “New source of energy: Electricity generation from bacteria in terms of bioelectricity production” by A.K. Bhandari and Mamta Baunthiyal in National conference on technological revolution in electrical engineering -2014, held at GB Pant Engineering College, Ghurdauri, Pauri from 22-23 May, 2014.
 - 11 Poster presented entitled “Antistaphylococcal activity of actinobacteria isolated from land sliding regions of Ghurdauri (Pauri) Uttarakhand” in international conference “New Horizons in Biotechnology 2015, November 22-25, Trivedrum, Kerala, India
 - 12 Poster presentation entitled “Defense inducers with potential to protect *Brassica* crops from necrotrophic fungal pathogens” by Rajesh Kumar Pathak, Mamta Baunthiyal, Rohit Shukla, Dinesh Pandey, Gohar Taj, Virendra Kumar Kasana & Anil Kumar in National Conference on “Protein Structure and Dynamics in Health and Agriculture” conducted on November 3-4, 2017 by Jamia Millia Islamia, New Delhi under the aegis of Protein Society, India
 - 13 Poster presentation entitled “Mathematical modeling, simulation and network analysis of the jasmonate signaling pathway in *Arabidopsis thaliana* for understanding the pathophysiology of Alternaria blight in *Brassica species*” by Rajesh Kumar Pathak, Mamta Baunthiyal, Neetesh Pandey, Dinesh Pandey & Anil Kumar in 12th Uttarakhand State Science & Technology Congress 2017-18 at UCOST, Dehradun, India
 - 14 Poster presentation entitled “Identification of agriculturally important molecules as defense inducers triggering jasmonic acid mediated immunity in oilseed *Brassica* for management of Alternaria blight” by Rajesh Kumar Pathak, Mamta Baunthiyal, Rohit Shukla, Dinesh Pandey, Gohar Taj & Anil Kumar in International Conference on

“Advances in Chemical Sciences and Allied Fields of Science, Health, Education & Environment” conducted on 8-10 March, 2018 by Career College, Bhopal in collaboration with Royal Society of Chemistry, London North India Section & Global Research & Welfare Society (GRWS).

Conference/Workshops /Seminars Attended (in India)

1. National Seminar on "Chemistry-Industry Relationship: Challenges in the Changing Scenario" organized by Department of Chemistry, Kurukshetra University, Kurukshetra (January 17-19, 1995).
2. National workshop on Industrial Biotechnology, Equipment and Facility Design, Sponsored by DBT, at BISR, Statue Circle, Jaipur (January, 8-24, 1998).
3. National workshop on "Application of Internet in Advanced Teaching and Research in Biological Sciences" organized by Bioinformatics center, Department of Bioscience and Biotechnology, Banasthali Vidyapith, Banasthali (March 24-26, 2001).
4. Workshop on "Patent Awareness" organized by DST Rajasthan in collaboration with TIFAC, DST, GOI, New Delhi held at Banasthali Vidyapith, Banasthali (July 27, 2001).
5. National workshop on "Application of Information Technology in Biotechnology Based research" organized by Bioinformatics center, Department of Bioscience and Biotechnology, Banasthali Vidyapith, Banasthali (February 16-17, 2002).
6. National workshop on "Genomics and Proteomics" sponsored by DBT, at BISR, Statue Circle, Jaipur (September 18-19, 2003).
7. National workshop on "Bioinformatics Basics-Application in Biological Sciences" organized by Bioinformatics center, Department of Bioscience and Biotechnology, Banasthali Vidyapith, Banasthali (February 19-20, 2005).
8. National workshop on "Biological Databases and Data Mining" organized by Bioinformatics center, Department of Bioscience and Biotechnology, Banasthali University, Banasthali (December 22-24, 2007).
9. Participated in Continuing Medical Education cum Workshop in Immunology held at Himalayan Institute of Medical Sciences, Dehradun, Uttarakhand (22nd -23rd January 2011).

10. Participated in National Seminar on Environmental Management and Biodiversity Conservation Jointly organized by Action for Sustainable Efficacious development and Awareness and MANU-International Council for Man and Nature held at Omkarananda Institute of Management and Technology, Rishikesh (26th-27th Feb 2011).
11. UGC orientation course at Academic Staff College, Rajasthan University, Jaipur from 15.01.01 to 10.02.01.
12. UGC refresher course in Biotechnology at Academic Staff College, JNU, New Delhi from 08.04.02 to 03.05.02.
13. 4- one day workshops on Springboard “Women’s Development programme”, organized by British Council India and Women Study Centre, Banasthali University, Banasthali, from (08th Apr 2007 to 07th Sept 2007).
14. Jubilee Conference on Women’s Education: Vision & Mission of Women’s University in a global Society, organized by Banasthali University, Banasthali (November 11-13, 2008).
15. QIP Short term training programme on “Recent advances in Nanomedicine –from bench to bedside” organized by IIT- Roorkee from 4th to 8th June 2012.
16. One week training programme under Continuing Education Programme on “Strategies for Organisation’s Growth” at IIT Mumbai from 21-25th January, 2013.
17. One week QIP short term course on “Biotechniques for pollution control and resource recovery”, organized by Centre for the Environment, at IIT Guwahati from July 1st to 5th , 2013.
18. TEQIP sponsored one week short term course on “Eco-technology for sustainable development”, organized by Applied science, Biotechnology and Civil engineering department, at GB Pant Engineering college from October 21st to 25th , 2013.
19. One week training programme under Management development Programme on “Management capacity enhancement for administrators” at IIM Lucknow Noida Campus from 13-17th January, 2014.
20. TEQIP sponsored 2 days off-campus training programme on “Academic Management for achieving excellence in engineering education”, organized by Engineering staff College of India, at GB Pant Engineering college , Pauri from May 05-06 , 2014.
21. TEQIP sponsored 2 days workshop on Materials characterization by SEM, TEM, XRD and EBSD”, organized by Mechanical Engineering department, at GB Pant Institute of Engineering and Technology, Pauri from October 27-28, 2017.

22. TEQIP sponsored one week short term course on "Digital Image Processing and its Applications" organized by Computer Science and Engineering Department, at GB Pant Institute of Engineering and Technology, Pauri from December 20-24, 2017.

Invited lectures/ Presentation

1. "Potential of microbial communities isolated from diverse medium for agro-ecosystem services". National conference on Microbes in Extreme Environments: diversity and Translational applications (MEEDTA 2015) organised by Department of Botany and Microbiology, School of Life sciences, HNB Garhwal Central University, Uttarakhand India from October 30-31, 2015.
2. "Eco-technology for sustainable development", TEQIP sponsored one week short term course organized by Applied science, Biotechnology and Civil engineering department, at GB Pant Engineering college from October 21st to 25th , 2013.
3. "Information Technology and its impact on Society: A new horizon of energy efficiency and E-Waste management", TEQIP sponsored short term course organized by Computer science and Engineering department, at GB Pant Engineering college from August 26- 30, 2013.