CURRICULUM VITAE

PROF. PRATYOOSH SHUKLA

Professor & Head, Department of Microbiology

Maharshi Dayanand University, Rohtak-124001, Haryana, India

E-mail: pratyoosh.shukla@gmail.com

GENERAL SECRETARY, THE ASSOCIATION OF MICROBIOLOGISTS OF INDIA (AMI)

Lab web page: http://medhaid.co/Dr-Pratyoosh-Shukla/

Google scholar citation:

https://scholar.google.co.in/citations?hl=en&user=MG9aCDUAAAAJ&view_op=list_works&sortby=pubdate

ORCID iD : orcid.org/0000-0002-9307-4126

ResearchGate: https://www.researchgate.net/profile/Pratyoosh_Shukla

RESEARCH INTERESTS: Enzyme Technology and Microbial Biotechnology; Protein Bioinformatics

EDUCATIONAL QUALIFICATIONS:

Exam	Year	Board/Univ.	Division	% age	Subjects
B.Sc.	1997	A.P.S. University. Rewa, M.P. India	1st	75.0%	Bot., Zoo., Chem. F.C.
M.Sc.*	1999	Dr. Hari Singh Gour University, Sagar, M.P. India	1st	75.9%	Applied Microbiology and Biotechnology
Ph. D.	2002	A.P.S, University Rewa, M.P., India	Awarded in September 2002		Microbiology and Fungal Biotechnology
International NRF-DUT Post Doc	2008-09	Department of Biotechnology & Food Technology, Durban University of Technology, Durban, South Africa	Awarded (From April 2008-31 March 2009)		Enzyme Technology & Enzyme Engineering

University Topper- Stood First in order of Merit

ACADEMIC AND PROFESSIONAL APPOINTMENTS:

S. No.	Employer	*From*	*To*	*Designation*
1.	Registrar, Dr. H. S. Gour University, Sagar (MP),India	July, 2000	June, 2002	Lecturer(Contractual)
2.	Registrar, National Law University, Jodhpur, India	July 8 , 2002	March 19,2003	Astt Lecturer (Life Science/Biotech)
3.	Registrar, Birla Institute of Technology, (DEEMED UNIVERSITY) Mesra, Ranchi, India	March 21, 2003	September 30,2005	Lecturer
3.	Registrar, Birla Institute of Technology, Mesra, Ranchi, India	October, 1,2005	September, 18, 2007	Sr. Lecturer
4.	Registrar, Birla Institute of Technology, Mesra, Ranchi, India	Sept.19, 2007 (w.e.f 01/06/07)	May 31,2010	Reader
5.	Registrar, Birla Institute of Technology, (DEEMED UNIVERSITY) Mesra, Ranchi	June 1, 2010	Dec. 18, 2011	Associate Professor
6.	Registrar, M.D. University, Rohtak, Haryana, India	Dec. 19, 2011	May 31, 2013	Associate Professor & HOD
7.	Registrar, M.D. University, Rohtak, Haryana, India	June 1, 2013	Till today	Professor & HOD

EXPERIENCE:

TEACHING [UG/PG]: 18 Years (2000-2018)

RESEARCH: 16 years (2002-2018) (post Ph.D.)

PUBLICATIONS & PATENTS: Author of 138 scientific publications

a. Peer Reviewed Journals (International): 100
b. Peer Reviewed Journals (National): 03
c. Book Chapters: 26
d. Edited Books /Books authored: 07
e. Journal special issue: 02

OTHERS: 115

f. Conference Proceedings/poster presentations (International): 40
g. Conference Proceedings /poster presentations (National): 25
h. Invited Lectures/Oral presentations: 50

PATENT: 01

Title: Novel β-1, 4-endoxylanase from *Thermomyces lanuginosus* SS-8 and the mode of action thereof.

Ref No.141/KOL/2010; Filed on 15/02/2010 at the Patent Office, Kolkata

Publication date: 19.10.2012 (U/S 11A)

Peer Reviewed Journals (International):

2018

1. Sanjeev K. Gupta, Pratyoosh Shukla (2018) Glycosylation control technologies for recombinant therapeutic proteins. DOI: 10.1007/s00253-018-9430-6 Applied Microbiology and Biotechnology. (Impact Factor: 3.34)
2. Dinesh Saini, Hillol Chakdar, Sunil Pabbi & Pratyoosh Shukla (2018) Enhancing production of microalgal biopigments through metabolic and genetic engineering (DOI:10.1080/10408398.2018.1533518), Critical Reviews in Food Science and Nutrition. (Impact Factor: 6.015)
3. Kumar, V., Kumar, A., Chhabra, D., & Shukla, P. (2018). Improved biobleaching of mixed hardwood pulp and process optimization using novel GA-ANN and GA-ANFIS hybrid statistical tools. Bioresource technology, 271: 274-282 (Impact factor: 5.807)
4. Arun Kumar Dangi, Babita Sharma, Russell T. Hill, Pratyoosh Shukla (2018) Bioremediation through microbes: systems biology and metabolic engineering approach. Critical Reviews in Biotechnology, doi.org/10.1080/07388551.2018.1500997. (Impact Factor: 5.239)
5. Shukla, P. (2018). 'Futuristic Protein Engineering: Developments and Avenues'. Current Protein and Peptide Science, 19(1), 3-4. (Impact factor: 2.57)
6. Supratim Basu, Roel C. Rabara, Sangeeta Negi, Pratyoosh Shukla (2018) "Engineering of PGPMOs through gene editing and systems biology: solution for phytoremediation?, Trends in Biotechnology , 36(5) 499-510 (Impact Factor: 13.578)
7. Sharma, B., Dangi, A. K., & Shukla, P. (2018). Contemporary enzyme based technologies for bioremediation: A review. Journal of environmental management, 210, 10-22. (Impact Factor: 4.010)

