Name: Dr. Indra Mani

Contact information

Department of Microbiology,
Gargi College, University of Delhi,
Siri Fort Road, New Delhi-110049.

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Personal Profile

Dr. Indra Mani received his M.Sc. in Microbiology from Bundelkhand University (BU), Jhansi and PhD in Biochemistry from Banaras Hindu University (BHU), Varanasi, India. He completed postdoctoral training in the Department of Physiology, School of Medicine, Tulane University, New Orleans, USA. He has worked as a Senior Research Officer (SRO) in the Department of Medicine, All India Institute of Medical Sciences (AIIMS), New Delhi, India. He has more than 10 years of research and teaching experience in Microbiology, Molecular Genetics, Cell Signalling, and Bioinformatics. He has published more than 50 articles in peer-reviewed journals, 48 book chapters and 6 books. He has presented several papers at different national and international conferences. He has extensive experience in fluorescence/confocal microscopy, receptor endocytosis and signalling, molecular cytogenetics, microbial characterization, and in silico analysis. He serves as a reviewer of peer-reviewed journals and is also a member of national and international societies.

Research Interests:

Cell signaling, Microbiology, Molecular Genetics, and Bioinformatics

Web pages:

Google Scholar: https://scholar.google.co.in/citations?user=r_NVOv0AAAAJ&hl=en

ORCiD: https://orcid.org/0000-0001-7690-5517

Scopus: https://www.scopus.com/authid/detail.uri?authorId=21741520000

PubMed: https://pubmed.ncbi.nlm.nih.gov/?term=indra+mani

ResearchGate: https://www.researchgate.net/profile/Indra-Mani

Vidwan: https://vidwan.inflibnet.ac.in/profile/246490

Web of Science: https://www.webofscience.com/wos/author/record/842049

Education

Degree	Institute/University	Subject	Year
Ph.D.	Banaras Hindu University (BHU), Varanasi, UP.	**Biochemistry**	2010
M.Sc.	Bundelkhand University, Jhansi, UP.	**Microbiology**	2004
B.Sc.	VBS Purvanchal University, Jaunpur, UP.	**Zoology, Botany, Chemistry**	2000

Employment

Position	Institute/University	Year
Assistant Professor	Department of Microbiology**,** Gargi College (University of Delhi), Siri Fort Road, New Delhi-110049. India.	1/2018- to date
Assistant Professor	Department of Microbiology**,** Bhaskaracharya College of Applied Sciences (University of Delhi), Dwarka, New Delhi-110075. India.	7/2017-12/2017
Assistant Professor	Department of Microbiology**,** Gargi College (University of Delhi), Siri Fort Road, New Delhi-110049. India.	1/2017-5/2017
Senior Research Officer	Department of Medicine, All India Institute of Medical Sciences (AIIMS), Ansari Nagar, New Delhi-110029. India.	10/2015-06/2016
Postdoctoral Research Fellow	Department of Physiology, School of Medicine, Tulane University, New Orleans, Louisiana-70112. USA.	8/2011-03/2015
Teaching Faculty	Saaii College of Medical Science and Technology, CSJM University, Kanpur-209203. UP. India.	09/2005-11/2006

Awards & Honours

- **Trainee Research Travel Award** from American Federation of Medical Research/Southern Society for Clinical Investigation (**AFMR/SSCI**) for an oral presentation in the Southern Regional Meetings on February 26-28, 2015, New Orleans, Louisiana-70112. USA.

- Qualified National Eligibility Test (**NET**) conducted by the Agricultural Scientists Recruitment Board (ASRB), ICAR New Delhi.
- Qualified Graduate Aptitude Test in Engineering (**GATE**) exam conducted jointly by Indian Institutes of Science and Indian Institute of Technologies. MHRD, New Delhi, Government of India.

Grants and Fellowships
Fellowship from DBT (Department of Biotechnology), India 2006-2009.

