

**Department: Biotechnology**

**Dr Pushpender Kumar Sharma**

**Research/review article Published**

**List of some of the Peer Reviewed National and International Journals**

<b>S. No.</b>	<b>Authors</b>	<b>Year</b>	<b>Title of the paper</b>	<b>Name of the Journal</b>	<b>Journal ISSN/ISNB Number</b>
1	Sharma PK, Sharma V, Sharma S, Bhatia G, Singh K, Sharma R	2020	Comparative metatranscriptome analysis revealed broad response of microbial communities in two soil types, agriculture versus organic soil 17:6	<i>Journal of Genetic Engineering and Biotechnology</i> <b>IF: Awaited</b>	2090-5920
2	Kaur J, Sharma PK.	2020	Mini Review on Antimicrobial Peptides, Sources, Mechanism and Recent Applications.27:1:4-16	<i>Protein and peptide letters</i> <b>IF: 1.168</b>	1875-5305
3	Kaur R, Kumar R, Verma S, Kumar A, Rajesh C, Sharma PK	2020	Structural and functional insights about unique extremophilic bacterial lipolytic enzyme from metagenome source 2020/152:1;593-604	<i>International Journal of Biological macromolecules</i> <b>IF: 4.784</b>	593-604
4	Sharma V, Kumar R, Sharma VK, Yadav AK, Tirola M, Sharma PK	2020	Expression, purification, characterization and in silico analysis of newly isolated hydrocarbon degrading bleomycin resistance dioxygenase.2019/doi: 10.1007/s11033-	<i>Mol Biol Rep.</i> <b>IF: 2.01</b>	0301-4851
5	Kaur M, Singh G, Kaur A, Sharma PK, Kang TS,	2019	Thermally Stable Ionic Liquid-Based Microemulsions for High-Temperature Stabilization of Lysozyme at Nanointerfaces 35 (11),408	<i>Langmuir</i> , <b>IF: 3.683</b>	0743-7463

			5-4093 <b>DOI:</b> 10.1021/acs.langmuir.9b00106		
6	Kaur J, Kaur R and Sharma PK (2019)	2019	Delineating bacterial community structure of rhizosphere metagenome from Kansal Forest.	<i>Ecological genetics and genomics</i> <b>IF: Awaited</b>	2405-9854
7	Kaur J, Kaur R and Sharma PK (2019)	2019	Delineating bacterial community structure of rhizosphere metagenome from Kansal Forest.	<i>Ecological genetics and genomics</i> <b>IF: Awaited</b>	2405-9854
8	Sharma VK, Kumar R, Verma S, Sharma PK*	2018	Molecular Diversity of Bacterial $\alpha$ Subunit of Ring-Hydroxylating Dioxygenases from Cypermethrin and Metal Contaminated Agriculture Soil.5:368-375	<i>Current Biotechnology</i> <b>IF: awaited</b>	2211-551X
9	Kaushal S, Kaur R, Boparai JK, Singh R, Kang TS, Badru R, Singh P, Sharma PK	2018	Purification of Metagenomic DNA using Novel Nanocomposite Titanium Dioxide-polyaniline Tin (IV) antimonophosphate, Insights into the Mechanism Underlying Purification Process 5:349-375	<i>Current Biotechnology</i> <b>IF: awaited</b>	2211-551X
10	Sharma R, Sharma PK.	2018	Metatranscriptome sequencing and analysis of agriculture soil provided significant insights about the microbial community structure and function. 6: 9-15	<i>Ecological Genetics and Genomics</i> <b>IF: Awaited</b>	2405-9854
11	Kaur R, Rajesh C, Sharma R, Boparai JK, Sharma PK	2018	Metagenomic Investigation of Bacterial phylogeny from Hot Spring Soil of Manikaran, Himachal Pradesh, India, revealed high percentage of Unculturable Bacteria. 6:16-21	<i>Ecological Genetics and Genomics</i> <b>IF: Awaited</b>	2405-9854