8. Yadav, R., K Singh, P., & Shukla, P. (2018). Metabolic engineering for probiotics and their genome-wide expression profiling. Current Protein and Peptide Science, 19(1), 68-74. (Impact factor: 2.57)
9. Basu, M., Kumar, V., & Shukla, P. (2018). Recombinant Approaches for Microbial Xylanases: Recent Advances and Perspectives. Current Protein and Peptide Science, 19(1), 87-99. (Impact factor: 2.57)
10. Vishal Kumar, Arun Kumar Dangi, Pratyoosh Shukla (2018) Engineering Thermostable Microbial Xylanases Toward its Industrial Applications. Molecular Biotechnology, 1-10, Impact Factor 1.634)
11. Liu, H., Sun, J., Chang, J. S., & Shukla, P. (2018). Engineering microbes for direct fermentation of cellulose to bioethanol. Critical reviews in biotechnology, Pages 1-17. https://doi.org/10.1080/07388551.2018.1452891. (IF 6.542)
12. Rameshwar Tiwari, Lata Nain, Nikos Labrou & Pratyoosh Shukla (2017) Bioprospecting of functional cellulases from metagenome for second generation biofuel production: A review. Critical Reviews in Microbiology. 44 (2), 244-257 (Impact factor- 8.19). *NAAS Rating: 12.02.* ISSN 1040-841X (Print), 1549-7828 (Online).
13. Banerjee, A., Banerjee, C., Negi, S., Chang, J. S., & Shukla, P. (2018). Improvements in algal lipid production: a systems biology and gene editing approach. Critical Reviews in Biotechnology, 38 (3), 369-385. (IF 6.542)
14. Jagadevan, S., Banerjee, A., Banerjee, C., Guria, C., Tiwari, R., Baweja, M., & Shukla, P. (2018). Recent developments in synthetic biology and metabolic engineering in microalgae towards biofuel production. Biotechnology for biofuels, 11(1), 185. (Impact Factor: 5.497)
15. Saini, D. K., Pabbi, S., & Shukla, P. (2018). Cyanobacterial pigments: Perspectives and biotechnological approaches. Food and Chemical Toxicology. 120: 616-624. (Impact Factor: 3.997)
16. Vashistha, R., Dangi, A.K., Kumar, A. et al. 3 Biotech (2018) Futuristic biosensors for cardiac health care: an artificial intelligence approach 8: 358. https://doi.org/10.1007/s13205-018-1368-y.((Impact Factor: 1.497)
17. Vashistha, R., Chhabra, D., & Shukla, P. (2018). Integrated Artificial Intelligence Approaches for Disease Diagnostics. Indian journal of microbiology, 58(2), 252-255.
18. Dubey, K. K., Luke, G. A., Knox, C., Kumar, P., Pletschke, B. I., Singh, P. K., & Shukla, P. (2018). Vaccine and antibody production in plants: developments and computational tools. Briefings in functional genomics.(Impact Factor:1.310)
19. Dangi, A. K., Sharma, B., Khangwal, I., & Shukla, P. (2018). Combinatorial Interactions of Biotic and Abiotic Stresses in Plants and Their Molecular Mechanisms: Systems Biology Approach. Molecular Biotechnology, 1-15. (Impact Factor:1.815)
20. V Kumar, P Shukla (2018) Extracellular xylanase production from *T. lanuginosus* VAPS24 at pilot scale and thermostability enhancement by immobilization, Process Biochemistry, (Impact factor 2.616)
21. Kumar, V., Singh, P. K., & Shukla, P. (2018) Thermostability and Substrate Specificity of GH-11 Xylanase from *Thermomyces lanuginosus* VAPS24. Indian Journal of Microbiology, 1-5. (Impact factor: 1.34)

2017

22. Tiwari, R., Singh, P. K., Singh, S., Nain, P. K., Nain, L., & Shukla, P. (2017). Bioprospecting of novel thermostable β-glucosidase from *Bacillus subtilis* RA10 and its application in biomass hydrolysis. Biotechnology for Biofuels 10 (1), 246. (IF 5.203).
23. Dangi, A. K., Dubey, K. K., & Shukla, P. (2017). Strategies to Improve *Saccharomyces cerevisiae*: Technological Advancements and Evolutionary Engineering. Indian Journal of Microbiology, 1-9. (IF 1.143).

24. Sanjeev Kumar Gupta, Pratyoosh Shukla (2017) Sophisticated cloning, fermentation and purification technologies for an enhanced therapeutic protein production: A Review Front. Pharmacol. doi: 10.3389/fphar.2017.00419. (Impact Factor: 4.418) ISSN No. 1663-9812.
25. Gupta SK, Sharma A, Kushwaha H and Shukla P (2017) Over-expression of a Codon Optimized Yeast Cytosolic Pyruvate Carboxylase (PYC2) in CHO Cells for an Augmented Lactate Metabolism. Front. Pharmacol. 8:463. doi: 10.3389/fphar.2017.00463(Impact Factor: 4.418). ISSN No. 1663-9812.
26. Sanjeev K. Gupta, Santosh K. Srivastava, Ankit Sharma, Vaibhav H. Nalage, Darshita Salvi, Hiralal Kushwaha, Nikhil B. Chitnis, Pratyoosh Shukla (2017) Metabolic engineering of CHO cells for the development of a robust protein production platform. PLOS ONE. DOI: 10.1371/journal.pone.0181455.(IF 2.766)
27. Vishal Kumar, Deepak Chhabra, Pratyoosh Shukla (2017) Xylanase production from *Thermomyces lanuginosus* VAPS-24 using low cost agro-industrial residues via hybrid optimization tools and its potential use for saccharification. DOI: 10.1016/j.biortech.2017.07.094, Bioresource Technology, ISSN: 0960-8524, (IF 5.651)
28. Puneet Kumar Singh, Vishal Kumar, Ruby Yadav and Pratyoosh Shukla (2017) Bioengineering for microbial inulinases: Trends and applications. Current protein & peptide science, 18. DOI: 10.2174/1389203718666161122112251 (IF 2.441)
29. Yadav R, Kumar V., Baweja M., Shukla P. (2017) Gene editing and genetic engineering approaches for advanced probiotics: A Review. Critical Reviews in Food Science and Nutrition. http://dx.doi.org/10.1080/10408398.2016.1274877. (IF 5.492)
30. Moumita Basu, Vishal Kumar and Pratyoosh Shukla (2017) Recombinant approaches for microbial xylanases: recent advances and perspectives. Current protein & peptide science, 18. DOI: 10.2174/1389203718666161122110200 (IF 2.441)
31. Kashyap Kumar Dubey, Punit Kumar, Nikos E. Labrou, Pratyoosh Shukla (2017) Biotherapeutic potential and mechanisms of action of Colchicine. Critical Reviews in Biotechnology. 10.1080/07388551.2017.1303804. ISSN 1549-7801. (IF 7.510)
32. Nigam, V.K., Arfi, T., Kumar, V., Shukla, Pratyoosh (2017) Bioengineering of Nitrilases Towards Its Use as Green Catalyst: Applications and Perspectives. Indian J Microbiol. doi:10.1007/s12088-017-0645-5. (IF 1.143)
33. Dahiya DK, Renuka, Puniya M, Shandilya UK, Dhewa T, Kumar N, Kumar S, Puniya AK and Shukla P (2017) Gut Microbiota Modulation and Its Relationship with Obesity Using Prebiotic Fibers and Probiotics: A Review. Front. Microbiol. 8:563. doi: 10.3389/fmicb.2017.00563 (IF 4.165)
34. Roshan Kumar, Koushik Biswas, Puneet Kumar Singh, Pankaj Kumar Singh, S. Elumalai, Pratyoosh Shukla and Sunil Pabbi (2017) Lipid production and molecular dynamics simulation for regulation of accD gene in cyanobacteria under different N and P regimes. Biotechnology for Biofuels. DOI: 10.1186/s13068-017-0776-2. (IF 6.444) ISSN: 1754-6834
35. Sanjeev Kumar Gupta, Pratyoosh Shukla (2017) Gene editing for cell engineering: trends and applications. Critical Reviews in Biotechnology , 37:5, 672-684, Impact factor-7.510. NAAS Rating: 12.09. http://dx.doi.org/10.1080/07388551.2016.1214557 ISSN: 1549-7801.

