Rahul Shrivastava, Ph.D.

Professor, Department of Biotechnology and Bioinformatics

Research Specialization:

Bacterial Pathogenesis, Identification of Drug targets, Mycobacterial biofilms, Antimicrobial Screening

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Biography:

I have a passion for teaching and love interacting with students. I have more than 17 years of experience which includes more than 15 years of Teaching and about 2 years of Industry experience.

Gold Medalist in Microbiology from Pt. Ravishankar Shukla University, Raipur. Qualified the CSIR – NET JRF Examination to pursue Ph.D. from Central Drug Research Institute (a CSIR Institute), Lucknow in the area of Bacterial Pathogenesis, Immunology and Molecular Biology. After Ph.D. worked for about two years with Evalueserve.com Pvt. Ltd., Gurgaon, an MNC in the area of Intellectual Properties.

Joined Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh in 2010, as Assistant Professor and currently working as an Associate Professor at the Department of Biotechnology and Bioinformatics of the University. Involved in teaching courses in the areas of Microbiology, and Diagnostics to graduate and post-graduate students. Research interests include Microbial Pathogenesis, Identification of Drug targets, Mycobacterial biofilms, Antimicrobial Screening.

Awarded with funded research projects from various Govt. agencies like - DST, ICMR and DBT. An active researcher with multiple articles and book chapters in National and

International Journals and Books. Delivered multiple lectures, and invited talks in Conferences, Workshops and Seminars. On reviewer board for different publication houses including Springer, Elsevier etc. Currently guiding three PhD scholars, and four scholars have already completed their PhD under my guidance. Guided more than 24 UG and PG students for their final year dissertation work. I am a member of Scientific Advisory Committee, and Board of Studies of University and College.

Shouldered with various administrative responsibilities at JUIT, including Training and Placement Coordinator, Industrial Training Coordinator, Alumni Affairs Coordinator, Warden, Dy. Chief Warden, and Chief Warden of the University. Presently serving as Coordinator for M.Sc. Microbiology Program, and Summer Training program conducted for students from all over India.

Educational Qualification:

Ph.D. Microbiology – 2009

Thesis title: ***Identification of Mycobacterial Regulatory Sequences affecting Virulence.***

Institution: Division of Microbiology, Central Drug Research Institute (CDRI), Lucknow (India).

Awarded by: Jawaharlal Nehru University (JNU), New Delhi, in Nov' 2009.

Post Graduation (M. Sc.): Microbiology - 2000

First Division with 71.92% marks - *Awarded by:* Pt. Ravishankar Shukla University, Raipur, India. Gold Medalist.

Graduation (B. Sc.): Microbiology, Botany, Chemistry – 1998

First Division with 77.5% marks - *Awarded by:* Pt. Ravishankar Shukla University, Raipur, India. College Topper.

Job Profile:

Teaching Experience: (More than 14 years, CSIR - NET Qualified)

1. Associate Professor: Jaypee University of Information Technology, Solan (H.P.) INDIA – Sep'2017 - Present

2. Assistant Professor (Senior Grade): Jaypee University of Information Technology, Solan (H.P.) INDIA – Aug'2013 – Sep'2017

3. Assistant Professor (Grade –II): Jaypee University of Information Technology, Solan (H.P.) INDIA – July' 2010 – July'2013

4. Assistant Professor (Grade –I): Jaypee University of Information Technology, Solan (H.P.) INDIA – Jan'2010 - Jun'2010

5. Lecturer: Janta College, Etawah, CSJM University, Kanpur, INDIA – Oct'2001 - May'2002

Industry Experience: (≈2 years)

Sr. Research Associate: Evalueserve.com Pvt. Ltd, Gurgaon, (Haryana) INDIA – Apr' 2008 – Jan' 2010.

Job profile included patent search and analysis using various patent databases, landscape mapping, freedom-to-operate studies, invalidation analysis etc.

Externally Funded Research / Consultancy Projects:

S. No.	**Title of Research Project/ Consultancy Work**	**Details of Sponsoring Agency**	**Duration, Sanction Date & Status**	**Amount Sanctioned**	**Chief or Co Investigator Specify**
1	DBT – HIMCOSTE Skill Vigyan Project	DBT, Govt. of India & HIMCOSTE, Shimla	3 Years (2020 – 2023) (Completed)	49.8 Lakh	Co Investigator
2	Synthesis of Novel Poly-N Substituted Glycines (Peptoids) Based on Cell Selective Antimicrobial Peptides for Gram Negative and Gram Positive Bacterial Infections (FN. 52/4/2013-Bio/BMS)	Indian Council of Medical Research (ICMR), Govt. of India	3 years, Oct 2015 – March 2019 (Completed)	24.3 Lakh	Co Investigator
3	Identification, characterization of diarrhoeagenic pathogens in Himachal Pradesh	Indian Council of Medical Research (ICMR), Govt. of India	3 years Oct 2013 – Oct 2016 (Completed)	16 Lakh	Co Investigator
4	Identification of Macrophage Invasion Protein(s) of Atypical Mycobacteria *M. fortuitum* as Potential Drug Target and Inhibitors Thereof	Department of Science and Technology (DST), Govt. of India	4 years, Jan 2013 – Jan 2017 (Completed)	16.45 Lakh	Principal Investigator

Honours and Awards:

1. Session Chair, at 2rd International Conference on Biotechnology and Bioinformatics (ICBAB-2023)" organized by The Department of BT and BI, Jaypee University of Information Technology, Solan, Himachal Pradesh supported by DST-SERB at Jaypee University of Information Technology (JUIT), Waknaghat from 11-13 July, 2023.

2. Session Chair, at 3rd International Conference on Emergent Converging Technologies and Biomedical Systems (ETBS 2023)" organized by The Dept. ECE & CSE, JUIT, Solan, Himachal Pradesh in collaboration with DST iHub-AWaDH and Indian Institute of Technology Ropar at JUIT, Solan from May 15-17, 2023.

3. External Expert for conducting viva for Microbiology Laboratory Course for the University of Petroleum and Energy Studies, Dehradun, Uttarakhand (2022, 2023).

4. Session Chair, "2nd Emergent Converging Technologies and Biomedical Systems (ETBS 2022)" organized by Department of Electronics and Communication Engineering, Jaypee University of Information Technology (JUIT), Waknaghat, Solan, H.P., INDIA. 23-24 September 2022.

5. Session Chair, at International Conference on "Technological Intervention in Renewable Energy for Sustainable Environment (RESE-2021)" organized by Centre of Excellence in Sustainable Technologies for Rural Development [CESTRD], Department of Biotechnology and Bioinformatics, JUIT, Waknaghat, Solan (H.P.), India; 24 & 25 November 2021.

6. Session Chair, 6th International conference on "Signal Processing, Computing and Control (ISPCC-2k21)" organized by Department of Electronics and Communication Engineering, Jaypee University of Information Technology (JUIT), Waknaghat, Solan, H.P., INDIA. 7 - 9 October 2021.

7. External Expert for the Moderation of the Question papers for Microbiology and Biotech Programs, BSc, MSc Microbiology and B.Tech Biotech for the University of Petroleum and Energy Studies, Dehradun, Uttarakhand (2020 - 2023).

8. First position in Oral Presentation for Medical and Nanobiotechnology Session, at International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology, Noida, India; 28th-30th January, 2021.

9. Session Chair, at International Conference on "Technologies for Environmental Sustainability and Smart Agriculture" organized by Centre of Excellence in Sustainable Technologies for Rural Development [CESTRD], Department of Biotechnology and Bioinformatics, JUIT, Waknaghat, Solan (H.P.), India; 18-19 September, 2020.

10. Expert Member for Board of Studies – Department of Biotechnology, G.B. Pant Engineering College, Pauri Garwal-246194 (Uttarakhand) for B.Tech/M.Tech Biotechnology courses. (Since 2019).

11. Out-of-turn promotion from Assistant Professor Grade –I to Grade –II (in five months) at Jaypee University of Information Technology, Solan (H.P.)

12. Senior Research Fellowship from Council of Scientific and Industrial Research (CSIR), New Delhi, Govt. of India (June, 2004 – June 2007) – *for pursuing Ph.D.*

13. Junior Research Fellowship from Council of Scientific and Industrial Research (CSIR), New Delhi, Govt. of India (June, 2002 – Mar 2004) – *for pursuing Ph.D.*

14. Qualified National Eligibility Test (CSIR-NET) for JRF and Lecturership – Thrice - 2002, 2001, & 2000.

15. Gold Medalist in Microbiology - Post Graduation (M.Sc.), June 2000.

Publications

Journal Publications:

1. Ayushi Sharma, Saurabh Bansal, Neha Kumari, Jitendraa Vashistt, **Rahul Shrivastava*** (2023). Comparative proteomic investigation unravels the pathobiology of *Mycobacterium fortuitum* biofilm. Applied Microbiology and Biotechnology, 107 (19), pp 6029-6046. 1-10, DOI: https://doi.org/10.1007/s00253-023-12705-y.

2. Ayushi Sharma, Nidhi Tyagi, **Rahul Shrivastava*** (2023). Optimization of protocol for quantification of biofilm formed by pathogenic rapidly-growing nontuberculous mycobacteria for diagnostic screening. Methods in Microbiology, 53, pp. 67-99, DOI: https://doi.org/10.1016/bs.mim.2023.05.003.

3. Monika Choudhary, **Rahul Shrivastava**, Jitendraa Vashistt (2022). Eugenol and geraniol Impede Csu-pilus Assembly and Evades Multidrug-resistant *Acinetobacter baumannii* biofilms: In-vitro and In-silico evidence. Biochemical and Biophysical Research Communications. doi.org/10.1016/j.bbrc.2022.10.095**.**

4. Monika Choudhary, **Rahul Shrivastava**, Jitendraa Vashistt (2022). *Acinetobacter baumannii* Biofilm Formation: Association with Antimicrobial Resistance and Prolonged Survival under Desiccation. Current Microbiology. 79(12):361. doi:10.1007/s00284-022-03071-5.