12	Saini J. Sharma PK	2018	Clinical, Prognostic and Therapeutic Significance of Heat Shock Proteins in Cancer 13:1478-1490	<i>Current Drug Target.</i> IF: <b>2.642</b>	1873-5592
13	Bajaj NK, Bhardwaj, A, Singh P, Sharma Pk Sharma J	2018	Study of photocatalytic and antibacterial activities of graphene oxide nanosheets. 1–7.	<i>Advanced Composites and Hybrid Materials</i> IF: <b>Awaited</b>	2522-0128
14	Singh G, Singh, G,; Damarla, K, Sharma Pk, Kumar A, Kang, TS	2017	Gelatin based Highly Stretchable, Self-healing, Conducting, Multi-adhesive and Antimicrobial Ionogels Embedded with Ag2O Nanoparticles.5;8:6568-6577	<i>ACS Sustainable Chem. Eng.</i> 2017 IF: <b>6.97</b>	2168-0485
15	Kaushal S, Badru R, Sharma PK, Kumar S, Singh P	2016	Electrochemical behavior of membrane based on zirconium (IV) phosphoborate nanocomposite and its application in dye removal.6:111606-111615	<i>RSC Advances.</i> IF: <b>3.049</b>	2046-2069
16	Kaur G, Sharma R, Singh K, Sharma PK	2015	Delineating bacterial community structure of polluted soil samples collected from cancer prone belt of Punjab, India .2015/5(5):727-734	<i>3 Biotech</i> IF: <b>1.786</b>	2190-572X
17	Kaur G, Singh A, Sharma R, Sharma VK, Verma S,Sharma PK	2015	Cloning, Expression, Purification and Characterization of Lipase from Bacillus licheniformis, isolated from Hot Spring of Himachal Pradesh,India.6:49	<i>3 Biotech</i> IF: <b>1.786</b>	2190-572X
18	Kaushal S, Sharma PK, Mittal SK, Singh P	2015	A Novel Zinc Oxide-Zirconium (IV) Phosphate Nanocomposite as Antibacterial Material with Enhanced Ion Exchange Properties. 7:1-6	<i>Colloids and Interface Science Communications</i> IF: <b>1.870</b>	2215-0382

19	<b>Sharma PK,</b> Narang D Mukhopadhyay S	2013	Dynamics and dimension of an amyloidogenic disordered state of human b2-microglobulin.42 (10):767-776	<i>European Biophysical Journal</i> .2013 <b>IF: 2.527</b>	0175-7571
20	Sharma PK Kumar R, Garg P, Kaur J	2013	Insights into controlling role of substitution mutation, E315G on thermostability of a lipase cloned from metagenome of hot spring soil.4(2);189-196	<i>3 Biotech</i> <b>IF: 1.786</b>	2190-572X
21	Dalal V, Bhattacharya M, Narang D, <b>Sharma PK,</b> Mukhopadhyay S	2012	Fluorescence Imaging of Single Amyloid Fibrils.3(13) 1783-1787	<i>JPC Letter</i> . <b>IF: 7.329</b>	1948-7185
22	<b>Sharma P.K.,</b> Singh K., Singh R., Capalash N., Ali A., Mohamad O., and Kaur J	2012	Characterization of thermostable lipase showing loss of secondary structure at ambient temperature	<i>Molecular Biology Reports</i> 39 (3) 2795-2804 <b>IF 2.01</b>	0301-4851
23	<b>Sharma PK,</b> Kumar R, Kumar R, Mohammad O, Singh R, Kaur J		Engineering of a metagenome derived lipase towards thermal tolerance: effect of asparagine to lysine mutation on the protein surface	<i>Gene</i> ,10;491(2):264-71. <b>IF 2.638</b>	0378-1119
24	<b>Sharma, P.K.,</b> Capalash N, and Kaur J	2007	An improved method for single step purification of metagenomic DNA” <i>Molecular Biotechnology</i> .	<i>Molecular Biotechnology</i> . 36: 61-63	10736085

### Books authored which are published by International Publishers

S No.	Authors in Sequence	Book Title & Year/Page.	Publisher Details	ISSN/ISBN Number
1	Sharma PK	Metagenomic Lipases	LAP LAMBERT, Academic Publishing Germany	13:978-3659295393, 10:9783659295393

**(iii) Chapters in Edited Books**

Sl. No.	Authors in Sequence	Chapter Title with page nos.	Book Title, editor (s) & Year	Publisher Details	ISSN/ISBN No.
1	Saini J, Kaur R, Sharma PK	Metagenomic Insights into Microbial Diversity and Metabolic Potential of Hot Spring Ecosystems In book: Mining of Microbial wealth and Metagenomics	Mining of Microbial wealth and Metagenomics, Editors: Editors: Kalia, V.C., Shouche, Y, Purohit, H.J., Rahi P Edition: 2017	<b>Springer Nature, Singapore</b>	DOI:10.1007/978-981-10-5708-3
2	Kumar R, Khurana J, Sharma PK, Kaur J	Thermostable Lipases and their Applications	Microbial Enzymes and Processes for Healthcare, Environment and Industry. 317-332 (2015)	<b>Jaya Publishing, New Delhi</b>	<b>ISBN: 9789384337582</b>

