

CURRICULUM VITAE

NAME : PROF. MUSHTAQ AHMED

QUALIFICATION : Ph.D (BHU)

CURRENT DESIGNATION : **PROFESSOR & DIRECTOR**
Centre For Molecular Biology
School of Life Sciences



PROGRAMME COORDINATOR
DBT, Govt. of India; supported M.Sc Biotechnology

ADDRESS : CENTRAL UNIVERSITY OF JAMMU,
Rahya-Suchani (Bagla), District Samba-181143, Jammu, (J & K).

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POSITIONS HELD

1. **PROFESSOR & HEAD** (Dec. 2015-2019)
Department of Environmental Sciences

DEAN (2018-19)
School of Earth & Environmental Sciences
CENTRAL UNIVERSITY OF HIMACHAL PRADESH
Dharamshala, District Kangra, Shahpur-176206 HP

2. **Associate Professor**
Department of Environmental Sciences
CENTRAL UNIVERSITY OF HIMACHAL PRADESH

3. **Assistant Professor**
Department of Botany (Centre of Advanced Study), Institute of Science,
BANARAS HINDU UNIVERSITY
Varanasi-221005 Uttar Pradesh, India.

TRAINING COURSES :

1. Orientation Programme, (01), Academic Staff College, BHU, Varanasi -221005, UP, India
2. Refresher course, (01), Academic Staff College, BHU, Varanasi -221005, UP, India

BOOK CHAPTERS:

~05

SPECIALISATION :

**Molecular Biology, Biotechnology, Bioinformatics, Environmental Microbiology-
Bio control agents & Sustainable Agriculture**

PUBLICATIONS:

LIST OF SELECTED CURRENT PUBLICATIONS (*Scopus Indexed Journals*)

1. Shivika Sharma, Shikha Sharma, Mushtaq Ahmed, Yusuf Akhter and Subhankar Chatterjee, 2021. Ornithine carbamoyltransferase from psychrophiles to thermophiles: structural evolution of catalytic fold to accommodate physiological diversity, *Extremophiles* (2021) 25:15-24 <https://doi.org/10.1007/s00792-020-01208-7>. **Springer, Impact factor (Thomson Reuters) 2.462.**
2. Razak Hussain, Rolly Yadav, Mushtaq Ahmed, Tabreiz Ahmad Khan, Devesh Kumar and Yusuf Akhter, 2020. Interplay between two spin states determines the hydroxylation catalyzed by P450 monooxygenase from *Trichoderma brevicompactum*. *Journal of Computational Chemistry* (2020): 1-7; DOI: 10.1002/jcc.26177. **WILEY, Impact factor (Thomson Reuters) 3.229.**
3. Razak Hussain, Mushtaq Ahmed, Tabreiz Ahmad Khan and Yusuf Akhter, 2020. FunPage 14505

monooxygenases-the diversity in catalysis and their promising roles in bio control activity. *Applied Microbiology and Biotechnology* (2020) 104:989-999. **Springer, Impact factor (Thomson Reuters) 3.88.**