5. Ayushi Sharma, Jitendraa Vashistt, **Rahul Shrivastava** (2022). *Mycobacterium fortuitum* fabG4 knockdown studies: Implication as pellicle and biofilm specific drug target. *Journal of Basic Microbiology. https://doi.org/10.1002/jobm.202200230.*

6. Ayushi Sharma, Jitendraa Vashistt, **Rahul Shrivastava** (2022). Knockdown of the type-II fatty acid synthase gene hadC in *Mycobacterium fortuitum* does not affect its

growth, biofilm formation, and survival under stress. *International Journal of Mycobacteriology*, 11 (2), 159-166.

7. Monika Choudhary, Shubham Kaushik, Arti Kapil, **Rahul Shrivastava**, Jitendraa Vashistt (2022). Decoding *Acinetobacter baumannii* biofilm dynamics and associated protein markers: proteomic and bioinformatics approach. *Archives of Microbiology*, *204 (4). doi.org/10.1007/s00203-022-02807-y.*

8. Poonam Katoch, Shubham Mittal, Shivani Sood, **Rahul Shrivastava** (2021). Identification and in silico characterization of transcription termination/antitermination protein NusA of *Mycobacterium fortuitum. Biologia, 76, 3855–3863. doi.org/10.1007/s11756-021-00903-w*.

9. Ayushi Sharma, Jitendraa Vashistt, **Rahul Shrivastava** (2021). Response surface modeling integrated microtiter plate assay for *Mycobacterium fortuitum* biofilm quantification. *Biofouling*
   37 (8), 830-843. doi: 10.1080/08927014.2021.1974846.

10. Pavan Kumar Agrawal, Pooja Upadhyay, **Rahul Shrivastava**, Swati Sharma, Vijay Kumar Garlapati (2021). Evaluation of the Ability of Endophytic Fungi from Cupressus torulosa to Decolorize Synthetic Textile Dyes. *Journal of Hazardous, Toxic, and Radioactive Waste*, 25 (1), 06020005.

11. Poonam Katoch, Kinam Gupta, Ragothaman M.Yennamalli, Jitendraa Vashistt, Gopal Singh Bisht, **Rahul Shrivastava** (2020). Random insertion transposon mutagenesis of *Mycobacterium fortuitum* identified mutant defective in biofilm formation. Biochemical and Biophysical Research Communications, 521 (4), 991-996.

12. Poonam Katoch, Gopal Singh Bisht, **Rahul Shrivastava** (2019). In vivo infection and In vitro stress survival studies of acid susceptible mutant of *Mycobacterium fortuitum*. International Journal of Mycobacteriology, 8 (4), 390-396.

13. Deepika Sharma, Monika Choudhary, Jitendraa Vashistt, **Rahul Shrivastava**, Gopal Singh Bisht (2019). Cationic antimicrobial peptide and its poly-N-substituted glycine congener: Antibacterial and antibiofilm potential against A. baumannii. Biochemical and Biophysical Research Communications, 518 (3), 472-478.

14. Poonam, Raghu M. Yennamalli , Gopal Singh Bisht, **Rahul Shrivastava** (2019). Ribosomal maturation factor (RimP) is essential for survival of nontuberculous mycobacteria Mycobacterium fortuitum under in vitro acidic stress conditions. *3 Biotech, 9* (4), 127-137.

15. D. Sharma, Poonam, **Rahul Shrivastava**, and G. S. Bisht (2019). In Vitro Efficacy of Lipid Conjugated Peptidomimetics Against *Mycobacterium smegmatis*, *International Journal of Peptide Research and Therapeutics*, 2019. https://doi.org/10.1007/s10989-019-09859-7.

16. Nutan Thakur, Swapnil Jain, Harish Changotra, **Rahul Shrivastava**, Yashwant Kumar, Neelam Grover, Jitendraa Vashistt (2018). Molecular characterization of diarrheagenic Escherichia coli pathotypes: Association of virulent genes, serogroups, and antibiotic resistance among moderate-to-severe diarrhea patients. *Journal of Clinical Laboratory Analysis, 32* (5), e22388.

17. Pooja Upadhyay, **Rahul Shrivastava**, Pavan Kumar Agrawal (2016). Bioprospecting and Biotechnological Applications of Fungal Laccase. ***3*** *Biotech, 6* (1), 1-15.

18. Shivani Sood, Satinder Kaur, **Rahul Shrivastava** (2016). A LacZ Reporter-based Strategy for Rapid Expression Analysis and Target Validation of Mycobacterium Tuberculosis Latent Infection Genes. *Current Microbiology, 72* (2), 213-219.

19. Shivani Sood, Anant Yadav, **Rahul Shrivastava** (2016). Mycobacterium Aurum is Unable to Survive Mycobacterium Tuberculosis Latency Associated Stress Conditions:

Implications as Non-suitable Model Organism. *Indian Journal of Microbiology, 56* (2), 198-204.

20. Pavan Kumar Agrawal, Shruti Agrawal, **Rahul Shrivastava** (2015). Modern molecular approaches for analyzing microbial diversity from mushroom compost ecosystem. *3 Biotech, 5(6),* 853–866.

21. Rajinder S. Chauhan, S.K. Chanumolu, Chittaranjan Rout, **Rahul Shrivastava** (2014). Can mycobacterial genomics generate novel targets as speed-breakers against the race for drug resistance. *Current Pharmaceutical Design, 20* (27), 4319-4345.

22. Anant Yadav, Shivani Sood, **Rahul Shrivastava** (2014). Promoter trap strategy for gene expression analysis under stress conditions of M. tuberculosis Latency. *BMC Infect Dis. 14*: (Suppl 3):O13. *(Abstract)*

23. **Rahul Shrivastava***, Vivek Kr. Kashyap*, Ravi Kr. Gupta*, , Brahm S. Srivastava, Ranjana Srivastava, Maloy Kumar Parai, Priyanka Singh, Saurav Bera and Gautam Panda (2012). In vivo activity of thiophene-containing trisubstituted methanes against acute and persistent infection of non-tubercular *Mycobacterium fortuitum* in a murine infection model, *Journal of Antimicrobial Chemotherapy. 67*(5), 188-97. * *Equal Contribution.*

24. **Rahul Shrivastava***, R. P.S. Parti,* A.R. Subramanian, Raja Roy, Brahm S. Srivastava and Ranjana Srivastava (2008). A transposon insertion mutant of Mycobacterium fortuitum attenuated in virulence and persistence in murine infection model that is complemented by Rv3291c of *Mycobacterium tuberculosis*. *Microbial Pathogenesis 45,* 370-376. * *Equal Contribution.*

Book Chapters:

1. Swapnil Tripathi, Rajeev Mishra, **Rahul Shrivastava**, Gyanendra Singh (2024). Unveiling the neuroprotective benefits of biochanin-A. In Natural Molecules in Neuroprotection and Neurotoxicity pp. 1307-1320 Netherlands: Elsevier B.V. [ISBN 9780443237638].

2. Swapnil Tripathi, Rajeev Mishra, **Rahul Shrivastava**, Vikas Srivastava, Gyanendra Singh (2024). Neuroprotection induced by epigallocatechin-3-gallate. In Natural Molecules in Neuroprotection and Neurotoxicity, pp. 1321-1339 Netherlands: Elsevier B.V. [ISBN 9780443237638].

3. Ayushi Sharma, Nidhi Tyagi, Rahul Shrivastava* (2023). Optimization of protocol for quantification of biofilm formed by pathogenic rapidly-growing nontuberculous mycobacteria for diagnostic screening. Methods in Microbiology, 53, pp. 67-99, DOI: https://doi.org/10.1016/bs.mim.2023.05.003. **(Impact factor 3.0) [Book Series with impact factor 3.0]**

4. Poonam Katoch, Ayushi Sharma, Simran Gohan, Gyanendra Singh, **Rahul Shrivastava** (2024). Unlocking new ways to tackle tuberculosis using CRISPR-Cas as a potent weapon. In CRISPR-Cas System in Translational Biotechnology, pp 151-162 Academic Press. [ISBN 9780323918084].

5. Ayushi Sharma, Ashok Kumar Nadda, **Rahul Shrivastava** (2023). Mycobacterium tuberculosis DapA as a target for antitubercular drug design. In Biotechnology of Microbial Enzymes 2nd, pp. 279-296 London: Elsevier. [ISBN: 9780443190605].

6. Shagun Sharma, Kanishk Bhatt, **Rahul Shrivastava**, Ashok Kumar Nadda (2023). Tyrosinase and Oxygenases: Fundamentals and Applications. In Biotechnology of Microbial Enzymes 2nd, pp. 323-340 London: Elsevier. [ISBN : 9780443190605].

7. Anamika Verma, Ayushi Sharma, Manoj Kumar, Saurabh Bansal, **Rahul Shrivastava** (2022). Techniques and challenges in studies related with human gut microbiome. In Gunjan Goel, Teresa Requena, Saurabh Bansal, Human-Gut Microbiome (pp. 37-57). : Elsevier. [ISBN: 978-0-323-91313-3].

8. Manoj Kumar, Ayushi Sharma, Anamika Verma, **Rahul Shrivastava** (2022). Emergence of antibiotic resistance in gut microbiota and its effect on human health. In Gunjan Goel, Teresa Requena, Saurabh Bansal, Human-Gut Microbiome (pp. 211-232). : Elsevier. [ISBN : 978-0-323-91313-3].

9. Ayushi Sharma, Jitendraa Vashistt, **Rahul Shrivastava (**2021). Next-Generation Omics Technologies to Explore Microbial Diversity. In Jay Shankar Singh, ShashankTiwari, Chhatarpal Singh, Anil Kumar Singh, Microbes in Land Use Change Management (pp. 541-563). Netherlands: Elsevier. [ISBN : 978-0-12-824448-7] .

10. Icxa Khandelwal, Aditi Sharma, Pavan Kumar Agrawal, **Rahul Shrivastava** (2019). Bioinformatics Database Resources. In Information Resources Management Association, Biotechnology: Concepts, Methodologies, Tools, and Applications (pp. 84-119). USA: IGI Global. [ISBN : 9781522589037] .

11. Pavan Kumar Agrawal, **Rahul Shrivastava**, Jyoti Verma (2019). Bioremediation Approaches for Degradation and Detoxification of Polycyclic Aromatic Hydrocarbons. In Ram Naresh Bharagava, Pankaj Chowdhary, *Emerging and Eco-Friendly Approaches for Waste Management* (pp. 99-119). Singapore: Springer. [ISBN: 978-981-10-8669-4].