2016

36. Jahangir Imam, Pratyoosh Shukla, Nimai Prasad Mandal and Mukund Variar (2016). Microbial interactions in plants: Perspectives and applications of proteomics. Current Protein & Peptide Science, 18. DOI: 10.2174/1389203718666161122103731. (IF 2.8)
37. Ruby Yadav, Puneet Kumar Singh and Pratyoosh Shukla (2016) Metabolic Engineering for Probiotics and their Genome-Wide Expression Profiling. Current protein & peptide science, 18(12): 1-8. ISSN (Print): 1389-2037. ISSN (Online): 1875-5550 DOI: 10.2174/1389203718666161111130157. (IF 2.8)

38. Yadav R, Singh PK, Puniya AK and Shukla P (2016). Catalytic interactions and molecular docking of bile salt hydrolase (BSH) from *L. plantarum* RYPR1 and its prebiotic utilization. Front. Microbiol. 7(2116):1-7. doi: 10.3389/fmicb.2016.02116 (IF 4.165)
39. Yadav R, Puniya AK and Shukla P (2016). Probiotic properties of *Lactobacillus plantarum* RYPR1 from an indigenous fermented beverage Raabadi. Front. Microbiol. 7(1683): 1-9. doi: 10.3389/fmicb.2016.01683. (IF 4.165)
40. Jahangir Imam, Nimai P. Mandal, Mukund Variar and Pratyoosh Shukla (2016) Allele Mining and Selective Patterns of Pi9 Gene in a Set of Rice Landraces from India. 7(1846): 1-9. Front. Plant Sci., doi.org/10.3389/fpls.2016.01846. (IF 4.9)
41. J, Imam Singh PK and Shukla Pratyoosh (2016). Plant microbe interactions in post genomic era: perspectives and applications. Front. Microbiol. 7(1488):1-15. doi: 10.3389/fmicb.2016.01488. (IF 4.165)
42. Kumar Vishal, Baweja M, Singh PK and Shukla Pratyoosh (2016). Recent developments in systems biology and metabolic engineering of plant microbe interactions. Front. Plant Sci. 7(1421):1-12. doi: 10.3389/fpls.2016.01421 (IF 4.9)
43. Vishal Kumar, Julia Marin-Navarro, Pratyoosh Shukla (2016) Thermostable microbial xylanases for pulp and paper industries: trends, applications and further perspectives. World J Microbiol Biotechnol. 32(2):34: 1-10, 1-10 (DOI 10.1007/s11274-015-2005-0). (**Impact** factor- 1.779). *NAAS Rating: 7.78.* ISSN: 0959-3993 (Print) 1573-0972 (Online).
44. Banerjee Chiranjib, Singh, Puneet K., Shukla, Pratyoosh (2016) "Microalgal bioengineering for sustainable energy development: Recent transgenesis and metabolic engineering strategies. Biotechnology journal 11 (3), 303-314 (Impact factor- 3.78). ISSN: 1860-7314.
45. Sanjeev Kumar Gupta, Pratyoosh Shukla (2016) Bacterial platform technology for recombinant antibody fragment production: A review. Critical Reviews in Microbiology. 43(1):31-42 DOI:10.3109/1040841X.2016.1150959. (Impact factor- 8.19). *NAAS Rating: 12.02.* ISSN 1040-841X (Print), 1549-7828 (Online).
46. Puneet Kumar Singh, Josmi Joseph, Sukriti Goyal, Abhinav Grover, Pratyoosh Shukla (2016) Functional analysis of the binding model of microbial inulinases using docking and molecular dynamics simulation. Journal of Molecular Modeling, 22(4), 1-7. DOI 10.1007/s00894-016-2935-y. (Impact factor- 1.736). *NAAS Rating: 7.74.* ISSN: 1610-2940 (Print) 0948-5023 (Online).
47. Banerjee, C., Dubey, K. K., & Shukla, P. (2016). Metabolic engineering of microalgal based biofuel production: prospects and challenges. Frontiers in Microbiology, 7(432):1-8 http://dx.doi.org/10.3389/fmicb.2016.00432, Electronic ISSN: 1664-302X . *Impact factor-4.165*
48. Mehak Baweja,Lata Nain,Yutaka Kawarabayasi,Pratyoosh Shukla (2016) Current Technological Improvements in Enzymes towards their biotechnological applications. Frontiers in Microbiology 7(965):1-13. Electronic ISSN: 1664-302X http://dx.doi.org/10.3389/fmicb.2016.00965. *Impact factor-4.165*
49. Baweja M, Tiwari R, Singh PK, Nain L and Shukla P (2016). An Alkaline Protease from *Bacillus pumilus* MP 27: Functional Analysis of its Binding Model towards its Applications as Detergent Additive. Front. Microbiol. 7(1195): 1-14. Electronic ISSN: 1664-302X. doi: 10.3389/fmicb.2016.01195. *Impact factor-4.165*
50. Shrivastava, S., Kumar, V., Baweja, M., & Shukla, P. (2016). Enhanced xylanase production from *Thermomyces lanuginosus* NCIM 1374/DSM 28966 using statistical analysis. Journal of Pure and Applied Microbiology, 10(3), 2225-2231. ISSN 0973-7510. NAAS RATING 6.4 (2013). Impact Factor: 0.073.

2015

51. Jahangir Imam, Shamshad Alam, Nimai Prasad Mandal, Pratyoosh Shukla, Tilak Raj Sharma, Mukund Variar (2015). Molecular Identification and Virulence Analysis of AVR Genes in Rice Blast Pathogen, *Magnaporthe oryzae* from Eastern India. Euphytica, (Springer) ISSN (Print): 0014-2336; 1573-5060 (Online); 206(1):21–31. Impact Factor: 1.643 (Online first) (DOI: 10.1007/s10681-015-1465-5). *NAAS Rating: 7.46*
52. Jahangir Imam, Shamshad Alam, Nimai Prasad Mandal, Dipankar Maiti, Mukund Variar Pratyoosh Shukla (2015). Molecular Diversity and Mating Type Distribution of the Rice Blast Pathogen *Magnaporthe oryzae* in North-East and Eastern India. Indian Journal of Microbiology (Springer), 55(1): 108-113 (DOI 10.1007/s12088-014-0504-6): *Impact factor-0.8. [ISSN 0046-8991], NAAS Rating: 6.46*
53. S. Karumuri, P.K. Singh, Pratyoosh Shukla (2015) In Silico Analog Design for Terbinafine against *Trichophyton rubrum*: A Preliminary Study, Indian Journal of Microbiology (Springer), 55(3): 333–340. (DOI) 10.1007/s12088-015-0524-x. (Online first). *Impact factor-0.8. NAAS Rating: 6.46.*
54. Sanjeev Kumar Gupta, Pratyoosh Shukla (2015) Advanced technologies for improved expression of recombinant proteins in bacteria: Perspectives and applications. Critical Reviews in Biotechnology, 36(6):1089-1098. DOI 10.3109/07388551.2015.1084264. *Impact factor-7.89. NAAS Rating: 12.09.* Print ISSN: 0738-8551 Online ISSN: 1549-7801
55. Nigam, V.K. and Shukla, P., (2015). Enzyme Based Biosensors for Detection of Environmental Pollutants-A Review. Journal of microbiology and biotechnology, 25(11):1773-81. Online ISSN: 1738-8872 Print ISSN: 1017-7825 (Impact Factor: 1.685)
56. Rameshwar Tiwari, Kumar Pranaw, Surender Singh, Pawan Nain, Pratyoosh Shukla, Lata Nain (2015) Two step statistical optimization for cold active β-glucosidase production from *Pseudomonas lutea* BG8 and its application for improving saccharification of paddy straw. Biotechnology and Applied Biochemistry. 63(5):659-668 Online ISSN: 1470-8744 *Impact factor-1.36. NAAS Rating: 7.32. doi: 10.1002/bab.1415.*
57. Gupta Pratibha, Balaji Raju, Parani M, Chandra T S, Shukla Pratyoosh, Kumar Anil, Bandopadhyay Rajib. (2015). Phylogenetic analysis and biological characteristic tests of marine bacteria isolated from Southern Ocean (Indian sector) water. Acta Oceanologica Sinica, 34(8):73-82 doi: 10.1007/s13131-015-0000-0. ISSN: 0253-505X (print version) ISSN: 1869-1099 (electronic version) *Impact factor-0.74*
58. Yadav, Ruby, Pratyoosh Shukla (2015). An overview of advanced technologies for selection of probiotics and their expediency: A review. Critical Reviews in Food Science and Nutrition. Print ISSN: 1040-8398 Online ISSN: 1549-7852. DOI: 10.1080/10408398.2015.1108957. ***Impact factor- 5.176. NAAS Rating: 11.55.***
59. Puneet Kumar Singh, Pratyoosh Shukla (2015) Systems biology as an approach for deciphering microbial interactions. Briefings in Functional Genomics, Oxford Journals. DOI:10.1093/bfgp/elu023. 14 (2): 166-168 (Print ISSN: 2041-2649, online ISSN: 2041-2647). (Impact Factor: 4.210). NAAS Rating: 9.67.