Additional Professional/Administrative Roles
1. Member of IQAC, Gargi College, DU.
2. Member of Weज्ञानम्, The Research Wing of Scintillation, Gargi College, DU.
3. Additional Deputy Superintendent Semester Examination (Dec 2023- Feb 2024).

Other Activitise
- Admission, examination, evaluation, and setting question papers for University examinations.

Research Guidance
Guided **9** B.Sc. (H) students from Microbiology Department, for minor research projects.

2023: Title: In silico optimization of DNA codons in genes encoded by various strains Ebola Virus
2022: Title: In silico codon optimization of the variant antigen-encoding genes of diverse strains of Zika Virus
2019: Title: Codon Optimization of antigen-encoding genes of Nipah virus
2018: Title: Bacterial load of different edible fish sold in Delhi

International/national seminar/webinar
1. **Organizing Team Member** of a National conference on "**NEP-2020: Perspectives, Challenges and Way Forward**" held from November 3-4, 2023 organized by Gargi College, University of Delhi, New Delhi.
2. **Invited speaker** of the presentation entitled "**Role of microbes in e-waste management**" In the BioCuInGe Workshop on: "**Circular Economy: from Waste to Wealth"** held from 25-26 November 2022 organized by Indian Institute of Technology (IIT) New Delhi.
3. **Co-convener** of a "**Enkindle 2021: A three-day International Colloquium on Microbes, Environment, and Science Communication**" held from February 26-March 1, 2021 organized by Department of Microbiology, Gargi College, University of Delhi, New Delhi.
4. **Co-convener** of national webinar on "**Bioinformatics to Systems Genomics**" held on November 6, 2020 organized by Department of Microbiology, Gargi College, University of Delhi, New Delhi.

Subject Taught
Advances in Microbiology, Bioinformatics, Recombinant DNA Technology, Immunology, Inheritance Biology, Industrial Microbiology, Food and Dairy Microbiology, Application of Microbes in Biotechnology, Microbial Physiology and Metabolism, Management of Human Microbial Diseases, Microbiological Analysis of Air and Water, Microbial Diagnosis in Health

Clinics, Microbial Quality Control in Food and Pharmaceutical Industries, Introduction and Scope of Microbiology, Bacteriology, Introduction to Microbiology and Microbial Diversity, and Microbial Genetics and Genomics.

HANDS-ON TRAINING

1. **Microbiology:** Isolation, characterization, and identification of bacteria using biochemical and molecular techniques (16S, 23S, ITS, DNA Gyrase, RNA polymerase gene sequences and its phylogenetic analysis). Isolation, characterization, and identification of fungus using biochemical and molecular techniques (18S, 5.8S, ITS, and 28S). Molecular identification of virus by putative gene PCR amplification, sequencing, and RFLP analysis.

2. **Cell Culture and Confocal Microscopy:** Experience with mammalian cell line culture (MMC, TMC, RTASM, and HEK-293 cells), SiRNA/miRNA transfection, Cell assay, and FACS analysis. Confocal/Fluorescence microscopy. Analysis of fluorescence images through MetaMorph software. Genotyping of transgenic/knockout mice. Handling of laboratory animal (mice and fish) for *in vivo* study.

3. **Biochemistry:** Receptor internalization, subcellular trafficking, and recycling assays using radioactive ^{125}I and eGFP-tagged protein. Biochemical estimation of protein, SDS-PAGE, and Western blotting. Quantitative analysis of gel, ELISA, Immunoprecipitation, Co-immunoprecipitation (co-IP), Immunohistochemistry, and Immunofluorescence (using different dye i.e., Texas Red, FITC, Cy5, Cy3, Alexa Fluor 488, and Dyelight 405).

4. **Molecular Biology:** Extraction of DNA, RNA, PCR, RT-PCR qPCR, DNA purification, Restriction digestion, Ligation, Cloning (Sticky, blunt end, and TA), Colony PCR, Plasmid isolation, Southern blotting, and Site-directed mutagenesis.