12. Gopal Singh Bisht, Kinam Gupta, **Rahul Shrivastava** (2017). Factories for Antibody Generation. In Vipin Chandra Kalia, Adesh Kumar Saini, *Metabolic Engineering for Bioactive Compounds* (pp. 351-370). Singapore: Springer. [ISBN: 978-981-10-5511-9].

13. Poonam, Ritu Ghildiyal, Gopal Singh Bisht, **Rahul Shrivastava** (2017). Engineering Yeast as Cellular Factory. In Vipin Chandra Kalia, Adesh Kumar Saini, *Metabolic Engineering for Bioactive Compounds* (pp. 173-208). Singapore: Springer. [ISBN: 978-981-10-5511-9].

14. Deepika Sharma, **Rahul Shrivastava**, Gopal Singh Bisht (2017). Nanomaterial in Diverse Biological Application. In Vipin Chandra Kalia, Adesh Kumar Saini, *Metabolic Engineering for Bioactive Compounds* (pp. 293-317). Singapore: Springer. [ISBN: 978-981-10-5511-9].

15. Icxa Khandelwal, Aditi Sharma, Pavan Kumar Agrawal, **Rahul Shrivastava** (2017). Bioinformatics Database Resources. In Shri Ram, *Library and Information Services for Bioinformatics Education and Research* (1st. ed., pp. 45-90). : IGI Global. [ISBN: 9781522518716].

16. Pavan Kumar Agrawal, **Rahul Shrivastava** (2014). Molecular Markers. In Indu Ravi, Mamta Baunthiyal, Jyoti Saxena, *Advances in Biotechnology* (pp. 25-39). Netherlands: Springer. [ISBN: 978-81-322-1553-0].

Technical Reports / Full Length Paper Conference Publication:

1. Thakur N, Harish Changotra, **Rahul Shrivastava**, Grover N, Jitendraa Vashistt (2018). Estimation of Vibrio species incidences and antibiotic resistance in diarrhea patients. Asian Journal of Pharmaceutical and Clinical Research, 11 (1), 369-373.

2. Prajjwal Jagwan, Shan Ghai, **Rahul Shrivastava**, Shruti Jain (2023). Prediction of Protein Biomarkers for *Mycobacterium fortuitum* using Machine Learning Technique. Proceedings of the International Conference on Signal Processing and Communication (ICSC) [9th: JIIT, Noida: 21-23 Dec 2023], pp.416-421. [SCOPUS].

3. Shan Ghai, Prajjwal Jagwan, **Rahul Shrivastava**, Shruti Jain (2024). Analysis of differentially expressed *M. fortuitum* proteins for biomarker prediction using Support Vector Machine. Proceedings of the 2023 Seventh International Conference on Image Information Processing (ICIIP) [7th: JUIT, Waknaghat: November 22 - 24, 2023], pp.212-217. [SCOPUS].

Articles /Monographs:

1. Mishra Mamta, **Rahul Shrivastava**, Sudhir Kumar (2014). Pop pills at will: Implications of self-medication. *Current Science, 106* (1), 9.

2. Rahul Shrivastava. 'Industry Job or Career in Academics?....a self help article' BIOCHROME, Vol 2, Page 8-9, May 2017.

3. Rahul Shrivastava. 'Career Development' BIOCHROME, Vol 1, Page 8-9, May 2016.

Invited Talks / Lectures / Resource Person:

1. Resource person for Six Week Summer Training Workshop in the module "*Molecular Biology and Genetic Engineering Techniques*", for outside participants (graduate and undergraduate students), conducted at JUIT, Waknaghat, Solan, June – July, 2024.

2. Expert Lecture on "Career Prospects in Biotechnology and Bioinformatics" at Kendriya Vidyalaya, Jakhoo Hills, Shimla. 27 April, 2024

3. Expert Lecture on 'NEP and the need for creating Foreign Collaboration Cells in colleges' at Rajkiya Kanya Mahavidyalaya, Shimla. 8 April 2024.

4. Resource person for Six Week Summer Training Workshop in the module "*Molecular Biology and Genetic Engineering Techniques*", for outside participants (graduate and undergraduate students), conducted at JUIT, Waknaghat, Solan, June – July, 2023.

5. Invited Lecture on "Wearable Biosensors: Trends towards Personalized Medicine" at National Academic Immersion Program (NAIP) conducted for UG students of MIT World Peace University, Pune, India, at the JUIT, Solan. 7 July, 2023.

6. Lecture and Hands-on session on "Biotechnological Techniques" at Department of Biotechnology, Khalsa College, Patiala. 2 May 2023.

7. Lecture and Hands-on session on 'Molecular Biology and Biotechnological Techniques' at RKMV, Shimla. 24 February 2023.

8. Resource person for Six Week Summer Training Workshop in the module "*Molecular Biology and Genetic Engineering Techniques*", for outside participants (graduate and undergraduate students), conducted at JUIT, Waknaghat, Solan, June – July, 2022.

9. Delivered an Invited Lecture on '*Wearable Biosensors: Recent Innovation in Bioscience Technology'* at National Seminar on "Emerging Trends & Innovations in Biosciences" at the School of Life and Allied Science, ITM University, Raipur (Chhattisgarh) India; 3 March, 2022.

10. Oral talk on 'Random Insertion Transposon Mutagenesis of *Mycobacterium fortuitum* Identified role of Anthranilate Phosphoribosyl transferase (trpD) in Biofilm Formation and Hypoxic Stress Survival' at International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology, Noida, India: 28th-30th January, 2021.

11. Resource person for Six Week Summer Training Workshop in the module "*Microbial Pathogens & Medical Genomics*", for outside participants (graduate and undergraduate students), conducted at JUIT, Waknaghat, Solan, June – July, 2019.

12. Oral talk on 'An in Vitro Model for *Mycobacterium tuberculosis* Persistent Infection Drug Discovery Studies'. *Proceedings of the International Conference on Advances in Biosciences and Biotechnology* - ICABB-2018 [Jaypee Institute of Information Technology, Noida: 01-03 February, 2018.

13. Delivered an Invited Lecture on 'Antibody Engineering - Applications and Job Potential' at G.B. Pant Engineering College, Pauri (U.K.): 18 September, 2018.

14. Delivered an Invited Lecture on 'Requisite of Antibody Engineering to Mankind', at G.B. Pant Engineering College, Pauri (U.K.): 18 September, 2018.

15. Resource person for six week workshop in "Molecular Pathogens and Medical Genomics", domain for graduate and undergraduate students, at JUIT, Waknaghat, Solan, June – July, 2018.

16. Acid Stress Based *Mycobacterium fortuitum* Model: a window to *Mycobacterium tuberculosis* latency. *Proceedings of the Himachal Pradesh Science Congress* [3rd. Indian Institute of Technology, Mandi, Himachal Pradesh, India: 22-23 October, 2018].

17. Oral talk on 'Tackling a Problem with Persistence: A model for Tuberculosis Infection Studies' at 2nd Himachal Pradesh Science Congress (HPSC-2017), Shimla, Himachal Pradesh, India: 20-21 November, 2017.

18. Resource person for six week workshop in "Molecular Pathogens and Medical Genomics", domain for graduate and undergraduate students, at JUIT, Waknaghat, Solan, June – July, 2017.

19. Guest Lecture on 'Identification of novel genes responsible *M. fortuitum* drug resistance' in UK -India Workshop on "Tackling the emergence of antimicrobial resistance: increasing virulence and facilitating research network" funded by the British Council and the Royal Society of Chemistry under the prestigious Newton Link Research Grants [IMTECH, Chandigarh; 7-10 November 2016].

20. Resource person for six week workshop in "Molecular Pathogens and Medical Genomics", domain for graduate and undergraduate students, at JUIT, Waknaghat, Solan, June – July, 2017.

21. Delivered an Invited Expert Lecture on 'Safety in Laboratory: Dealing with Biologicals' at National Seminars on Lab Safety in Chemistry organized by MM University Mullana, Haryana on November 12, 2014.

22. Delivered an Invited Lecture on "Biosensors" at AICTE -TEQIP sponsored Short Term course on "Eco Technology for Sustainable Development, 21 Oct to 25 Oct, 2013, G.B. Pant Engineering College, Pauri (U.K.).

23. Delivered an Invited Lecture on “Biology Laboratories - Safety and Etiquette” at Safety Week Celebration, at JUIT, Waknaghat, Solan, 2012.

24. Biosensors as Diagnostic Tools DST sponsored six weeks technology Based Entrepreneurship Development Program on 'Development of Bio-diagnostic Kits' 18th July to 18th Aug., 2012, Kurukshetra University, Kurukshetra (Haryana).

Proteome submission:

Mass spectrometry proteomics data from the project "Proteome analysis of *Mycobacterium fortuitum* biofilm" deposited to ProteomeXchange Consortium *via* PRIDE partner repository (2021). [Data set identifier: PXD023784].

GenBank Submissions: (Novel gene sequences submitted)

1. **Ayushi Sharma**, Jitendraa Vashistt, Rahul Shrivastava (2021). *Mycolicibacterium fortuitum* subsp. *fortuitum* DSM 46621 = ATCC 6841 putative 3-oxoacyl-ACP reductase (*fabG4*) gene, partial cds. [GenBank nucleotide accession: MW470669]

2. **Ayushi Sharma**, Jitendraa Vashistt, Rahul Shrivastava (2021). *Mycolicibacterium fortuitum* subsp. *fortuitum* DSM 46621 = ATCC 6841 putative 3-hydroxyacyl-ACP dehydratase (*hadC*) gene, partial cds. [GenBank nucleotide accession: MW470668]

3. Poonam, **Shrivastava, R. [***Mycobacterium fortuitum* ATCC 6841] Putative transcription termination/antitermination factor NusA of *Mycobacterium fortuitum* [BankIt2198443 Seq MK574079].

4. Poonam, **Shrivastava, R.** [*Mycobacterium fortuitum* ATCC 6841] Probable ribosomal maturation factor RimP of *Mycobacterium fortuitum*. [BankIt2094302 Seq1 MH052677].

5. Divya, Poonam, **Shrivastava, R.** [*Mycobacteium fortuitum* ATCC 6841] Lipase U (lipU) of *Mycobacteium fortuitum* ATCC 6841. [BankIt2103688 Seq MH197269].