2014

60. Rameshwar Tiwari, Surender Singh, Pratyoosh Shukla, Lata Nain (2014). Novel cold active ß-glucosidase from *Pseudomonas lutea* BG8 suitable for simultaneous saccharification and fermentation. RSC Advances, 4 (101), 58108 - 58115 **(Impact Factor: 3.71). *NAAS Rating: 9.84.*** 10/2014; DOI: 10.1039/C4RA09784J. ISSN 2046-2069

61. Chiranjib Banerjee, Sandipta Ghosh, Gautam Sen, Sumit Mishra, Pratyoosh Shukla, Rajib Bandopadhyay (2014) Study of algal biomass harvesting through cationic cassia gum, a natural

plant based biopolymer. Bioresource Technology (Elsevier), 151: 6–11. ISSN: 0960-8524 (IF: 4.720; 5 Yr IF: 5.172). http://dx.doi.org/10.1016/j.biortech.2013.10.035. *NAAS Rating: 10.75*

62. Tanu Dahiya, Mehak Baweja, and **Pratyoosh Shukla** (2014) A Swift Description on Antimicrobial Action of *Sarcostemma intermedium*, an Extraordinary Scarce Medicinal Plant against Few Pathogenic Microorganisms. Research Journal of Pharmaceutical, Biological and Chemical Sciences. (RES J PHARM BIOL CHEM SCI) : 5(2): 1064-1069. ISSN: 0975-8585. (**Impact Factor 0.35**)

63. Vishal Kumar, Pragya Pandey, Shivani Gupta, **Pratyoosh Shukla** (2014) "A reviving preliminary evoke on few xylanase producing fungal isolates from different ecological niche" International Journal of Current Microbiology and Applied Sciences, 3(4): 501-506. ISSN:2319-7692(Print), ISSN:2319-7706(Online). NAAS Rating: 5.38.

64. **Pratyoosh Shukla** (2014) 54th Annual Conference of Association of Microbiologists of India (AMI): A Report. Indian Journal of Microbiology (Springer). 54(2): 244–245. (DOI 10.1007/s12088-014-0465-9): ISSN: 0046-8991 ***Impact factor-0.8. NAAS Rating: 6.46***

65. Jahangir Imam, Shamshad Alam, Nimai Prasad Mandal, Dipankar Maiti, Mukund Variar **Pratyoosh Shukla** (2014) Molecular Diversity and Mating Type distribution of the rice blast pathogen *Magnaporthe oryzae* in North-East and Eastern India. 55(1):108–113 (DOI: 10.1007/s12088-014-0504-6). Indian Journal of Microbiology (Springer) Impact Factor: 0.8, ***NAAS Rating: 6.46***

66. Jahangir Imam, Dewanand Mahto, Nimai Prasad Mandal, Dipankar Maiti, **Pratyoosh Shukla** Mukund Variar (2014) Molecular Analysis of Indian Rice Germplasm Accessions with Resistance to Blast Pathogen. Journal of Crop Improvement (Taylor and Francis), 28(6): 729-739. DOI:10.1080/15427528.2014.921261. H Index: 22, NAAS Rating: 5.12. Print ISSN: 1542-7528 Online ISSN: 1542-7536

67. Hanan Mahmood, Tridisha Goswami, **Pratyoosh Shukla** (2014). An overview of quick-witted Vacuum Cleaner Tape Technique towards cataloguing Keratinophilic fungi from floor dust samples of student hostels. Journal of Pure and Applied Microbiology, 8 (5): 4177-80. ISSN 0973-7510. NAAS RATING 6.4 (2013). Impact Factor: 0.073.

68. Chiranjib Banerjee, **Pratyoosh Shukla**, Ramesh Chandra and Rajib Bandopadhyay (2014). Biohydrogen production from algae: an overview. Everyman's Science, Indian Science Congress Association. XLIX, (2): 117-120. ISSN 0531-495X.

2013

69. Shubhangi Goyal, Trisha Raj, Chiranjib Banerjee, Jahangir Imam, **Pratyoosh Shukla** (2013). Isolation and ecological screening of indigenous probiotic microorganisms from curd and chili sauce samples. International Journal of Probiotics & Prebiotics; May-Aug 2013, Vol. 8 Issue 2/3, p91 (ISSN 1555-1431)

70. C. Banerjee, S. Mishra, G. Sen, **Pratyoosh Shukla** and R. Bandopadhyay (2013). Study of algal biomass harvesting using cationic guar gum from the natural plant source as flocculant. Carbohydrate Polymers (Elsevier), 92: 675– 681. http://dx.doi.org/10.1016/j.carbpol.2012.09.022. ISSN: 0144-8617 (Impact factor: 3.6).