4. Shikha Sharma, Mushtaq Ahmed and Yusuf Akhter, 2019. Fungal acetyltransferases structures, mechanisms and inhibitors: A review, *International Journal of Biological Macromolecules*. <https://doi.org/10-1016/j.ijbiomac.2019.11.2014>. **Elsevier, Impact factor (Thomson Reuters) 4.784.**
5. Shikha Sharma, Mushtaq Ahmed and Yusuf Akhter, 2019. The molecular link between tyrosol binding to tri6 transcriptional regulator and down regulation of trichothecene biosynthesis. DOI: 10.1016/j.biochi.2019.01.021 . *Biochimie*, 60 (2019): 14-23. **Elsevier, Impact factor (Thomson Reuters) 3.188.**
6. Razak Hussain, Mushtaq Ahmed, Tabreiz Ahmad Khan and Yusuf Akhter, 2018. Augmentation of cytochrome P450 monooxygenase catalysis on its interaction with NADPH-cytochrome P450 reductase FMN domain from *Trichoderma brevicompactum*. *International Journal of Biochemistry and Cell Biology*, 74-80, 103 (2018). **Elsevier, Impact factor (Thomson Reuters) 3.905.**
7. Shikha Sharma, Mushtaq Ahmed and Yusuf Akhter, 2018. The revelation of selective sphingolipid pathway inhibition mechanism on fumonisin toxin binding to ceramide synthases in susceptible organisms and survival mechanism in resistant species. *Biochimie*, 41-50, 149. **Elsevier, Impact factor (Thomson Reuters) 3.188.**
8. Razak Hussain, Shikha Sharma, Indu Kumari, Mushtaq Ahmed, Tabreiz Ahmed Khan and Yusuf Akhter, 2017. "Catalytic diversity and homotropic allostery of two Cytochrome P450 monooxygenase like proteins from *Trichoderma brevicompactum*" (JBIC-17-05-00095.R3). *Journal of Biological Inorganic Chemistry*, DOI 10.1007/s00775-017-1496-6. **Springer, Impact factor (Thomson Reuters), 3.632.**
9. Shikha Sharma, Indu Kumari, Razak Hussain, Mushtaq Ahmed and Yusuf Akhter, 2017. Species specific substrates and products choices of 4-O-acetyltransferase from *Trichoderma brevicompactum*. *Enzyme and Microbial Technology*, 104 (2017), 29-36. **Elsevier, Impact factor (Thomson Reuters) 2.502.**
10. Indu Kumari, Mushtaq Ahmed and Yusuf Akhter, 2017. Evolution of catalytic microenvironment governs substrate and product diversity in trichodiene synthase and other terpene fold enzymes. *Biochimie*, 144 (2018); 9-20. **Elsevier, Impact factor (Thomson Reuters) 3.362.**
11. Indu Kumari, Padamini Sandhu, Mushtaq Ahmed and Yusuf Akhter, 2017. Molecular Dynamics Simulations, Challenges and Opportunities: A Biologist's Prospective. *Current Protein and Peptide Science*, (18): 1-17. **Bentham Science Publishers. Impact factor (Thomson Reuters) 2.576.**
12. Nitika Chaudhary, Padamini Sandhu, Mushtaq Ahmed and Yusuf Akhter, 2016. Structural basis of transport function in major facilitator superfamily protein from *Trichoderma harzianum*. *International Journal of Biological Macromolecules*. 95:1091-1100. **Elsevier. Impact factor (Thomson Reuters) 4.784.**
13. Nitika Chaudhary, Indu Kumari, Padamini Sandhu, Mushtaq Ahmed and Yusuf Akhter, 2016. Proteome scale census of major facilitator superfamily transporters in *Trichoderma reesei* using protein sequence and structure based classification enhanced ranking. *Gene*, 558 (2016) 166-176. **Elsevier. Impact factor (Thomson Reuters) 2.138.**
14. Indu Kumari, Mushtaq Ahmed and Yusuf Akhter, 2016. Deciphering the protein translation inhibition and coping mechanism of trichothecene toxin in resistant fungi. *The International Journal of Biochemistry and Cell Biology*, 78 (2016) 370-376. **Elsevier. Impact factor (Thomson Reuters) 3.905.**
15. Indu Kumari, Mushtaq Ahmed and Yusuf Akhter, 2016. Multifaceted impact of trichothecene metabolites on plant-microbe interactions and human health. *Applied Microbiology and Biotechnology*. 100 (13): 5759-5771. **Springer. Impact factor (Thomson Reuters) 3.376.**
16. Jai S. Patel, Birinchi K Sarma, Harikesh B. Singh, Ram S. Upadhyay, Ravindra N. Kharwar and Mushtaq Ahmed, 2016. *Pseudomonas fluorescens* and *Trichoderma asperellum* enhance expression of G α subunits of the Pea heterotrimeric G-protein during *Erysiphe pisi* infection. *Frontiers in Plant Sciences*, DOI: 10.3389/fpls.2015.01206 (6): 1-13. **Impact factor (Thomson Reuters) 4.495.**
17. Aarti Rana, Mushtaq Ahmed, Abdur Rub and Yusuf Akhter, 2015. A tug-of war between the host and pathogen

generates strategic hotspots for the development of novel therapeutic interventions against infectious diseases. *Virulence*, 6(6): 566-580. **Taylor & Francis. Impact factor (Thomson Reuters) 5.418.**

18. Indu Kumari, Nitika Chaudhary, Padamini Sandhu, Mushtaq Ahmed and Yusuf Akhter, 2015. Structural and mechanistic analysis of engineered trichodiene synthase enzymes from *Trichoderma harzianum*: towards higher catalytic activities empowering sustainable agriculture. *Journal of Biomolecular Structure and Dynamics*, DOI: 10.1080/07391102.2015.1073632. **Taylor & Francis. Impact factor (Thomson Reuters) 3.310.**
19. Yusuf Akhter, Mushtaq Ahmed and Subhash Kumar Yadav, 2020. 3Quality deprivation through quality assessment: the academic score system in Indian higher education. *ACADEMIA (A Publication of the Higher Education Network)*. 2020 (1) : 1-23.

RESEARCH PROJECTS COMPLETED

1. University Grants Commission (UGC), 2015: Major Research Project No. MRP-MAJOR-BOTA-2013-25956; titled, "Management of biotic stress by using antagonistic isolates of *Trichoderma* spp. in tomato vegetated temperate agro ecosystems". **Rs. 15.8 lakhs.**
2. Department of Science and Technology (DST, 2013) funded research project No. SR/FT/LS-34/2012; titled "Studies on antagonistic isolates of *Trichoderma* spp. for Management of *Fusarium* wilt of tomato in tropical agro ecosystems." **Rs. 25 Lakhs.**

PAPERS PRESENTED IN SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA : ~30

RESEARCH GUIDANCE: Ph.D Supervision:

1. Ms. Indu Kumari
2. Ms. Nitika Chaudhary
3. Ms. Shikha Sharmaⁱ
4. Ms. Geetika
5. Mr. Jai Singh Patel (BHU)

PG Dissertations guided: ~40

AWARDS/HONOURS:

1. Award of merit for being *DISTINCTION HOLDER* in 12th exam (J & K BOSE), 1996, J & K Govt.
2. Council of Scientific and Industrial Research (CSIR) -NET -JRF, 2001, Life Sciences
3. SLET- 2005, Life Sciences, Jammu & Kashmir
4. DST-SERB Young Scientist Award, 2012

MEMBERSHIP OF ACADEMIC/PROFESSIONAL BODIES/ PARTICIPATION IN ADMINISTRATIVE/SELECTION COMMITTEES

1. **Member**, 3rd Academic Council, Central University of Jammu, 2019-22.
2. **Member**, 2nd Academic Council, Central University of Himachal Pradesh (30th May, 2015 to 30th May, 2018).
3. **Member**, 3rd Academic Council, Central University of Himachal Pradesh (31th May, 2018 to 31st May, 2021).
4. **Member**, Executive Council, Central University of Himachal Pradesh (2019-2021).
5. **Chairman**, Institutional Bio Safety Committee (IBSC), Central University of Himachal Pradesh.
6. **Member**, Board of Studies, Department of Environmental Sciences, School of Earth and Environmental Sciences, Central University of Himachal Pradesh.

7. **Member**, School Board, School of Earth and Environmental Sciences, Central University of Himachal Pradesh.
8. **Member**, Board of Studies, Center for Computational Biology and Bioinformatics, School of Life Sciences, Central University of Himachal Pradesh.
9. **Member**, Board of Studies, Department of Information Technology, Central University of Himachal Pradesh.
10. **Member**, Board of Studies, Department of Plant Sciences, Central University of Himachal Pradesh.
11. **Member (formerly)**, Board of Studies, Department of Botany, Banaras Hindu University.
12. **Expert**, Ph.D thesis evaluation of Various Indian Universities.
13. **Expert/Paper Setter/Examiner**, of Various Indian Universities.
14. **Member**, Anti-ragging committee, Institute of Science, Banaras Hindu University, 2009-12.
15. **Observer of Examinations** - 2007, Banaras Hindu University
16. **Member**, Selection Committee, Assistant Professors (contractual) in various Departments of the faculty of Ayurveda, Institute of Medical Sciences, BHU.
17. **Member**, Selection Committee, Staff Nurse in S.S. Hospital, Institute of Medical Sciences, BHU.
18. **Member**, Selection Committee, Workshop Attendant in Institute of Technology, BHU
19. **Member, Selection** Committee, Office & Laboratory Attendants (common pool and M.Sc. (Tech.) in Environmental Science), in Rajive Gandhi South Campus-Barkacha, BHU.
20. **Member**, Selection Committee, Senior Technical Officer in Rajive Gandhi South Campus-Barkacha, Banaras Hindu University
21. **Member**, Selection Committee, Office Assistant in Rajive Gandhi South Campus-Barkacha, Banaras Hindu University
22. **Member**, Selection Committee, Laboratory Attendants in Institute of Agricultural Sciences, Banaras Hindu University.
23. **Member**, Selection Committee, Laboratory Attendants in Institute of Science, BHU.
24. **Member**, Selection Committee, Mechanic in Institute of Science, BHU.
25. **Member**, Selection Committee, Technical Assistant in Institute of Technology, BHU
26. **Member**, Selection Committee, Lecturer (Contractual) in Commerce, in Rajive Gandhi South Campus-Barkacha, Banaras Hindu University.
27. **Member**, Selection Committee, Lecturer (Contractual) in Remote Sensing & GIS, in Rajive Gandhi South Campus- Barkacha, Banaras Hindu University.
28. **Member**, Selection Committee, Lecturer (Contractual) in Psychology, in Rajive Gandhi South Campus-Barkacha, Banaras Hindu University.
29. **Member**, Selection Committee, Lecturer (Contractual) in Pharmaceutical Biology and Pharmacognosy in Rajive Gandhi South Campus- Barkacha, Banaras Hindu University.
30. **Member**, Selection Committee, Lecturer (Contractual) in Psychology, Education and Visual Arts in BHU.
31. **Member**, Selection Committee, Laboratory Attendants in Mahila Mahavidyalaya, BHU.

32. **Member**, Selection Committee, Assistant Professors, 2013. School of Teacher Education, Central University of Himachal Pradesh
33. **Member**, Selection Committee, Deputy Registrar, Central University of Himachal Pradesh.
34. **Member**, Selection Committee, Lab Assistant, Central University of Himachal Pradesh.
35. **Member**, Selection Committee, System Analyst, Central University of Himachal Pradesh.
36. **Member/Chairman** of several other (in addition to above) administrative Committees, Central University of Himachal Pradesh.
37. **Expert**, Selection Committee for recruitment/promotion of faculty Members, Department of Chemistry, Jamia Millia Islamia (A Central University), New Delhi, June, 2018.
38. **Member**, Academic Council, Central University of Jammu (2020 to till date)