5. **Classical and Molecular Cytogenetics:** Chromosome preparation, conventional staining i.e., Giemsa, silver, and fluorescence staining (Chromomycin A_3, DAPI, Propidium Iodide, Fluorescein avidine DCS, and Rhodamine avidine DCS). Karyotype and ideogram preparation. DNA Probe labeling by nick translation and PCR using dye like Fluorescein-12-dUTP and Tetamethyl-Rodamine-5-dUTP. Fluorescence *in situ* hybridization (FISH) and dual-color FISH.

6. **Bioinformatics:** Searching and analysis of nucleotide and protein sequences. Designing and characterization of promoter, primers, probes designing, and validation through *in vitro*. Phylogenetic analysis, prediction of antigenic epitopes, motifs in virulence protein, and RNA secondary structure. Modeling and validation of protein 3-D structure model using Modeller9v6.

Publications

List of publications (PubMed/Scopus/Web of Science/UGC-CARE listed Journals).

1. Mittal M, Kumari A, Paul B, Varshney A, Bhavya, Saini A, Verma C, and **Mani I*** (**2024**). Challenges and Opportunities of Gene Therapy in Cancer. ***OBM Genetics***. 1-45. ISSN 2577-5790. *Scopus indexed.*

2. Pawar VA, Tyagi A, Verma C, Sharma KP, **Mani I,** Srivastava SK, Shukla PK, Kumar A, and Kumar V **(2023)** Unlocking therapeutic potential: Integration of drug repurposing and immunotherapy for various disease targeting. ***American Journal of Translational Research.*** 15(8):4984-5006. **IF-2.2. ISSN**:1943-8141/AJTR0151403. *Scopus indexed.*
3. Bhattacherjee G, Gohil N, Shukla M, Sharma S, **Mani I,** Pandya A, Chu D-T, Bui NL, Thai YVN, Khambhati K, Maurya R, Ramakrishna S, and Singh, V (**2023**) *Nanotechnology and nucleic acid nanoparticles for metabolic disorders.* ***OpenNano.*** 13**:**100181. https://doi.org/10.1016/j.onano.2023.100150. **ISSN**: 2352-9520. *Scopus indexed.*
4. Bhattacherjee G, Gohil N, Shukla M, Sharma S, **Mani I,** Pandya A, Chu D-T, Bui NL, Thai YVN, Khambhati K, Maurya R, Ramakrishna S, and Singh, V (**2023**) *Exploring the potential of microfluidics for next-generation drug delivery systems.* ***OpenNano.*** 12:100150. https://doi.org/10.1016/j.onano.2023.100150. **ISSN**: 2352-9520. *Scopus indexed.*
5. Khurana R, **Mani I,** Kumar P, Ramasamy C and Pandey KN **(2022).** Ligand-dependent downregulation of Guanylyl cyclase/ Natriuretic peptide receptor-A: Role of miR-128 and miR-195. ***International Journal of Molecular Sciences***. 23(21):13381. **IF-5.6**. https://doi.org/10.3390/ ijms232113381. **ISSN**: **1422-0067.** *Scopus indexed.*