71. Jahangir Imam, Shamshad Alam, Nimai Prasad Mandal, Mukund Variar, **Pratyoosh Shukla** (2013). Molecular screening for identification of Blast Resistance Genes in North East and Eastern Indian Rice Germplasm (*Oryza sativa* L.) with PCR based makers. Euphytica, (Springer) 196(2):199-211. ISSN (Print): 0014-2336; 1573-5060 (Online); Impact Factor: 1.643

72. Jahangir Imam, Shamshad Alam, Mukund Variar, **Pratyoosh Shukla** (2013). Identification of Rice Blast Resistance Gene Pi9 from Indian Rice Land Races with STS Marker and its Verification by Virulence Analysis. Proceeding of National Academy of Sciences, India Section B: Biological Sciences. (Springer) 83: 4: 499-504. (NAAS Rating – 6.1, IF – 2.0). DOI 10.1007/s40011-013-0186-6, 2013. ISSN: 0369-8211 (print version) ISSN: 2250-1746 (electronic version)

73. Jaya Bhagat, P Shukla, PK Mishra (2013) Standardization of methodology for studying pathogenecity of *Xanthomonas campestris* Pv *Oryzae* to Rice. International Journal of Bioassays. 2 (08): 1172-1173. ISSN: 2278-778X

2012

74. Shripal Vijayvargiya, **Pratyoosh Shukla** (2012). A niched Pareto genetic algorithm for finding variable length regulatory motifs in DNA sequences. 3Biotech (Springer) 2(2): 141-148.
75. MVK Karthik, Hanan Syed, Tridisha Goswami, **Pratyoosh Shukla** (2012) Model and molecular docking substrate stabilization of *Microsporum canis* keratinase, Online Journal of Bioinformatics, 13(1):33-40.
76. T.T. Ngwenya, **Pratyoosh Shukla**, N. Baboolal, K. Permaul, S. Singh (2012) An industrial perspective of factors affecting molasses fermentation by *Saccharomyces cerevisiae*. Journal of Brewing and Distilling, 3(2):23-28.
77. Z. Nofemele, **Pratyoosh Shukla**, A. Trussler, K. Permaul, S. Singh (2012) "Improvement of ethanol production from sugarcane molasses through enhanced nutrient supplementation using *Saccharomyces cerevisiae.* Journal of Brewing and Distilling, 3(2):29-35. ISSN 2141-2197.
78. Puneet Singh, **Pratyoosh Shukla** (2012) 'A prelude report on molecular docking of HER2 protein towards comprehending anti-cancer properties of saponins from *Solanum tuberosum*. Nature Precedings (doi.org/10.1038/npre.2012.7147.1) ISSN 1756-0357.
79. C. Banerjee, R. Bandopadhyay, **Pratyoosh Shukla** (2012). A simple novel agar diffusion method for isolation of indigenous microalgae *Chlamydomonas* sp. CRP7 and *Chlorella* sp. CB4 from operational swampy top soil". Indian Journal of Microbiology (Springer) (DOI: 10.1007/s12088-012-0295-6): *Impact factor-0.9.*
80. C. Banerjee, P. Gupta, S. Mishra, G. Sen, **Pratyoosh Shukla** and R. Bandopadhyay (2012). Study of polyacrylamide grafted starch based algal flocculation towards applications in algal biomass harvesting International Journal of Biological Macromolecules, Elsevier, 51(4): 456-461 (Impact factor: 2.453) http://dx.doi.org/10.1016/j.ijbiomac.2012.06.011
81. A.K. Shukla, **Pratyoosh Shukla** and A. Shrivastava (2012). "Exploration Revisited Towards Biotechnological Applications and Potential Of Rare Medicinal Plants: A Review". International Journal of Innovations in Bio-Sciences (IJIBS): 2(2): 76-78.
82. Smita Lata, Smriti Shrivastava, **Pratyoosh Shukla** (2012) An Insight on Recent Advances on Immobilization Methods for Industrial Enzymes and its Relevance to Xylanases. *In:* Rath CC (Ed) Microbiology. Dynamic Biochemistry, Process Biotechnology and Molecular Biology: 6(1): 57-61. (Dyn. Biochem. Process Biotech. Mol. Biol. Print: ISSN 1749-0626).
83. M.V.K. Karthik, M.V.K.N. Satya Deepak, **Pratyoosh Shukla** (2012). Explication of interactions between HMGCR isoform 2 and various statins through In silico modeling and docking.

Computers in Biology and Medicine (Elsevier) 42, (2): 156–163 doi:10.1016/j.compbiomed.2011.11.003. *Impact factor: 1.23*

84. MVK Karthik, **Pratyoosh Shukla** (2012) Rational enzyme design towards substrate stabilization in family 11 xylanases from *Thermomyces lanuginosus*. Online Journal of Bioinformatics (OJB), 12(1):107-114, 2011

Book Chapters: (National & International)

1. **Pratyoosh Shukla**, Naveen Kango and V. Bondre (2004). "Transfer of Drug Resistance plasmid with Km^r gene in *Vibrio Cholerae* KB 207" In: *Microbiology and Biotechnology for Sustainable Development*. (P.C. Jain, Ed.), CBS Publishers and Distributors, New Delhi. Pp. 277-282. ISBN-13: 9788123910871, ISBN-10: 8123910878.

2. **Pratyoosh Shukla**, D. Garai and S. Shrivastava (2009). An overview of statistical optimization methods for microbial conversion of environmental samples for lipase production by hyperlipolytic fungi *Rhizopus oryzae* KG10. 171-180. In Environmental Microbiology, APH Publishers, New Delhi. ISBN-1081313065511; ISBN-13-9788131306550.

3. Neha Kumari, MVK Karthik, Puneet Singh, Shripal Vijayvargiya, **Pratyoosh Shukla** (2010) Molecular docking approaches for improvement in catalytic site binding of industrial chitinases from *Trichoderma harzianum.* In Recent Trends in Microbial Biotechnology, LAP Lambert Academic Publishing, Germany. (ISBN-10: 3843390029; ISBN-13: 978-3843390026)

4. **Pratyoosh Shukla**, Rajib Bandopadhyay and Rashmi. (2010). Development in social and legal issues in biotechnology: A comparative overview on the present scenario and future prospects of bioethics. In: Biotechnology for sustainable Development: Achievements and Challenges. Tata McGraw Hill Education Publishers, India. Pp. 239-244. ISBN 13-978-0-07-070832-7.

5. S. Vijayvargiya and **Pratyoosh Shukla** (2013) Microbial gene finding through identifying transcription factor binding sites (TFBS) *In* Applications of Microbial Genes in Enzyme Technology, V. K. Gupta and M. G. Tuohy (eds.), Nova Science Publishers, pp. 313-326 (ISBN: 978-1-62417-808-5)
[URL: https://www.novapublishers.com/catalog/product_info.php?products_id=39021]

6. Pratyoosh Shukla, Vinod Nigam, Rishi Gupta, Ajay Singh, Ramesh Chander Kuhad (2013) Sustainable Enzyme Technology for Environment: Biosensors for Monitoring of Pollutants and Toxic Compounds. *In* Biotechnology for Environmental Management and Resource Recovery. pp 69-76. (Eds. R.C. Kuhad, A. Singh). ISBN: 978-81-322-0875-4 (Print) 978-81-322-0876-1
[URL: http://link.springer.com/book/10.1007%2F978-81-322-0876-1]

7. Jahangir Imam, Puneet Kumar Singh and **Pratyoosh Shukla** (2013) Biohydrogen as Biofuel: Future Prospects and Avenues for Improvements. *In* Biofuel Technologies, V. K. Gupta and M. G. Tuohy (eds.) DOI: 10.1007/978-3-642-34519-7_12, Springer-Verlag Berlin Heidelberg. ISBN 978-3-642-34519-7 (eBook); ISBN 978-3-642-34518-0 (Hardcover)
[URL: http://link.springer.com/book/10.1007%2F978-3-642-34519-7]

8. Jahangir Imam, Mukund Variar, **Pratyoosh Shukla** (2013). "Role of enzymes and proteins in plant-microbe interaction: a study of M. oryzae vs rice". *In* Shukla, Pratyoosh; Pletschke, Brett I. (Eds.) Advances in Enzyme Biotechnology, Springer-Verlag Berlin Heidelberg. pp 137-145. ISBN 978-81-322-1094-8 (ebook); ISBN 978-81-322-1093-1 (Hardcover)
[URL: http://link.springer.com/book/10.1007%2F978-81-322-1094-8]

9. Shripal Vijayvargiya and **Pratyoosh Shukla** (2013) Regulatory motif identification in biological sequences: An overview of computational methodologies. In Shukla, Pratyoosh; Pletschke, Brett I. (Eds.)