6. Poonam, Yennamalli, M. R., **Shrivastava, R**. [*M. fortuitum* ATCC 6841] Short Chain Dehydrogenase Sequence of *M. fortuitum* (ATCC 6841). [KY250516].

7. Poonam, Yennamalli, M. R., **Shrivastava, R.** [*M. fortuitum* ATCC 6841] Peptidase S9, prolyl oligopeptidase Protein. [KY250519].

8. Poonam, Sood, S., **Shrivastava, R.** [*Mycobacterium fortuitum* ATCC 6841] Probable Anthranilate Synthase Subunit I of *M. fortuitum* [KY250521].

9. Poonam, Sood, S., **Shrivastava, R.** [*M. fortuitum* ATCC 6841] Probable X-Pro dipeptidase. [KY250518].

10. Poonam, Sood, S., **Shrivastava, R.** [*M. fortuitum* ATCC 6841] Probable Replication Initiation and Membrane Attachment Protein DnaB.[KY250517].

11. Poonam, Sood, S., **Shrivastava, R.** [*M. fortuitum* ATCC 6841] Tentative Anthranilate Synthase Subunit II of *M. fortuitum* ATCC 6841. [KY250520].

12. Poonam, Sood, S., **Shrivastava, R.** [*M. fortuitum* ATCC 6841] Tentative Anthranilate Phosphoribosyltransferase of *M. fortuitum* ATCC 6841 [KY250522].

13. Shivani Sood, Varun Jaiswal, Poonam Katoch, Sandeep Kumar Sharma and **Rahul Shrivastava**. [*M. fortuitum* ATCC 6841] *M. fortuitum* isocitrate lyase, a homologue of *M. tuberculosis* H37Rv isocitrate lyase. [KM275229].

14. Shivani Sood, Varun Jaiswal, Poonam Katoch and **Rahul Shrivastava**. *M. fortuitum* homologue of *M. tuberculosis* sigma factor SigH. [KM282166].

15. Shivani Sood, Varun Jaiswal, Poonam Katoch and **Rahul Shrivastava**. [*M. fortuitum* ATCC 6841] *M. fortuitum* pcaA, a homologue of *M. tuberculosis* H37Rv pcaA. [KM282163].

16. Shivani Sood, Varun Jaiswal, Poonam Katoch and **Rahul Shrivastava**. [*M. fortuitum* ATCC 6841] *M. fortuitum* nitrate reductase narX, a homologue of *M. tuberculosis* H37Rv nitrate reductase narX. [KM282164].

17. Shivani Sood, Poonam Katoch, Varun Jaiswal and **Rahul Shrivastava**. [*M. fortuitum* ATCC 6841] *M. fortuitum* nitrate/nitrite transporter narK2, a homologue of *M. tuberculosis* H37Rv nitrate/nitrite transporter narK2. [KM282165].

18. **Rahul Srivastava**, et al: *M. fortuitum* strain ATCC 6841 AsnC-family regulatory protein gene, complete cds. [DQ648081].

International Conferences / Symposia Proceedings:

1. Janki Insan, **Rahul Shrivastava** (2022). Sex-Specific Transcriptomic Differences in Pulmonary Tuberculosis Patients. Proceedings of the International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology, Noida, India : 20 -22 January, 2022], pp.52-52.

2. Ayushi Sharma, Jitendraa Vashistt, **Rahul Shrivastava** (2021). Global proteome analysis revealed metabolic remodeling during biofilm formation by *Mycobacterium fortuitum*. Proceedings of the 13th Annual Meeting of Proteomics Society, India and Virtual International Symposium on OMICS in Redefining Modern Biology (OMICS-2021). [Organized by: Proteomics Society of India (PSI) in collaboration with CSIR-Centre for Cellular and Molecular Biology (CCMB) & CCMB Science Foundation (CSF), India; 21-23 October].

3. Manoj Kumar, Ayushi Sharma, **Rahul Shrivastava** (2021). Anti-Microbial Resistance among Bacterial Pathogens and Novel Intervention Strategies to Tackle it. Proceedings of the International Conference on Recent Advances in Applied Science, Technology and Health (RASTH 2021) [SRM Institute of Science and Technology, Kattankulathur, India : 3-5 March 2021], pp.58-58.

4. **Rahul Shrivastava**, Poonam Katoch (2021). Random Insertion Transposon Mutagenesis of *Mycobacterium fortuitum* Identified role of Anthranilate Phosphoribosyl transferase (trpD) in Biofilm Formation and Hypoxic Stress Survival. Proceedings of the International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology, Noida, India : 28th-30th January, 2021], pp.23-23.

5. Simran Gohan, **Rahul Shrivastava** (2021). Gene Therapy Strategies for Tackling Hutchinson-Gilford Progeria. Proceedings of the International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology, Noida, India: 28th-30th January, 2021], pp.12-12.

6. Nayanika Sharma, Pranjal Bhatia, **Rahul Shrivastava** (2021). Big Data Analysis of Alzheimer's Disease for Early Prediction. Proceedings of the International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology, Noida, India : 28th-30th January, 2021], pp.80-80.

7. **Ayushi Sharma**, Jitendraa Vashistt, Gopal Singh Bisht, Rahul Shrivastava (2020). Systems biology approach for screening drug targets from mycobacterial proteomes**.** Proceedings of the International Conference on Frontiers in Biochemistry and

Biotechnology: Strategies to Combat Human Diseases. [Organized by: Department of Biochemistry (Shivaji College) and South Campus (University of Delhi), New Delhi, India; 12-13 February].

8. Ayushi Sharma, Jitendraa Vashistt, Gopal Singh Bisht, **Rahul Shrivastava** (2019). High throughput screening of *Mycobacterium fortuitum* proteome for discovery of novel drug targets. Proceedings of the International Conference on Recent Advances in Agricultural, Environmental and Applied Sciences for Global Development (RAAEASGD-2019) [2nd : Dr. Y.S. Parmar University of Horticulture and Forestry, Solan, India : 27-29 September, 2019], pp.51-51.

9. Shivani Sood, Varun Jaiswal, Poonam Katoch, **Rahul Shrivastava** (2019). Acid stress based Mycobacterium fortuitum surrogate model for *Mycobacterium tuberculosis* persistent infection. Proceedings of the Annual Conference of Association of Microbiologists of India (AMI) & International Symposium on Microbial Technologies in Sustainable Development of Energy, Environment, Agriculture and Health [60th : Central University of Haryana, Mahendergarh, India : 15-18 November, 2019], pp.319-319.

10. Ayushi Sharma, Poonam, Jitendraa Vashistt, Gopal Singh Bisht, **Rahul Shrivastava** (2019). Identification and in-silico structure modeling of *Mycobacterium fortuitum* homolog of *Mycobacterium tuberculosis* lipaseU. Proceedings of the International Conference on Recent Trends in Biotechnology and Bioinformatics (ICBAB-2019) [Jaypee University of Information Technology, Solan, India : 01-03 August, 2019].

11. Monika Choudhary, Deepika Sharma, Gopal Singh Bisht, **Rahul Shrivastava**, Jitendraa Vashistt (2019). Antimicrobial potential of quercetin and curcumin against antibiotic resistant strains of Acinetobacter baumannii. Proceedings of the International Conference on Recent Trends in Biotechnology and Bioinformatics (ICBAB-2019) [Jaypee University of Information Technology, Solan, India : 01-03 August, 2019].

12. Lalita Sharma, **Rahul Shrivastava**, Gopal Singh Bisht (2019). Synthesis, characterisation and evaluation of antibacterial activity of a 12 residue peptide A-12. Proceedings of the International Conference on Recent Trends in Biotechnology and Bioinformatics (ICBAB-2019) [Jaypee University of Information Technology, Solan, India : 01-03 August, 2019].

13. Saesha Verma, Ayushi Sharma, Gopal Singh Bisht, **Rahul Shrivastava** (2018). To Determine Anti-Mycobacterial Properties of Valeriana jatamansi and Its Prospective role as a Future Nutraceutical. *Proceedings of the International Conference on*

Nutraceuticals and Chronic Diseases (INCD-2018) [3rd: Cancer Research Institute - Himalayan Institute of Medical Sciences, Rishikesh (Dehradun), Uttarakhand: 14-16 September, 2018].

14. Sophia Puri, Deepika Sharma, Gopal Singh Bisht, **Rahul Shrivastava** (2018). Therapeutic Activity of Valeriana jatamansi Plant Extract against Diarrheagenic Infections. *Proceedings of the International Conference on Nutraceuticals and Chronic Diseases (INCD-2018)* [3rd: Cancer Research Institute - Himalayan Institute of Medical Sciences, Rishikesh (Dehradun), Uttarakhand: 14-16 September, 2018].

15. **Rahul Shrivastava**, Shivani Sood, Gopal Singh Bisht (2018). An in Vitro Model for Mycobacterium Tuberculosis Persistent Infection Drug Discovery Studies. *Proceedings of the International Conference on Advances in Biosciences and Biotechnology - ICABB-2018* [Jaypee Institute of Information Technology, Noida: 01-03 February, 2018].

16. Ayushi Sharma**,** Jitendraa Vashistt, **Rahul Shrivastava** (2018). Identification of Biofilm Associated Genes of Mycobacterium Species: a review of techniques and strategies. *Proceedings of the International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)* [Jaypee Institute of Information Technology, Noida: 01-03 February, 2018].

17. Monika Choudhary, **Rahul Shrivastava**, Jitendraa Vashistt Identification of drug target for multidrug resistant biofilm forming Acinetobacter baumannii. *Proceedings of the International Conference on Advances in Biosciences and Biotechnology (ICABB-2018)* [Jaypee Institute of Information Technology, Noida: 01-03 February, 2018].

18. Arpita Prasad, Rahul Pramjeet, Gopal Singh Bisht, **Rahul Shrivastava** (2017). In-Vitro studies of the Overexpressed Gene Isocitrate Lyase of Mycobacterium fortuitum under Stressed Conditions. *Proceedings of the Annual Conference of Association of Microbiologists of India and International Symposium on Microbes for Sustainable Development: Scope and Applications (MSDSA-2017)* [58th: Babasaheb Bhimrao Ambedkar University Lucknow, Uttar Pradesh, India: 16-19 November, 2017].