6. Khambhati K, Bhattacherjee G, Gohil N, Dhanoa G, Sagona A, **Mani I,** Bui NL, Chu D-T, Karapurkar J, Jang SH, Chung HY, Maurya R, Alzahrani K, Ramakrishna S, and Singh, V (**2022**). Phage engineering and phage-assisted CRISPR-Cas delivery to combat multidrug-resistant pathogens. ***Bioengineering & Translational Medicine***. 8(2): e10381. **IF-7.4**. doi: 10.1002/btm2.10381.10381. **ISSN**: 2380-6761. *Scopus indexed.*
7. Bhattacharjee G, Gohil N, Khambhati K, **Mani I,** Maurya R, Karapurkar JK, Gohil J, Chu Dinh-Toi, Hue VT, Alzahrani KJ, Show PL, Rawal RM, Ramakrishna S, and Singh V (**2022**) Current approaches in CRISPR-Cas9 mediated gene editing for biomedical and therapeutic applications. ***Journal of Controlled Release.*** 343:703-723. **IF-10.8**. https://doi.org/10.1016/j.jconrel.2022.02.005. **ISSN**: 0168-3659. **UGC Journal No.** 6966. *Scopus indexed*
8. Kumar S, Sarthi P, **Mani I**, Ashraf MU, Kang MH, Kumar V, and Bae YS (**2021**). Epitranscriptomic approach: To improve the efficacy of ICB therapy by co-targeting intracellular checkpoint CISH. ***Cells***. *10*(9):2250. **IF-6**. https://doi.org/10.3390/cells10092250. **ISSN: 2073-4409. UGC Journal No**. 5264. *Scopus indexed.*
9. **Mani I** and Pandey KN **(2019).** Emerging concepts of receptor endocytosis and concurrent intracellular signaling: Mechanisms of guanylyl cyclase/natriuretic peptide receptor-A activation and trafficking. ***Cellular Signalling***. 60:17-30. *Scopus indexed.* Doi.org/10.1016/j.cellsig.2019.03.022. **IF-4.8**. **ISSN**: 0898-6568. **UGC Journal No**. 5282.
10. Sharma SK, Sharma R, Singh BK, Upadhyay V, **Mani I,** Tripathi M, and Kumar P (**2019**). A prospective study of non-tuberculous mycobacterial disease among tuberculosis suspects at a tertiary care centre in north India. ***Indian Journal of Medical Research.*** 150:458-467. **IF-4.2**. DOI: 10.4103/ijmr.IJMR_194_19. **ISSN** 0971-5916. *Scopus indexed.*
11. Gogulamudi VR, **Mani I,** Subramanian U, and Pandey KN (**2019**). Genetic disruption of Npr1 depletes T regulatory cells and provokes high levels of proinflammatory cytokines and fibrosis in the kidneys of female mutant mice. ***American Journal of Physiology-Renal Physiology***. 316(6): F1254-F1272. **IF-4.2**. Doi:

10.1152/ajprenal.00621.2018. **ISSN:** 1931-857X. **UGC Journal No**. 3579. *Scopus indexed.*

12. Somanna NK*, **Mani I***, Tripathi S and Pandey KN (**2018**). Clathrin-dependent internalization, signaling, and metabolic processing of guanylyl cyclase/natriuretic peptide receptor-A. ***Molecular and Cellular Biochemistry***. (**Somanna NK and Mani I have contributed equally the first authors*). 441(1-2): 135-150. **IF-4.3**. Doi 10.1007/s11010-017-3180-0. **ISSN**: 0300-8177. *Scopus indexed.*
13. **Mani I,** Garg R, and Pandey KN **(2016).** Role of FQQI motif in the internalization, trafficking, and signaling of guanylyl-cyclase/natriuretic peptide receptor-A in cultured murine mesangial cells. ***American Journal of Physiology-Renal Physiology***. **310**: F68-F84. **IF-4.2**. Doi: 10.1152/ajprenal.00205.2015. **ISSN:** 1931-857X**. UGC Journal No**. 3579. *Scopus indexed.*
14. Subramanian U, Kumar P, **Mani I,** Chen D, Kessler I, Periyasamy R, Raghavaraju G and Pandey KN **(2016).** Retinoic acid and sodium butyrate suppress the cardiac expression of hypertrophic markers and proinflammatory mediators in *Npr1* gene-disrupted haplotype mice. ***Physiological Genomics***. **48**:477-490. **IF-4.6**. DOI: 10.1152/physiolgenomics.00073.2015. **ISSN:** 1094-8341. **UGC Journal No**. 30873. *Scopus indexed.*
15. Singh V, Chaudhary DK, **Mani I,** and Dhar PK (**2016**). Recent advances and challenges of the use of cyanobacteria towards the production of biofuels. ***Renewable and Sustainable Energy Reviews.*** **60**(1): 1-10. https://doi.org/10.1016/j.rser.2016.01.099. **IF-15.9**. **ISSN:** 13640321. **UGC Journal No**. 10266. *Scopus indexed.*
16. **Mani I,** Garg R, Tripathi S, and Pandey KN **(2015).** Subcellular trafficking of guanylyl cyclase/natriuretuic peptide receptor-A with concurrent generation of intracellular cGMP**.** ***Bioscience Reports***. **35(**art: e00260): 1-17, Doi: 10.1042/BSR20150136. **IF-4**. **ISSN: 0144-8463. UGC Journal No**.14873. *Scopus indexed.*
17. Kumar P, Periyasamy R, Das S, Neerukonda S, **Mani I,** and Pandey KN **(2014).** All-trans retinoic acid and sodium butyrate enhance natriuretic peptide receptor a gene transcription: role of histone modification. ***Molecular Pharmacology*****. 85**:946-957. Doi: 10.1124/mol.114.092221. **IF-3.6**. **ISSN**:1521-0111. **UGC Journal No**.31588. *Scopus indexed.*
18. Singh V, **Mani I,** Chaudhary DK, and Dhar PK (**2014**). Metabolic engineering of biosynthetic pathway for production of renewable biofuels. ***Applied Biochemistry and Biotechnology***.**172**(3): 1158-71. Doi: 10.1007/s12010-013-0606-3. **IF: 3**. ISSN: 0273-2289. **UGC Journal No**.15918. *Scopus indexed.*
19. Kumar R, Singh M, Kushwaha B, Nagpure NS, **Mani I,** and Lakra WS **(2013).** Molecular characterization of major and minor rDNA repeats and genetic variability assessment in different species of mahseer found in North India. ***Gene*****.** 527(1): 248-258. https://doi.org/10.1016/j.gene.2013.06.032. **IF: 3.5**. ISSN: 0378-1119. **UGC Journal No**.27454. *Scopus indexed.*
20. Singh V, **Mani I**, and Chaudhary DK **(2013).** ATP4A gene regulatory network for fine-tuning of proton pump and ion channels**.** ***Systems and Synthetic Biology*****. 7**(1-2): 23-32. https://doi.org/10.1007%2Fs11693-012-9103-1. ISSN: 1872-5325. **UGC Journal No**.22418. *Scopus indexed.*
21. Singh V, Chaudhary DK, **Mani I**, Jain R, and Mishra BN (**2013**). *Development of diagnostic* and vaccine markers through cloning, expression and regulation of putative virulence-proteins-encoding genes of *Aeromonas hydrophila*. ***Journal of Microbiology*****. 51**(3): 275-282. https://doi.org/10.1007/s12275-013-2437-x. **IF: 3**. ISSN:1225-8873. **UGC Journal No**. 24615. *Scopus indexed.*