Advances in Enzyme Biotechnology, Springer-Verlag Berlin Heidelberg. pp 111-124. ISBN 978-81-322-1094-8 (ebook); ISBN 978-81-322-1093-1 (Hardcover)
[URL: http://link.springer.com/book/10.1007%2F978-81-322-1094-8]

10. Jahangir Imam, Mukesh Nitin, Neha Nancy Toppo, Nimai Prasad Mandal, Yogesh Kumar, Mukund Variar, Rajib Bandopadhyay, Pratyoosh Shukla (2014) A Comprehensive Overview on Application of Bioinformatics and Computational Statistics in Rice Genomics Toward an Amalgamated Approach for Improving Acquaintance Base. *In* Agricultural Bioinformatics Kishor, P.B. Kavi, Bandyopadhyay, Rajib, Suravajhala, Prashanth (Eds.) Springer-Verlag. Pp 89-107. ISBN 978-81-322-1880-7 (ebook); ISBN 978-81-322-1879-1 (Hardcover)
[URL:http://www.springer.com/life+sciences/systems+biology+and+bioinformatics/book/978-81-322-1879-1]

11. Puneet Kumar Singh, Jahangir Imam, Pratyoosh Shukla (2014). *In-silico* approach in bioremediation, Microbial Biodegradation and Bioremediation. *In* Microbial Biodegradation and Bioremediation, (Elsevier) 1st Edition (S. Das, Eds.). ISBN :9780128000212.
[URL: http://store.elsevier.com/Microbial-Biodegradation-and-Bioremediation/isbn-9780128000212]

12. Kashyap Kumar Dubey, Punit Kumar, Puneet Kumar Singh, Pratyoosh Shukla (2014). Exploring prospects of mono-oxygenases based bio-catalyst in xenobiotics and their computational modeling *In* Microbial Biodegradation and Bioremediation, (Elsevier) 1st Edition (S. Das, Eds.). ISBN :9780128000212.
[URL: http://store.elsevier.com/Microbial-Biodegradation-and-Bioremediation/isbn-9780128000212]

13. Chiranjib Banerjeea, Harsh Kumar Agrawal, Puneet Kumar Singh, Rajib Bandopadhyay, Pratyoosh Shukla (2016) proteomic approaches in microalgal research: challenges and opportunities, *In* Biotechnology: Progress and Applications (Hameed Saif Eds), Astral International. ISBN: 9789351247296.

14. Chiranjib Banerjee, Rajib Bandopadhyay, Puneet Kumar Singh, Harsh Kumar Agrawal, Pratyoosh Shukla (2015) Innovations in microalgal harvesting using biopolymer based approach. *In* Microbial Factories, Biodiversity, Biopolymers, Bioactive Molecules: Volume 2 (Springer) (Kalia V.C., Eds.) (ISBN 978-81-322-2594-2). [URL : http://www.springer.com/in/book/9788132225942]

15. Jahangir Imam, Mukund Variar, Pratyoosh Shukla (2015) Advances in molecular mechanism towards understanding plant-microbe interaction: A study of *M. oryzae* vs rice. *In* Frontier Discoveries and Innovations in Interdisciplinary Microbiology. Springer-Verlag Berlin Heidelberg. (Shukla, P. Eds.) ISBN 978-81-322-2610-9 (ebook); ISBN 978-81-322-2609-3. pp 79-96
[URL : http://link.springer.com/chapter/10.1007/978-81-322-2610-9_6]

16. Vishal Kumar, Pratyoosh Shukla (2015) Functional Aspects of xylanases towards industrial applications. *In* Frontier Discoveries and Innovations in Interdisciplinary Microbiology. Springer-Verlag Berlin Heidelberg. (Shukla, P. Eds.) ISBN 978-81-322-2610-9 (ebook); ISBN 978-81-322-2609-3. pp 157-165. [URL : http://link.springer.com/chapter/10.1007/978-81-322-2610-9_9]

17. Mehak Baweja, Puneet Kumar Singh, Pratyoosh Shukla (2015) Enzyme technology, functional proteomics and systems biology towards unraveling molecular basis for functionality and interactions in biotechnological processes. *In* Frontier Discoveries and Innovations in Interdisciplinary Microbiology. Springer-Verlag Berlin Heidelberg. (Shukla, P. Eds.) ISBN 978-81-322-2610-9 (ebook); ISBN 978-81-322-2609-3. pp 207-212. [URL: http://link.springer.com/chapter/10.1007/978-81-322-2610-9_13]

18. Pranjal Garg, Pratyoosh Shukla (2015) Archaeology vis-à-vis microbiology: discovering the vistas of interdisciplinary research. *In* Frontier Discoveries and Innovations in Interdisciplinary Microbiology.

Springer-Verlag Berlin Heidelberg. (Shukla, P. Eds.) ISBN 978-81-322-2610-9 (ebook); ISBN 978-81-322-2609-3. pp 213-219 . [URL: http://link.springer.com/chapter/10.1007/978-81-322-2610-9_14]

19. Jahangir Imam, Nimai Prasad Mandal, Mukund Variar, Pratyoosh Shukla (2015) Recent advances in proteomics approaches in understanding plant-microbe interactions Pp 55-70. In Plant-Microbe Interactions (Eds K. Ramasamy, K Kumar) New India Publishing Agency, ISBN 978-938-330-5834 (Hardcover)

20. Ruby Yadav, Puneet Kumar Singh, Pratyoosh Shukla (2016) Production of fructooligosaccharides as ingredient of probiotic applications: future scope and trends. Microbial Biotechnology: An Interdisciplinary Approach. CRC Press, Taylor and Francis Group. United States ISBN 9781498756778. (URL: https://www.crcpress.com/Microbial-Biotechnology-An-Interdisciplinary-Approach/Shukla/p/book/9781498756778]

21. Yadav R., Shukla P. (2017) Probiotics for Human Health: Current Progress and Applications. In: Shukla P. (eds) Recent advances in Applied Microbiology. Springer, Singapore. pp 133-147. DOI https://doi.org/10.1007/978-981-10-5275-0_6. Print ISBN 978-981-10-5274-3; Online ISBN 978-981-10-5275-0. https://link.springer.com/chapter/10.1007/978-981-10-5275-0_6.

22. Kumar V., Baweja M., Liu H., Shukla P. (2017) Microbial Enzyme Engineering: Applications and Perspectives. In: Shukla P. (eds) Recent advances in Applied Microbiology. Springer, Singapore, pp 259-273. Print ISBN 978-981-10-5274-3; Online ISBN 978-981-10-5275-0. https://link.springer.com/chapter/10.1007/978-981-10-5275-0_6.