19. Divya, Anandita Govil, **Jitendraa Vashistt**, **Rahul Shrivastava** (2017). Identification and Construction of LipU Antisense Knockout Mutant of Mycobacterium fortuitum and its Potential Role in pathogenesis. *Proceedings of the Annual Conference of Association of microbiologist of India and International Symposium on Microbes for Sustainable Development: Scope and Applications (MSDSA-2017)* [58th: Babasaheb Bhimrao Ambedkar University Lucknow, Uttar Pradesh, India: 16-19 November, 2017].

20. Shubham Mittal, Poonam, **Rahul Shrivastava** (2017). Identification of Mycobacterium Fortuitum Virulent Membrane Genes as Potential Drug Targets. *Proceedings of the Indian Conference on Bioinformatics* [Birla Institute of Scientific Research, Jaipur, India: 7-9 November, 2017].

21. Poonam, Jitendraa Vashistt, Gopal Singh Bisht, **Rahul Shrivastava** (2017). Ribosomal Maturation Factor RimP as Potential Drug Target for M. Fortuitum. *Proceedings of the International conference on Advances in Plant and Microbial Biotechnology* [Jaypee Institute of Information Technology, Noida: 2-4 February 2017].

22. Nutan Thakur, Chetansee Khanna, Priyanka Sharma, Arti Kapil, **Rahul Shrivastava**, Jitendraa Vashistt (2017). Exploring Correlation Between Biofilm Formation Ability and Resistance Potential of Acinetobacter Baumannii Strains Isolated from Different Clinical Sources. *Proceedings of the International conference on Advances in Plant and Microbial Biotechnology* [Jaypee Institute of Information Technology, Noida : 2-4 February 2017].

23. Kinam Gupta, Poonam, J Vashistt, **Rahul Shrivastava** (2016). Analysis of transposon mutants' library in search of genes responsible for biofilm formation in a Mycobacterium fortuitum. *Proceedings of 57th Annual Conference of AMI & International Symposium; On Microbes and Biosphere: What's New and What's Next* [Guwahati, India; 24-27 November 2016].

24. Bishal Prasher, Divya Chauhan, Shivani Sood, **Rahul Shrivastava** (2016). Expression of cyclopropane mycolic acid synthase pcaA is essential for survival of *M. fortuitum* under in vitro stress conditions. *Proceedings of 57th Annual Conference of AMI & International Symposium; On Microbes and Biosphere: What's New and What's Next* [Guwahati, India; 24-27 November 2016].

25. **Rahul Shrivastava** (2016). Identification of Novel Gene(s) Responsible for Mycobacterium fortuitum. *Proceedings of the UK-India Workshop on Tackling the Emergence of Antimicrobial Resistance: increasing virulence and facilitating research network* [IMTECH Chandigarh: 7-10 November 2016].

26. Kriti Vaid, Shivani Sood, Shivani Saxena, Poonam, **Rahul Shrivastava** (2016). Isocitrate Lyase Homologue of Mycobacterium fortuitum Plays role in in-vitro Survival and Stress Response.*Proceedings of the International Conference on Innovative Research in Biotechnology, Biomedical Sciences, Bioinformatics and Stem cell Applications (BSC-2016)* [JNU, New Delhi, India : 30 January, 2016].

27. Ritu Ghildiyal, Shivani Sood, Jitendraa Vashistt, **Rahul Shrivastava** (2015). Mycobacterium fortuitum sigH antisense knock-out mutant shows reduced survival under in vitro stress conditions. Proceedings of the 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on Emerging Discoveries in Microbiology [JNU, New Delhi, India].

28. Poonam, Monika Pradhan, Kanika Sharma, **Rahul Shrivastava** (2015). Identification of *Mycobacterium fortuitum* Virulence Factors using Transposon mutagenesis. Proceedings of the 56th Annual Conference of Association of Microbiologists of India (AMI-2015) & International Symposium on Emerging Discoveries in Microbiology [JNU, New Delhi, India: 7 - 10 December, 2015].

29. Nutan, Harish Changotra, **Rahul Shrivastava**, Nancy Grover, Jitendraa Vashistt (2015). Exploration of Drug Resistance Pattern of Diarrhoeagenic Pathogens in North - Western Himalayan Region of India: implications for use and misuse of antibiotics.. Proceedings of the European Congress of Clinical Microbiology and Infectious Diseases [25th: Copenhagen, Denmark.: 25-28 April, 2015].

30. Shivani Sood, P. Katoch, **Rahul Shrivastava** (2015). A conserved molecular mechanism of adaptation on exposure to acidic condition shown by fast growing pathogenic mycobacteria Mycobacterium fortuitum. Proceedings of the 25th European Congress of Clinical Microbiology and Infectious Diseases [Copenhagen, Denmark : 25-28 April, 2015].

31. Nutan, Swapanil Jain, Harish Changotra, **Rahul Shrivastava**, Jitendraa Vashistt (2015). Metagenomic Studies in Relation to Diarrheal Diseases. Proceedings of the International Congress on Friedreichs Ataxia and DNA Structure in Health & Disease [All India Institute of Medical Sciences, New Delhi, India: 11-13 April, 2015].

32. Anant Yadav, Shivani Sood, **Rahul Shrivastava** (2014). Promoter trap strategy for gene expression analysis under stress conditions of M. tuberculosis latency. *BMC Infectious Diseases*, *14* (3).

33. Shivani Sood, Anant Yadav, Poonam, **Rahul Shrivastava** (2014). *M. fortuitum* persistence on exposure to granuloma specific conditions: Implications for a surrogate model. *Proceedings of the International conference on Cellular and Molecular Mechanisms of Disease Processes* [University of Kashmir, Jammu & Kashmir, India].

34. Anant Yadav, Shivani Sood, **Rahul Shrivastava** (2014). Promoter trap strategy for gene expression analysis under stress conditions of M. tuberculosis latency. *Proceedings of the*

2nd International Science Symposium on HIV and Infectious Diseases (HIV SCIENCE 2014) [Chennai, India : 30 January - 1 February 2014].

35. Shivani Sood, Poonam, Jitendraa Vashistt, **Rahul Shrivastava** (2014). Reporter based two-pronged strategy: target validation and rapid drug screening against persistent mycobacteria. Proceedings of the International Symposium on Cellular Response to Drugs and 38th All India Cell Biology Conference [38: Lucknow, India: 10-12 Dec. 2014].

36. Varun Jaiswal, **Rahul Shrivastava** and C Rout (2010) Computational analysis of immunogenic epitopes to identify vaccine candidate of influenza A virus with broad specificity. Influenza: Translating basic insights, Washington D.C., USA.

37. **Rahul Shrivastava**, Brahm S. Srivastava, Ranjana Srivastava, (2006) *M. fortuitum* murine infection model for screening of Antimycobacterial drugs and Identification of Virulence determinants; Symposium on New frontiers in Tuberculosis, International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, India.

National Conferences / Symposia Proceedings:

1. Sharvi Sood, **Rahul Shrivastava** (2022). Immunotherapies for Tuberculosis. Proceedings of the National Seminar on "Emerging Trends & Innovations in Biosciences [School of Life and Allied Science, ITM University, Raipur (Chhattisgarh) India : 03 March, 2022].

2. Simran Gohan, **Rahul Shrivastava** (2021). CRISPR-Cas9 as Therapeutic for Hutchinson-Gilford Progeria Syndrome. Proceedings of the National Conference on "CRISPR/Cas: From Biology to Technology [SRM University – AP and Institute of Bioinformatics and Applied Biotechnology, Bengaluru : 25-27 November, 2021], pp.77-77.

3. Simran Gohan, **Rahul Shrivastava** (2021). Gene Therapy Strategies for tackling Hutchinson-Gilford Progeria. Proceedings of the National Conference on "Virtual National Conference on Transforming Trends in Life Science & Health care [DWARAKA DOSS GOVERDHAN DOSS VAISHNAV COLLEGE in association with Indian Science Congress Association (Chennai chapter): 17-18 November, 2021], pp.87-87.

4. Deepika Sharma, Poonam Sharma, **Rahul Shrivastava**, Gopal Singh Bisht (2018). Design, Synthesis, Characterization and Evaluation of Antimycobacterial activities of

Peptidomimetics.*Proceedings of the Himachal Pradesh Science Congress* [3rd: Indian Institute of Technology, Mandi, Himachal Pradesh, India: 22-23 October, 2018].

5. Ayushi Sharma, Jitendraa Vashistt, ***Rahul Shrivastava*** (2018). Standardization of Biofilm Formation of an Opportunistic Pathogen Mycobacterium fortuitum for Rapid Drug Screening.*Proceedings of the Himachal Pradesh Science Congress* [3rd: Indian Institute of Technology, Mandi, Himachal Pradesh, India: 22-23 October, 2018].

6. Vedika Kayasth, Kshitiz Gupta, **Rahul Shrivastava** (2017). A Healing Plate from Sacred Lotus: Biopackaging Applications of Nelumbo Nucifera Leaves. *Proceedings of the Recent Advances in Ayurvedic Herbal Medicine - from Source to Manufacturing* [Uttarakhand Ayurved University, Dehradun, India: 15-16 September 2017], pp.87-87.

7. Rahul Pramjeet, Poonam, Arpita Prasad, **Rahul Shrivastava** (2017). Random Mutagenesis for Identification of potential drug targets for Non tubercular Mycobacteria. *Proceedings of the Himachal Pradesh Science Congress* [2nd: Shimla, Himachal Pradesh, India: 20-21 November, 2017].

8. Monika Pradhan, Kanika Sharma, Poonam, **Rahul Shrivastava** (2016). Identification of Novel Gene(s) Responsible for Drug Resistance in Mycobacterium fortuitum. *Proceedings of the Recent Advances in Biomedical Research: Strategies and Innovation* [AIIMS, New Delhi, India: 26-27 May 2016].

9. Shivani Saxena, Poonam, Kriti Vaid, **Rahul Shrivastava** (2016). Isocitrate Lyase Homologue of Mycobacterium Fortuitum is Necessary for in Vivo Survival of *M. fortuitum* in a Mouse Model.*Proceedings of the Recent Advances in Biomedical Research: Strategies and Innovation* [AIIMS, New Delhi, India : 26 - 27 May 2016].