22. **Mani I**, Kumar R, Singh M, Kushwaha B, Nagpure NS, Srivastava PK and Lakra WS **(2013).** Chromosomal distribution of constitutive heterochromatin in eight species of mahseers (Family: Cyprinidae) from India. ***Indian Journal of Biotechnology*****. 12:** 178-186**. IF: 0.324**. ISSN: 0975-0967. **UGC Journal No**.20724. *Scopus indexed.*
23. Singh V, **Mani I,** and Chaudhary DK **(2012).** Analysis of the multicopper oxidase gene regulatory network of *Aeromonas hydrophila*. ***Systems and Synthetic Biology***. **6**(3-4): 51-59. DOI 10.1007/s11693-012-9093-z. ISSN: 1872-5325. **UGC Journal No**. 22418. *Scopus indexed.*
24. Singh V, Chaudhary DK, and **Mani I (2012).** Gene network analysis of *Aeromonas hydrophila* for novel drug target discovery. ***Systems and Synthetic Biology***. **6**(1-2): 23-30. ISSN: 1872-5325. **UGC Journal No**.22418. *Scopus indexed.*
25. Singh V, **Mani I**, Chaudhary DK, and Somvanshi P **(2011).** The β-Ketoacyl-ACP Synthase from *Mycobacterium tuberculosis* as potential drug targets. ***Current Medicinal chemistry***.**18**(9):1318-1324. **IF-4.1**. ISSN: 1875-533X. **UGC Journal No**.14250. *Scopus indexed.*
26. **Mani I**, Kumar R, Singh M, Nagpure NS, Kushwaha B, Srivastava PK, Rao DSK, and Lakra WS **(2011).** Nucleotide variation and physical mapping of ribosomal genes using FISH in genus *Tor* (Pisces, Cyprinidae). ***Molecular Biology Reports*****. 38**:2637-2647. **IF-2.8**. ISSN: 0301-4851. **UGC Journal No**.31535. *Scopus indexed.*
27. Singh V, **Mani I**, Chaudhary DK, and Somvanshi P **(2011).** Molecular detection and cloning of thermostable hemolysin gene from *Aeromonas hydrophila.* ***Molecular Biology*****. 45**(4): 551-560. **IF-1.2**. ISSN: 0026-8933. **UGC Journal No**. 31532. *Scopus indexed.*
28. Singh V, **Mani I,** and Chaudhary DK (**2011**). Gene cloning and homology modeling of the 3-oxoacyl-ACP synthase from *Aeromonas hydrophila* for drug discovery. ***Letters in Drug Design & Discovery*****. 8(7):** 619-625. **IF-1**. ISSN:1875-628X. UGC Journal No. 4588. *Scopus indexed.*
29. **Mani I,** Singh V, Chaudhary DK, Somvanshi P, and Negi MPS **(2011).** Codon optimization of the major antigen encoding genes of diverse strains of influenza A virus. ***Interdisciplinary Sciences: Computational Life Sciences*****. 3:** 1-7. **IF-4.8**. ISSN: 1913-2751. **UGC Journal No.** 2311. *Scopus indexed.*
30. Srivastava PK, Srivastava GK, **Mani I,** Yadav S, and Anand A **(2011).** Role of metabolites and significance of SH groups in the action of $NADP^+$-linked Isocitrate dehydrogenase of Urdbean seeds (*Phaseolus mungo* L.). ***Asian Journal of Biochemistry***. **6**(2): 181-190. Doi: 10.3923/ajb.2011.181.190. ISSN: 1815-9931. *Scopus indexed.*
31. **Mani I**, Kumar R, Kushwaha B, Singh M, Nagpure NS, Srivastava PK, and Lakra WS **(2010).** Cytogenetic characterization of an endemic mahseer, *Tor mosal mahanadicus* (David, 1953; Teleostei: Cyprinidae). ***The Nucleus*****. 53:** 109-114**.** Doi 10.1007/s13237-011-0017-1. ISSN:0976-7975. **UGC Journal No**. 27042. *Scopus indexed.*
32. Singh V, Chaudhary DK, **Mani I,** Somvanshi P, Rathore G, and Sood N **(2010).** Genotyping of *Aeromonas hydrophila* by Box elements. ***Microbiology*****. 79**(3):370–373. **IF-1.5**. ISSN: 0026-2617. **UGC Journal No**. 31152. *Scopus indexed.*
33. Singh M, Kumar R, Nagpure NS, Kushwaha B, **Mani I**, Murmu K, Chauhan UK, and Lakra WS **(2010).** Nucleotide sequences and chromosomal localization of 45S and 5S rDNA in *Neolissochilus hexagonolepis* (Pisces, Cyprinidae), using dual-color Fish. ***Zoological Science*****. 27(8):** 709–716. **IF-0.9**. ISSN: 0289-0003. **UGC Journal No**. 25650. *Scopus indexed.*
34. **Mani I,** Kumar R, Singh M, Kushwaha B, Nagpure NS, Srivastava PK, Murmu K, Rao DSK, and Lakra WS **(2009).** Karyotypic diversity and evolution of seven species of