23. Banerjee, A., Kumar, N., Varjani, S. J., Guria, C., Bandopadhyay, R., Shukla, P., & Banerjee, C. (2018). Computational Modelling and Prediction of Microalgae Growth Focused Towards Improved Lipid Production. *In* Biosynthetic Technology and Environmental Challenges (pp. 223-232). Springer, Singapore.

24. Sanjeev K. Gupta, Arun K. Dangi, Shailja Dwivedi (2018) Effectual bioprocess development for protein production using Cell line engineering *In.*: Shukla P. (eds) Applied Microbiology and Bioengineering, Academic Press, Elsevier, USA. ISBN: 9780128154076.

25. Dinesh Kumar Dahiya, Renuka, Arun Kumar Dangi, Umesh K. Shandilya, Anil Kumar Puniya, Pratyoosh Shukla (2018) New-generation probiotics: perspectives and applications. *In*: J Faintuch, S. Faintuch (eds) Microbiome and Metabolome in Diagnosis, Therapy, and other Strategic Applications. Academic Press, Elsevier, USA. ISBN: 9780128152492

26. Artificial Intelligence Integration for Neurodegenerative Disorders (2018). Leveraging Biomedical and Healthcare Data, Semantics, Analytics and Knowledge In: Firas Kobeissy Kevin Wang Ali Alawieh Fadi Zaraket (eds) Academic Press, Elsevier, USA. ISBN: 9780128095560

Edited Books

1. **Pratyoosh Shukla (2018)** Applied Microbiology and Bioengineering, Academic Press, Elsevier, USA. ISBN: 9780128154076. https://www.elsevier.com/books/applied-microbiology-and-bioengineering/shukla/978-0-12-815407-6#

2. **Pratyoosh Shukla (2017)** Recent advances in Applied Microbiology (Springer Nature). ISBN 978-981-10-5275-0. http://www.springer.com/us/book/9789811052743.

3. **Pratyoosh Shukla (2016)** Microbial Biotechnology: An Interdisciplinary Approach. CRC Press, Taylor and Francis Group. United States ISBN 9781498756778. (URL: https://www.crcpress.com/Microbial-Biotechnology-An-Interdisciplinary-Approach/Shukla/p/book/9781498756778]

4. **Pratyoosh Shukla(2015)** Frontier Discoveries and Innovations in Interdisciplinary Microbiology. Springer-Verlag Berlin Heidelberg. ISBN 978-81-322-2610-9 (ebook); ISBN 978-81-322-2609-3 [URL: http://www.springer.com/us/book/9788132226093]

5. **Pratyoosh Shukla,** MVK Karthik **(2015)** Computational Approaches in *Chlamydomonas reinhardtii* for Effectual Bio-hydrogen Production. SpringerBriefs in Systems Biology, Springer-Verlag Berlin Heidelberg. ISBN 978-81-322-2383-2 (ebook); ISBN 978-81-322-2382-5 (Hardcover)
(URL: http://www.springer.com/in/book/9788132223825#aboutBook]

6. **Pratyoosh Shukla** and Pletschke, Brett I. (Eds.) (2013) Advances in Enzyme Biotechnology, Springer-Verlag Berlin Heidelberg. ISBN 978-81-322-1094-8 (ebook); ISBN 978-81-322-1093-1 (Softcover)
[URL: http://link.springer.com/book/10.1007%2F978-81-322-1094-8]

7. MVK Karthik, **Pratyoosh Shukla** (2012). Computational Strategies Towards Improved Protein Function Prophecy of Xylanases from *Thermomyces lanuginosus* (SpringerBriefs in Systems Biology) Springer; 2012 Ed. [ISBN- 978-1-4614-4722-1] DOI: 10.1007/978-1-4614-4723-8
[URL: http://link.springer.com/book/10.1007%2F978-1-4614-4723-8]

Journal Special Issue/ Conference Proceedings:

Pratyoosh Shukla, R.C. Kuhad, T. Satyanarayana (2011). Proceedings of the 51st Annual International Conference of the Association of Microbiologists of India – Recent Trends in Cross-disciplinary Microbiology: Avenues and Challenges. 3Biotech (Springer), 1(4):187-272. (10 articles)
[URL: http://link.springer.com/journal/13205/1/4/page/1]

Ph.D. STUDENTS GUIDANCE: 18 (Eighteen)

The following students are registered/completed P.D. under my Supervision/ co-supervision

AWARDED: 11, ONGOING: 7

S.No.	*Name of Student*	*Status*	*Title of Thesis*
1.	Mr. Raju Poddar (As Co-guide)	Awarded	"Noninvasive Measurement of Blood Glucose Level using Optical Coherence Tomography"
2.	Mr. Shripal Vijayvargiya (As Guide)	Awarded	Computational Techniques for Gene prediction through identifying regulatory Transcription Factor Binding Sites (TFBS) in Biological Sequences."
3.	Ms. Smriti Shrivastava (As Guide)	Awarded	Thermozymes: Production and characterization of High level Cellulase-free Xylanases from the Thermophilic fungi with special reference to *Thermomyces lanuginosus*
4.	Mr. Chiranjib Banerjee (As Co-Guide)	Awarded	Molecular characterization and identification of novel hydrogen producing algae and exploiting their biotechnological potential
5.	Mr. Jahangir Imam (As Guide)	Awarded	Understanding plant fungus interactions in relation to pathogenic variation in *Magnaporthe grisea* and diversity at Pi9 locus in rice (*Oryza sativa* L)
6.	Mr. Rameshwar Tiwari	Awarded	Bioprospecting of B-glucosidase from diverse environmental niches by culturable and unculturable approaches
7.	Mr. Puneet Kumar Singh	Awarded	Characterization of microbial inulinases from soil fungi and escalation of their catalytic properties through enzyme modeling and docking.
8.	Mr Sanjeev Kumar Gupta	Awarded	Microbial protein engineering approaches towards deciphering the effect of co-expression of pyruvate carboxylase in production of recombinant bio-therapeutic proteins.
9.	Ms Mehak Baweja	Awarded	Exploring biotechnological potential of microbial proteases: Isolation and

			characterization of proteases from southern ocean samples and their applications.
10.	Ms Ruby Yadav	Awarded	Isolation and characterization of indigenous probiotic microorganisms from conventional fermented food products and deciphering their probiotic potential
11.	Mr Vishal Kumar Aggarwal	Awarded	An effectual bio-process development for the production of Xylanases from *Thermomyces lanuginosus* and its applications in pulp and paper industry
12.	Ms Babita Sharma	Ongoing	Enzymatic bioremediation studies on microorganisms isolated from industrial soils and their biotechnological potential
13.	Mr. Dinesh K. Saini	Ongoing	Bioprospecting of cyanobacteria for high value biopigments and optimization for their enhanced production
14.	Ms. Twinkle	Ongoing	Isolation, molecular characterization and enzymatic potential of root nodule bacteria towards improving performance of bioinoculants
15.	Ms. Monika Yadav	Ongoing	Evaluation of probiotic capabilities in customary dairy products and its metabolic significance
16.	Ms. Sunita Verma	Ongoing	Identification and characterization of novel NAP (Nucleoid associated protein) Rv1985c from *Mycobacterium tuberculosis* and its role in survival and pathogenesis.
17.	Ms. Ishu Khanagwal	Ongoing	Production, characterization and evaluation of xylooligosaccharides towards its use in prebiotic applications
18.	Ms. Shweta Jaiswal	Ongoing	Molecular characterization of lindane degrading bacteria and their functional gene annotation for bioremediation