10. Poonam, Pavan Kumar Agrawal, **Rahul Shrivastava** (2016). Antimycobacterial Activity of Leaf Extracts of Medicinal Plants Against M. Smegmatis. *Proceedings of the Recent Advances in Green Technology* [Bahara University, Shimla : 29- 30 September 2016].

11. Radhika Batta, Poonam, Harish Changotra, **Rahul Shrivastava**, Jitendraa Vashistt (2015). Assessment of the resistance pattern in Klebsiella spp. against β-lactams in Himachal Pradesh. Proceedings of the National Conference on Emerging Trends in Host-Microbe Interactions [DAV University, Jalandhar (Punjab) : 17 -18 April, 2015].

12. Nancy Koundal, Akanksha Tomar, Shilpa, Nutan, **Rahul Shrivastava**, Jitendraa Vashistt (2015). Comparative resistance pattern analysis of gram negative bacteria against

commonly used antibiotics. Proceedings of the National Conference on Emerging Trends in Host-Microbe Interactions [DAV University, Jalandhar (Punjab) : 17-18 April 2015].

13. Ankita Thakur, Kriti Vaid, Shivani Saxena, Nutan, Jitendraa Vashistt, **Rahul Shrivastava** (2015). Aminoglycosides resistance pattern of Escherichia coli isolated from urine samples in various hospital settings of Himachal Pradesh. Proceedings of the National Conference on Emerging Trends in Host-Microbe Interactions [DAV University, Jalandhar (Punjab): 17-18 April, 2015].

14. Shivani Sood, Raj Kumar Tiwari, Neeraj Mahindroo, **Rahul Shrivastava** (2013). Establishment of Rapidly Growing Mycobacteria (RGM) as drug screening model for M. tuberculosis latent infection. Proceedings of the National conference on Research Trends in Drug Development: Exploration of Medicinal & Aromatic Plants [Shoolini University, Solan H.P., India].

15. Shivani Sood, Sree Krishna Chanumolu, Chittaranjan Rout, **Rahul Shrivastava***, (2012) Identification of Mycobacterial genes involved in Persistence as Potential Drug Targets, National Conference on 'NexGen Biotechnology: Amalgamating Science & Technology at UIET, Kurukshetra University, Kurukshetra, India.

16. **Rahul Shrivastava**, Brahm. S. Srivastava and Ranjana Srivastava, (2011) Mycobacterium fortuitum murine infection model: Persistence and Reactivation, National Symposium on Current Perspectives in Animal Biotechnology, pp6-7, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India

17. **Rahul Shrivastava**, R.P.S.Parti, S. Srivastava, Brahm S. Srivastava, Ranjana Srivastava, (2008) A mutant of Mycobacterium fortuitum attenuated in virulence and persistence in murine infection model which is complemented by Rv3291c of Mycobacterium tuberculosis. at - 'Dr. C. R. Krishnamurthi Memorial' Competition for Award of Young Scientist, at CDRI, Lucknow, India.

Research Guidance – PhD:

S. No.	Enrol. No. & Name of the Student	Title of Thesis/Dissertation/Project	Names of Joint Supervisors	Status (Completed/ Ongoing)
1	Shivani Sood (106558)	Establishment and validation of *M. fortuitum* model for *M. tuberculosis* persistent infection	None	Completed
2	Poonam (136553)	Identification of macrophage invasion genes of *Mycobacterium fortuitum* as potential drug targets	None	Completed
3	Ayushi Sharma (176553)	Biofilm associated drug target identification of *Mycobacterium fortuitum*	One	Completed
4	Monika Choudhary (176556)	Global proteome analysis of *Acinetobacter baumannii* biofilm for identification of novel drug targets	One	Completed
5	Manisha Sharma (206552)	Diversity Analysis & Evolutionary Studies in indigeneous cattle using mitochondrial genome	One	Ongoing
6	Akansha Nayyar (236555)	Identification of potential drug targets of *Mycobacterium tuberculosis* using machine learning approaches	One	Ongoing

Research Guidance: M. Tech / M.Sc.:

S. N.	Enrol. No. & Name of the Student	Title of Thesis/ Dissertation/Project	Joint Supervisor	M.Tech/ M.Sc	Status (Completed/ Ongoing)
1	Sourav Kumar (225112004)	Study of *Mycobacterium fortuitum* gene hadC under stress conditions	None	M.Sc	Completed - 2024
2	Diksha Suman (225112001)	Study of *Mycobacterium fortuitum* gene fabG4 under stress conditions	None	M.Sc	Completed - 2024
3	Shan Ghai (225111004)	Analysis of *Mycobacterium fortuitum* proteomic data set using machine learning for prediction of biomarkers	Dr. Shruti Jain	M.Sc	Completed - 2024
4	Prajjwal Jagwan (225111001)	Analysis of *Mycobacterium fortuitum* proteomic data set using machine learning for prediction of biomarkers	Dr. Shruti Jain	M.Sc	Completed - 2024
5	Nidhi Tyagi (217831)	Testing the efficacy of Gold nanoparticles against *Mycobacterium smegmatis* Biofilms	None	M.Sc.	Completed - 2023
6	Damini Singh (217855)	Analysis of Microflora on Biometric Machines	None	M.Sc.	Completed - 2023
7	Sweta Kumari (217859)	Effect of media components on growth of *Rauwolfia serpentina* and its antimicrobial activity	Dr. Hemant Sood	M.Sc.	Completed - 2023

8	Anamika Verma (197819)	Biofilm and Hospital Acquired Infection: Mechanism, Tolerance and Treatment	None	M.Sc.	Completed - June'2021
9	Manoj Kumar (197802)	A Study on Mechanism of Multidrug Resistance in Bacterial Pathogens	None	M.Sc.	Completed - June'2021
10	Divya (133801)	Construction of lipF anti-sense knock out mutant of *Mycobacterium fortuitum* and study of its role in i*n-vivo* infection and virulence	None	M.Tech	Completed - May, 2018
11	Arpita Prasad (162553)	Immunological Analysis of *M. fortuitum* Anthranilate Synthase mutants	None	M.Tech	Completed - May, 2018
12	Ritu Ghildiyal (142551)	Growth Kinetics and Characterization of *Mycobacterium fortuitum* Sense and Antisense Mutants Of Sigma Factor sigH	None	M.Tech	Completed - May, 2016
13	Shivani Saxena (111806)	Growth Kinetics of *Mycobacterium fortuitum* Isocitrate Lyase Mutants Under In Vivo And Stress Conditions.	None	M.Tech	Completed- May, 2016
14	Kriti Vaid (111801)	A comprehensive report on the regulatory steps required for Vaccine approval in India	None	M.Tech	Completed - May, 2016
15	Chhama Pandey (132558)	Lab scale purification of proteins	None	M.Tech	Completed - May, 2015
16	Abhishek Pathania (132556)	Project report on wine and vinegar production	None	M.Tech	Completed - May, 2015

17	Ankita Thakur (101711)	Comparative Analysis of QRDR Regions of drug resistant *Salmonella typhi* strains	Dr. Jitendraa Vashistt	M.Tech	Completed - May, 2015
18	Nancy Koundal (101704)	Identification of Extended Spectrum Beta-Lactamases Gene in Resistant Bacterial Strains from Himachal Pradesh	Dr. Jitendraa Vashistt	M.Tech	Completed - May, 2015
19	Anant Yadav (091725)	Validation of a Promoter Trap Vector for Gene Expression Analysis Under Stress Conditions of Mycobacterium Tuberculosis Latency	None	M.Tech	Completed - May, 2014

Faculty Development Programs Organized:

S. No.	Title	Dates	Sponsoring Agency and Organisation & Place held
1	FDP on "Teaching and Research Practices"	05-06-2023 to 10-06-2023	Dept. BTBI , JUIT (Co-coordinator)

Faculty Development Program Attended:

S. No.	Title	Dates/ Duration	Sponsoring Agency and Organisation & Place held
1	Faculty Development Program on "Innovation in Drug Delivery Technologies"	25 July – 30 July 2023	Jaypee Institute of Information Technology, Sector-62, Noida.
2	FDP on "Advanced Excel with Data Visualization"	13 Feb 2023 to 17 Feb 2023	MeitY and IIT Kanpur
3	One week FDP on Machine Learning – "Concepts and Applications"	14 March to 20 March 2023	University of Jammu
4	Faculty Development Program on "Innovation in drug delivery technologies"	25th to 30th July, 2022	Jaypee Institute of Information Technology, Sector-62, Noida.
5	NEP 2020 Implementation in Higher Education Institutes	09-May-2022 to 13-May-2022 One Week	Curriculum Development Centre Department , NITTTR, Chandigarh
6	Training of Trainer in Quality Control Biologist	16 Feb to 06 March 2021 [3 Weeks]	LSSSDC Skill India, National Skill Development Corporation (NSDC)
7	Training of Trainer in Lab Technician - Life Sciences	16 Feb to 06 March 2021 [3 Weeks]	LSSSDC Skill India, National Skill Development Corporation (NSDC)

8	Waste Management for Sustainable Development	4 – 8 Jan 2021/ One week	Department of Civil Engineering, JUIT Waknaghat
9	Advanced Excel with Data Visualization	21-27 Dec 2020/ One week	E & ICT Academy, IIT Kanpur
10	Advancements in Biotechnology and Nanotechnology	21-26 Sep 2020/ One week	UIET, Panjab Univrsity, Chandigarh & Govt. College of Engg. And Technology, Jammu (TEQIP-III)
11	Transforming Education with Industry 4.0	15- 20 June 2020 [One week]	Dept. CSE, JUIT, Solan
12	Faculty Development Programme on "R"	28 April to 02 May 2020 [one week]	Spoken Tutorial Project, IIT Bombay (National Mission on Education through ICT, MHRD, Govt. of India). Organized by Jaypee University Of Information Technology, Solan
13	Faculty Development Programme "Outcome Based Education in Biotechnology and Bioinformatics"	24-30, December, 2015 – One week	JUIT, Solan, H.P.
14	Faculty Development Programme	14th July 2014 – 19th July, 2014	JUIT, Solan, H.P.