**Patent granted: 01**

S No.	Inventor	Title & Year/Page.	Granting year and agency	Patent Number
1	Kaur J, Sharma PK, Singh R	<b>Engineering of the Metagenome Derived Lipase</b>	<b>2018 by CSIR</b>	<b>(1279/DEL/2010)</b>

**(i) Research Projects**

Sl. No.	Title of Project	Funding Agency & Year of Funding	Project Duration	Grant/ Amount Mobilized (Rs. Lakh)	More than or less than 10 lakhs	Whether completed or Ongoing
1	Metatranscriptomic Analysis and Functional	Science Engineering Research	3 years	22 Lakh	>10 Lakh	Completed

Characterization of the metabolically active genes of microbial consortium of polluted and water samples of cancer prone belt of Punjab'	Board/2013				
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## AWARDS / FELLOWSHIPS

### (i) Awards/ Fellowships

Sl. No.	Title of Award/ Fellowship	Year	Conferred by Organization	International/National
1	CSIR Senior Research Fellowship	2008	CSIR, India	National
2	DBT Post-Doctoral Fellowship Award	2010	By Department of Biotechnology,	National
3	SERB Young Scientist Project	2013	SERB, New Delhi	National

### IX. INVITED LECTURES / RESOURCE PERSON/ PAPER PRESENTATION IN SEMINARS/ CONFERENCES /FULL PAPER IN CONFERENCE PROCEEDINGS (PAPER PRESENTED IN SEMINARS/ CONFERENCES AND ALSO PUBLISHED AS FULL PAPER IN CONFERENCE PROCEEDINGS WILL BE COUNTED ONLY ONCE)\*

Sl. No.	Topic/Title of Lecture/Paper	Title of Conference / Seminar	Organized by & Date	International (Abroad or within country) / national /State /University level
1	Metagenomics	Use of ICT in Life Sciences"	jointly organised by Department of Biotechnology, Maharaja Agrasen University, Solan, Himachal Pradesh and Electronics and ICT Academies, NIT Patna under the "Scheme of financial assistance for setting up of Electronics and ICT Academies" by the Ministry of Electronics and Information Technology (MeitY), Government of India from 28th November, 2019 to 7 th December, 2019	National
2	As Key note speaker titled" Understanding and Delineating	Emerging Trends in Basic and Applied	Maharaja, Agrasen School of Basic and Applied Sciences, May 1-2, 2015	International conference

	the mechanism of beta 2 microglobulin aggregation leading to amyloid formation	Sciences		
3.	Oral Presentation on topic “Metagenomic and Metatranscriptomic Insights about Microbial Community Structure and function from a Cypermethrin and metal contaminated soil	21 <sup>st</sup> Punjab Science Congress on Scientific Advances for Inclusive development and Environmental Protection	Feb, 7-9,2018	International
4.	Genetic Engineering: A robust technology in agriculture sector	Recent advances in Plant and agricultural Sciences	March 15-16, 2019	National
5.	Investigating The Heavy Metals And Pesticides Concentration In Agricultural Soil And Groundwater of Mansa District Of Punjab, India: Insights Into Its Impact on Human Health	2 Days International Conference on Recent Innovations in Engineering , Science, Humanities and Management (ICRIESHM-17),DSCW, Panjab University, ,	18-19 March, 2017	International
6	Insights into array of Protein structure and function	Invited lecture and college level, at Modi	September 18, 2014	

		College, Patiala		
7	Insights into two faces of Protein	Invited lecture at college, Phase-6, Mohali	April 27-2016	

### Conference and workshop attended/poster presentation

- Presented a poster in 80<sup>th</sup> SBCI conference held at Lucknow “**Mechanism of B2-microglobulin aggregation leading to amyloid fibril formation** (year 2012)
- Presented a poster in SBCI 82<sup>nd</sup> conference held at Hyderabad year (2014)
- Abstract published in Journal of proteomic and bioinformatics published by OMICS group
- Presented poster at CCMB Hyderabad in 14<sup>th</sup> FAOMB congress organized by SBCI 2015.