MEMBERSHIP OF SCIENTIFIC OR PROFESSIONAL BODIES

- Life Member, "Indian Science Congress Association (ISCA)".
- Life Member, "India Society for Technical Education (ISTE)"
- Life Member, Mycological Society of India (MSI)
- Member, Asian Federation of Biotechnology (AFoB)
- Life Member, Biotech Research Society of India (BRSI)
- Life Member, ADNAT, CCMB, Hyderabad.
- Member, American Society on Microbiology (ASM)
- Life Member, "Association of Microbiologists of India (AMI)".
- Member, " European Federation of Biotechnology (EFB)"
- Member, The GenomeWeb Intelligence Network genomics tools and technology. (http://www.genomeweb.com)

MEMBER AS REVIEWER/ EDITORIAL BOARD OF JOURNALS/ SCIENTIFIC SOCIETIES

- Associate Editor, BMC Microbiology, Associate Editor (3 Biotech-Springer)
- Academic Editor (PLOS One)
- Editor, Indian Journal of Microbiology (Springer)
- Editor-in-Chief, Journal of Microbiology, Internet Scientific Publishers, USA (2007-2009)
- Reviewer and Member, Editorial Board of Journal of Applied Sciences in Environmental Sanitation, ITS, Indonesia.
- Reviewer,
    - Annals of Microbiology (Springer),Bioresource Technology (Elsevier)
    - Biotechnology for Biofuels, Journal of Molecular Catalysis B: Enzymatic
    - Journal of Chemical Technology and Biotechnology (JCTB- Wiley)
    - Proceedings of the National Academy of Sciences, India Section B: Biological Sciences (Springer), Briefings in Functional Genomics (Oxford Journals)
    - IEEE Transactions on Cybernetics
- Secretary, Association of Microbiologists of India, Ranchi Unit, Jharkhand Chapter (2007-2011).
- President, Association of Microbiologists of India, Rohtak Unit.
- Member, National Executive Council of Association of Microbiologists of India. (2007-2014)

- General Secretary, Association of Microbiologists of India (AMI) (2014 onwards)
- Member, National Executive Council of Mycological Society of India (MSI)

AWARDS AND SCIENTIFIC RECOGNITION

- Faculty Research Award: Top 10 "Most outstanding Researchers" in the field of Immunology and Microbiology (2018)
- Fellow, Academy of Microbiological Sciences (2017)
- AMI-Alembic Award in Industrial Microbiology (2015)
- ASM-IUSSTF Indo-US Professorship Award in Microbiology by American Society of Microbiology (2014)
- Best Poster Award (75 Platinum Jubilee AMI poster Award- The Association of microbiologists of India(AMI) [2013]
- FAST TRACK YOUNG SCIENTIST Project by DST, Govt. of India (2012)
- Selected as Scientist/ Project investigator and Participated in Southern Ocean Antarctica Expedition (Ministry of Earth Sciences, Govt. of India). (January-March, 2011)
- Awarded as Best Poster Award- Danisco India Award in Probiotics & Enzyme Technology (2010)
- Best Poster Award, International Conference, InCoFIBS, 2010, NIT Rourkela (2010)
- Awarded with NRF-DUT Post Doctoral Fellowship in Enzyme Biotechnology supported by National Research Foundation and Durban University of Technology, South Africa (2008-2009)
- Best presentation Award (Senior Category) during National Seminar towards a Scientific & Technological Culture, National Science Seminar, 2006 organized by National Council for Science and Technology Communication (NCSTC), New Delhi.
- Nominated as Programme Coordinator at BIT Mesra, Ranchi, India for PIPRA, University of California, Davis, CA.
- Invited by Bioinfo,Inc. USA for delivering lectures in Microbial Genetics.
- Stood First in the order of merit in University for Master of Science (Applied Microbiology & Biotechnology)
- Received "Prof. S.B. Saksena, F.N.A., Award" in life sciences for getting **first** position in university during M.Sc. in Applied Microbiology and Biotechnology (Consist of a cash prize and citation).

R & D PROJECTS (As Principal Investigator/Co-Investigator):

S. No.	*Title of Project*	*Funding Agency & Total Budget*	*Date of Sanction*	*Duration*
1.	'Development of probes for early detection of microorganisms responsible for food spoilage during food processing and preservation'. (45/MFPI/R&D/2002-IV)(As Co-investigator)	Ministry of Food Processing & Industries, Govt of India 80.00 Lakhs (INR)	15-02-2006	2 years (2006-2008)
2.	Genetic modification of hydrogen producing algae (As Coordinator)	Institute Sponsored R & D Project (3 Lakhs)	July 2009	2009-12 (3 Lakhs)
3.	Innovative Project on Bio-hydrogen production from microalgae	BIT Mesra, Ranchi (3.00 Lakhs)	August 2010	November, 2012 (3.00 Lakhs)
4.	Cloning, expression and Characterization of a novel xylanase from *Thermomyces lanuginosus* and improvement of effectual bioprocess' (Reg. No. SERC/LS-228/2012 dated 06/08/12)	DST-FAST TRACK Govt. of India (23.46 Lakhs)	August 2012	2012-2015 (23.46 Lakhs)
5.	Proteomic analysis and lipid profiling of *chlamydomonas reinhardti* and its relevance towards bio-fuel production	UGC, New Delhi Rs. 9,80,800/-	22, March, 2013 (01-04-2013)	2013-2016 Rs. 9,80,800/-
6.	"TREAT-AFTER-TOO-Targeting elimination of antineoplastic compounds in hospital waste waters: novel frontiers in sustainable treatment". (As CoPI) (BT/IN/INNO-INDIGO/26/MKM/2015-16) Dated Nov 26, 2015	DBT, Govt of India-INNO INDIGO	2015-2018	Rs. 209.168 Lakhs (Rs. 2 Crore Nine Lakhs)
7.	Site Directed Mutagenesis of UbiA gene in *Agrobacterium tumefaciens* to enhance CoQ10 Yield [BT/PR13569/BBE/117/106/2015] (As CoPI)	DBT, Govt. of India	2016-2018	Rs. 40 Lakhs (Rs. Fourty Lakhs)
8.	"Fund for Improvement of S&T infrastructure in universities & higher educational institutions (FIST)" (Grant No. 1196 SR/FST/LS-I/2017/4). **[Coordinator]**	Department of Science and Technology, Govt. of India	2018-2023	Rs. 90 Lakhs (Rs. Ninety Lakhs)
9.	Erasmus+ Capacity Building in Higher Education - ''ENhancing female entrePRENeurship in InDIA (ENPRENDIA)''**[Institute Coordinator]**	European Union (EU)	2018	9,81,676 Euros [Rs. 8,20,46,717]
10.	Process development for the cost effective production of fungal endoglucanase, lipase and amylase for deinking of newsprints and mixed office waste papers (BT/PR27437/BCE/8/1433/2018) (PI & Coordinator)	DBT, Govt. of India	2018-2021	Rs. 62.91 Lakhs (Rs. Sixty Two Lakhs Ninety one thousand)