Conferences/ Workshops/ Seminars Organized:

S. No.	Title	Dates/ Duration	Sponsoring Agency and Organisation & Place held
1.	Summer Training Workshop - 2024 (6 Week Training Programme For Participants Across India)	12 June – 15 July 2024	Funds for chemicals etc, raised from summer training participants fee. Organized by the Dept. of BT&BI, JUIT, Solan, H.P.
2.	Summer Training Workshop - 2023 (6 Week Training Programme For Participants Across India)	02 June 2023 to 14 July 2023	Funds for chemicals etc, raised from summer training participants fee. Organized by the Dept. of BT&BI, JUIT, Solan, H.P.
3.	Workshop on "Hands-on Training Program on Approaches for Screening and Characterization of Pre-Clinical Drug Candidates"	08 December 2022 to 14 December 2022	STUTI , DST , GoI and Dept. BTBI, JUIT
4.	One Day Workshop on "Biotechnological Techniques" at Department of Biotechnology, Khalsa College, Patiala	02 May 2023	Dept. BTBI. JUIT
5.	Workshop on 'Molecular Biology and Biotechnological Techniques' at RKMV, Shimla	24 February 2023	Dept. BTBI. JUIT
6.	International Conference on "Biotechnology and Bioinformatics (ICBAB-2023)"	11 July 2023 to 13 July 2023	Dept. BTBI, JUIT
7.	Summer Training Workshop – 2022 (6 Week Training Programme For Participants Across India)	June 1, 2022 – July 13, 2022	Funds for chemicals etc, raised from summer training participants fee. Organized by the Deptt. of BT&BI, JUIT, Solan,

			H.P.
8.	Summer Training – 2018 (6 Week Training Programme For Participants Across India)	June 1, 2018 – July 12, 2018	Funds for chemicals etc, raised from summer training participants fee. Organized by the Deptt. of BT&BI, JUIT, Solan, H.P.
9.	National Symposium on Computational System Biology (NSCSB-2016)	18-20, March, 2016 (Organizing Committee)	DBT, and JUIT, Waknaghat
10.	National Workshop on Statistical Techniques in Biological and Medical Sciences (STBMS)-2016	13-18, June, 2016 (Organizing Committee)	DBT, and JUIT, Waknaghat
11.	One week Aptitude Training and Placement Workshop - for students from all Departments	31 Aug'16 to 5 September, 2016	JUIT, Solan, H.P.
12.	CV and Personal Interview Grooming Workshop "*Insights of Group Discussion & Personal Interview"*	18th, September, 2016	JUIT, Solan, H.P.
13.	One day workshop on Career Prospects in Biotechnology and Bioinformatics	28th November 2016	JUIT, Solan, H.P.
14.	Summer Training – 2015 (6 Week Training Programme For Participants Across India)	June 1, 2015 – July 12, 2015	Funds for chemicals etc, raised from summer training participants fee. Organized by the Deptt. of BT&BI, JUIT, Solan, H.P.
15.	5 - Lecture series related to career avenues and opportunities in BT & BI	April 11, 2015 – May 9, 2015	JUIT, Solan, H.P.
16.	Aptitude Training and Placement Workshop-for students from the department	23-28, August,2015	JUIT, Solan, H.P.
17.	CV and Personal Interview Grooming Workshop	14-16, September, 2015	JUIT, Solan, H.P.

18.	Training and Placement Workshop – for students from all departments.	25th July 2014 – 7th Aug, 2014	JUIT, Solan, H.P.
19.	Training and Placement Workshop for Biotechnology and Bioinformatics Students	8th Aug, 2014 - 9th Aug 2014	JUIT, Solan, H.P.

Conferences/ Workshops/ Seminars Attended:

S. No.	**Title**	**Dates/ Duration**	**Sponsoring Agency and Organisation & Place held**
1	International Conference on "Biotechnology and Bioinformatics (ICBAB-2023)"	11 July 2023 to 13 July 2023	Dept. BTBI, JUIT
2	Data Analytics and its Research Perspectives	6th –11th June 2022 (One Week)	Department of CSE/ IT, Jaypee University of Information Technology, Waknaghat, Solan
3	Data Science and Machine Learning in Biology	14 Feb - 24 Feb, 2022	Dollar Education Group
4	Industrial Revolution 4.0	3 July - 4 Sep 2021 (One Week, Every Saturday)	Department of ECE, Jaypee University of Information Technology, Waknaghat, Solan
5	National Level Workshop on "Growing Role of Machine Learning in Cyber-Security"	Two Weeks 13th - 24th June, 2022	Department of CSE/ IT, Jaypee University of Information Technology, Waknaghat, Solan Himachal Pradesh
6	One day workshop on "Environment and Sustainability"	09-Jun-22	JIIT, Noida and JUIT, Waknaghat

7	Attracting grants and funds for research	14-Sep-2021	Wiley Publishing
8	Containersation & DevOps Practices for Bioinformatician	18-Dec-2021	CEHTI, Department of Biotechnology and Bioinformatics, JUIT
9	Research Data Management and FAIR Principles for Healthcare Data	9-Oct-2021	CEHTI, Department of Biotechnology and Bioinformatics, JUIT
10	FuSe: A Tool for Functional Analysis of RNA-Seq Data	20-Nov-2021	CEHTI, Department of Biotechnology and Bioinformatics, JUIT
11	International Conference on "Technological Intervention in Renewable Energy for Sustainable Environment (RESE-2021)"	24 & 25 November 2021	Centre of Excellence in Sustainable Technologies for Rural Development [CESTRD], Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology (JUIT), Waknaghat, Solan, H.P., INDIA.
12	National Science Day Symposium	28-Feb-22	JUIT, Waknaghat, Solan and HIMCOSTE, Govt. of H.P.
13	Adverse drug reactions: Issues and challenges during Covid-19	10-11 January 2022	School of Health Sciences and Technology, UPES, Dehradun
14	International Conference on Advances in Biosciences and Biotechnology on "Recent Trends in Biosciences and Biomedical Research"	28-30 January 2021 / Three days	Jaypee Institute of Information Technology, Noida
15	International Conference on "Technologies for Environmental Sustainability and Smart Agriculture" organized by Centre of Excellence in	18-19 September 2020/ Two days	Department of Biotechnology and Bioinformatics, JUIT, Waknaghat, Solan

	Sustainable Technologies for Rural Development [CESTRD]		(H.P.)
16	Hands on workshop on Bioinformatics tools in Research	17-19 September 2020/ Three days	Department of Biotechnology, JIIT Noida
17	Women Innovation and IPR	8-13 March, 2021/ One Week Workshop	IPR Cell, JUIT, Waknaghat, Solan, H.P. India
18	Research and Innovation Showcase (RAISE)	20-25 March 2021/ One Week Workshop	IPR Cell, JUIT, Waknaghat, Solan, H.P. India
19	Third Himachal Pradesh Science Congress	22-23 Oct-2018	IIT Mandi, H.P.
20	International Conference on Advances in Biosciences and Biotechnology	01-03 Feb-2018	Jaypee Institute of Information Technology, Noida
21	Workshop on "Research-Based Pedagogical Tools"	10-13 Dec-2017	IIT Gandhinagar, Travel Award by Newton Bhabha Fun d of the British Council
22	One – day Workshop on "Patent Filing and geographical Indications"	27-Feb-2017	JUIT, Solan, H.P.
23	One – day Workshop on "Innovation and Intellectual Property Rights''	9-Dec-2016	JUIT, Solan, H.P.
24	Workshop on "Tackling the emergence of antimicrobial resistance: increasing virulence and facilitating research network"	7-10 November 2016	IMTECH, Chandigarh sponsored by British Council and the Royal Society of Chemistry
25	National Workshop on Statistical Techniques in Biological and Medical Sciences (STBMS)-2016	13-18, June, 2016	DBT and JUIT, Waknaghat
26	56th Annual Conference of Association of Microbiologists of India & International Symposium on Emerging Discoveries in Microbiology	7-10, December, 2015	JNU, New Delhi & association of microbiologists of India (AMI-2015)
27	XXXVIII All India Cell Biology	10-12 Dec, 2014	CDRI Lucknow, India.

	Conference and International Symposium on "Cellular Responses to Drugs"		
28	International conference on Cellular and Molecular Mechanisms of Disease Processes	3-16 April, 2014	Srinagar, Jammu & Kashmir, India
29	Workshop on Molecular Diagnostics: Challenges vis-a-vis Growth Potential.	June 8, 2012 (1 Day)	Department of Biotechnology, New Delhi, India)
30	Indo-Taiwan International workshop on 'Drug development for cancer and infectious diseases.	Dec 14 & 15' 2011 (Two Day)	Department of Science and Technology, at Moga, Punjab, India.
31	National Symposium on Current Perspectives in Animal Biotechnology	Feb, 2011	Bharathidasan University, Tiruchirappalli, Tamil Nadu
32	Symposium on - New frontiers in Tuberculosis.	Dec, 2006	International Centre for Genetic Engineering and DBT, New Delhi, India.
33	International Conference on Mycobacterial Infection [VDMI]	Feb, 2005	Indian Institute on Technology, Kharagpur, India
34	3rd Indo-US workshop on Applications of Flow Cytometry in Drug Mechanistics	Sep, 2003	Regional Research Laboratory, Jammu, India

Membership of Professional Bodies:

1. ***Life Member -*** *INDIAN SOCIETY OF CELL BIOLOGY [Membership No. 2014029]*
2. ***Life Member –*** *Indian Science Congress [Membership No. L17131]*
3. ***Life Member -*** *The Association of Microbiologists of India [Membership No. 3875-2014]*
4. ***Annual Member*** *- American Society for Microbiology [Membership No. 200344887]*

Reviewer for the following Journals

i. Scientific Reports
ii. JAAD Case Reports
iii. International Journal of Microbiology Research
iv. Frontiers Cellular and Infection Microbiology
v. Frontiers in Microbiology
vi. Plos One
vii. BMC Infectious Diseases

Syllabi Developed:

1. As PG program Coordinator for M.Sc. Microbiology, complete course structure, syllabus of all theory courses (all four semesters) was developed by research, inputs from Head of the Dept., Boss Members and other faculty from the Dept.
2. All courses were modified keeping in view the common topics in GATE and NET examinations.
3. Syllabus of Diagnostics & Vaccine Manufacture (18B1WBT833) was shifted from a third year core course to a fourth year elective course. The syllabus was modified to suit senior students and a laboratory component was added to the subject during teaching, for efficient learning of the subject.
4. During Covid scenario add-on efforts in form of live demonstration, interactive video links, recorded classroom lectures, class note pdf were provided to students.
5. NET/GATE based questions were provided as home assignments (without any mark assigned) so that students may solve them and be better prepared for the competitive exams.

Laboratories Developed:

1. As PG program Coordinator for M.Sc. Microbiology, complete course structure, laboratory syllabus of all courses (all four semesters) was developed by research, inputs from Head of the Dept., BoS Members and other faculty from the Dept.
2. Most laboratories were converted to Four Hour (instead of traditionally 2 hr) duration for M.Sc. Biotechnology (Microbiology Lab - 20MS7BT173) and M.Sc. Biotechnology (21MS7MB171 General Microbiology and Bacteriology Lab (21MS7BT171) Molecular Biology Lab (21MS7MB172) Recombinant DNA Technology Lab (18MS7BT373), to enable hands-on practice and skill development of the PG students.
3. During Covid scenario add-on efforts (sometimes out-of the way) in form of live demonstration. Simple innovative experiments from home / kitchen commodities were planned and done so that students were able to do them at their home and be involved in the laboratory course.
4. New experiments were planned and executed in the Recombinant DNA Technology Lab (18MS7BT373), for better understanding of the corresponding theory part.
5. Added new laboratory experiments related to DNA based diagnostic methods.

Contribution to Departmental Activities

AY - 2022-23:

1. Coordinator, Placements, Dept. of Biotechnology & Bioinformatics
2. Coordinator, Summer Industrial Training, Dept. of Biotechnology & Bioinformatics
3. Coordinator Departmental Budget Committee – for FY 2023-2024
4. Member, Laboratory Safety Committee, Dept. of Biotechnology & Bioinformatics
5. Member, Institutional Ethics Committee, Dept. of Biotechnology & Bioinformatics
6. Member, Institutional Bio-Safety Committee, Dept. of Biotechnology & Bioinformatics
7. Member, Institutional Animal Ethics Committee, Dept. of Biotechnology & Bioinformatics
8. Member, M.Sc. and B.Tech., M.Tech. Project and Seminar Evaluation Panels, Dept. of Biotechnology & Bioinformatics
9. Member, Departmental Ph.D. Monitoring Committee
10. Member, M.Sc. (Microbiology) Admission Committee
11. Coordinator for MoU between JUIT and ICAR-National Bureau of Animal Genetic Resources, Karnal (20.07.2021 to 19.07.2026) for jointly undertaking the research program and Ph.D. degrees for registered students.
12. Module Co-ordinator, Summer Training - 2023 (a six week training offered by the Dept. for students from all over India).
13. Ph.D. (Biotechnology, Bioinformatics) and PGET M. Tech. Examination question preparation.

AY - 2021-22:

1. Coordinator, Placements, Dept. of Biotechnology & Bioinformatics
2. Coordinator, Summer Industrial Training, Dept. of Biotechnology & Bioinformatics
3. Coordinator Departmental Budget Committee – for FY 2022-2023

4. Module Co-ordinator, Summer Training - 2022 (a six week training offered by the Dept. for students from all over India).
5. Member, Laboratory Safety Committee, Dept. of Biotechnology & Bioinformatics
6. Member, Institutional Ethics Committee, Dept. of Biotechnology & Bioinformatics
7. Member, Institutional Bio Safety Committee, Dept. of Biotechnology & Bioinformatics
8. Member, Institutional Animal Ethics Committee, Dept. of Biotechnology & Bioinformatics
9. Member, M.Sc, B.Tech, M.Tech Project and Seminar Evaluation Panels, Dept. of Biotechnology & Bioinformatics
10. Member, Departmental Ph.D Monitoring Committee
11. Member, M.Tech (Biotechnology) Admission Committee
12. Ph.D. (Biotechnology, Bioinformatics) and PGET M. Tech Examination question preparation

AY - 2020-21:

1. Coordinator, Placements, Dept. of Biotechnology & Bioinformatics
2. Coordinator, Summer Industrial Training, Dept. of Biotechnology & Bioinformatics
3. Member, Laboratory Safety Committee, Dept. of Biotechnology & Bioinformatics
4. Member, Institutional Ethics Committee, Dept. of Biotechnology & Bioinformatics
5. Member, Institutional Bio Safety Committee, Dept. of Biotechnology & Bioinformatics
6. Member, Institutional Animal Ethics Committee, Dept. of Biotechnology & Bioinformatics
7. Member, Departmental Ph.D Monitoring Committee
8. Member, Departmental Marketing and Promotional Committee
9. Member, Departmental Industrial Training Evaluation Panel
10. Member, M.Tech Program Restructuring Committee
11. Ph.D. (Biotechnology, Bioinformatics) and PGET M. Tech Examination question preparation
12. Member, M.Sc, B.Tech Project and Seminar Evaluation Panels, Dept. of Biotechnology & Bioinformatics

Contribution to Students Activities

AY - 2022 -23:

1. Coordinator, JYC Disciplinary Committee
2. Mentor, M.Sc Microbiology students, Department of Biotechnology and Bioinformatics
3. Mentor, B.Tech. Project Students (Fourth Year), Department of Biotechnology and Bioinformatics – students presented their work in the form of posters at different conferences / Seminar. Both students got placed in reputed companies.
4. Member, Students Consultative Committee, Department of Biotechnology and Bioinformatics
5. Coordinator, Hostel Advisory Committee
6. Departmental Coordinator for conducting Mock Interviews - 3rd Year
7. LoR and editing of CVs for B.Tech and M.Sc. students.
8. Voice of BT panel for preparation
9. A part of Student Induction Program for new batch of students –August 2023
10. Departmental Coordinator for conducting Aptitude Training for M.Sc. and 4th Year students
11. Interaction with students on day-to-day basis, grooming regarding company placements and higher studies.
12. CV and Personal Interview Grooming sessions for Final Year B. Tech students.

AY - 2021 -22:

1. Coordinator, JYC Disciplinary Committee
2. Mentor, M.Sc Microbiology students, Department of Biotechnology and Bioinformatics
3. Mentor, B.Tech Project Students (Fourth Year), Department of Biotechnology and Bioinformatics – students presented their work in form of posters at five different Conferences/seminar; got 2 best poster awards, one research publication.
4. Member, Students Consultative Committee, Department of Biotechnology and Bioinformatics

5. Departmental Coordinator for conducting Mock Interviews - 3rd Year (All Branches)
6. LoR and editing of CVs for B.Tech. and M.Sc. students.
7. Voice of BT panel for preparation.
8. Interaction with students on day-to-day basis, grooming regarding company placements and higher studies.
9. CV and Personal Interview Grooming sessions for Final Year B. Tech. students.
10. A part of Student Induction Program for new batch of students –August 2022

AY - 2020-21:

1. Mentor, Second Year Students, Department of Biotechnology and Bioinformatics
2. Member, Students Consultative Committee, Department of Biotechnology and Bioinformatics
3. Member, Hostel Advisory Committee
4. Departmental Coordinator for conducting Mock Interviews - 3rd Year (All Branches)
5. LoR and editing of CVs for B.Tech. and M.Sc. students.
6. Interaction with students on day-to-day basis, grooming regarding company placements and higher studies.
7. CV and Personal Interview Grooming sessions for Final Year B. Tech students.
8. Guided project students for submission of abstracts to conference / workshops:

i. Simran Gohan (Minor project) won Second position in E-Poster at International Conference on Advances in Biosciences and Biotechnology [Jaypee Institute of Information Technology,
Noida, India.

ii. Nayanika Sharma (Major project) participated at Research and Innovation Showcase (RAISE) by IPR Cell, JUIT, Waknaghat, Solan.

9. Selection Committee Panel member for JYC office bearers

Contribution to Institutional Activities

AY - 2022-23:

1. Chief Warden, JUIT
2. Member, Anti-Ragging Committee
3. Member, Anti-Ragging Squad
4. Coordinator, Hostel Allotment Committee
5. Coordinator, Hostel Advisory Committee
6. Member, University Level Committee (ULC), nominated member for ensuring quality teaching.
7. Program Coordinator – M.Sc. Microbiology: (Course Syllabus for Second Year, Modifications, Approvals from Boss, ACM)
8. Member, JUIT Student Counselling Committee
9. A part of Faculty induction program 'Gurudakshta' for newly joined faculty of JUIT.
10. Member, Education Expo meant for outreach and advertisement of JUIT for admissions

AY - 2021-22:

1. Chief Warden, JUIT, Solan (Feb'2022 onwards)
2. Deputy Chief Warden, JUIT (July 2021 – Jan 2022)
3. Program Coordinator – M.Sc. Microbiology: (Course Structure for second year, syllabi, Approvals from BoS)
4. Coordinator, Hostel Allotment Committee (Sep – Dec 2021)
5. Coordinator, Hostel Allotment Committees (Apr – July 2022)
6. Presiding Officer, Committee for Award and recognition for Daily wage workers
7. Member, Selection Committee for Admin Coordinator
8. University Level Committee (ULC), nominated member for ensuring quality teaching
9. JUIT - UGC Task force for Social and Industry Connect for 'Social responsibility and community connect'.
10. Member, Anti-Ragging Squad.
11. Member, Anti-Ragging Committee.

AY - 2020-21:

1. Deputy Chief Warden, JUIT Solan.
2. Program Coordinator – M.Sc. Microbiology: New Program started from July – 2021 Session (Course Structure, Syllabi, Approvals from BoS, Academic Council)
3. Member, Covid Help Group
4. Member, Covid Safety Enforcement Team
5. Member, Anti – Ragging Squad
6. Member, Anti-Ragging Committee.
7. University Level Committee (ULC), nominated member for ensuring quality teaching in Online mode.
8. Member, Annual Lab Stock Verification Board, JUIT
9. JUIT - UGC Task force for Social and Industry Connect for 'Social responsibility and community connect'
10. Member, JUIT – UGC Task Group – Jeevan Kaushal
11. Member, Hostel Advisory Committee
12. Member, Annual Lab Stock Verification Board, JUIT