mahseer (Pisces, Cyprinidae) from India. ***Journal of Fish Biology***.**75**:1079–1091. **IF-2**. ISSN:1095-8649. **UGC Journal No**. 7589. *Scopus indexed*.

35. Singh M, Kumar R, Nagpure NS, Kushwaha B, **Mani I,** Chauhan UK, and Lakra WS **(2009).** Population distribution of 45S and 5S rDNA in golden mahseer, *Tor Putitora*: population-specific FISH marker. ***Journal of Genetics*. 88**: 315–320. **IF-1.5**. ISSN: 0022-1333. **UGC Journal No**. 28287. *Scopus indexed.*

36. Singh M, Kumar R, Nagpure NS, Kushwaha B, **Mani I,** and Lakra WS **(2009).** Extensive NOR still active in geographically isolated populations of golden mahseer *Tor putitora.* ***Genome*. 52**(9): 783–789. **IF-3.1**. **ISSN:** 0831-2796. **UGC Journal No**. 27532. *Scopus indexed.*

NON-SCI LISTED JOURNALS

1. Mathuria A, Mehak and **Mani I*** (**2024**). In silico optimization of DNA codons in genes encoded by various strains of Ebola Virus. ***Medinformatics.*** DOI: https://doi.org/10.47852/bonviewMEDIN42021822. **eISSN:** 3029-1321.

2. Rawal MK, Hora J, Upadhyay P, Srivastava R, Nishat T, Ankita, and **Mani I** (2023). Evaluation of Vaccine Hesitancy and the Influence of Side Effects on Vaccination Drive amidst Covid-19 Pandemic in India. ***Open Access Journal of Microbiology and Biotechnology***. 8(1): 000248. ISSN:2576-7771.

3. Gupta A, Gangotia D, Vasdev K and **Mani I*** (**2022**). In silico DNA codon optimization of the variant antigen-encoding genes of diverse strains of Nipah virus. ***Indian Journal of Biotechnology and Pharmaceutical Research. 10(1):1-16. ISSN: 2347-3266.***

4. Sharma R, Singh BK, Jorwal P, **Mani I**, Upadhyay V, Soneja M, Sebastian G, Ramachandran R, Kumar P and Wig N (2021). Species Identification of non-tuberculous *Mycobacteria* (NTM) from sputum samples of TB suspects in a tertiary care centre from north India. ***Acta Scientific Medical Sciences.*** 5(9):123-130. **ISSN**: 2582-0931.

5. **Mani I** and Vasdev K (**2018**). MicroRNA in Prognosis, Diagnosis and Therapy of Cancer. ***Cell & Cellular Life Sciences Journal***. 3: 000134. ISSN: 2578-4811.

6. **Mani I** and Vasdev K **(2018).** Current Developments and Potential Applications of Biosensor Technology. ***Journal of Biosensors & Bioelectronics***. **9**(2): 1-3. ISSN: 2155-6210.

7. Dewasthale S, **Mani I** and Vasdev K **(2018).** Microbial biofilm: current challenges in health care industry. ***Journal of Applied Biotechnology & Bioengineering***. 5(3): 160-164. ISSN: 2572-8466.

8. Dhawan G, **Mani I** and Vasdev K (**2018**). Epigenetic remodeling of delta FosB protein: Its role in regulation of stress. ***Cell & Cellular Life Sciences Journal***. 3(1): 000121. ISSN: 2578-4811.

9. **Mani I*** and Vasdev K (**2017**). Toll-Like Receptor 11: Role in post-transplantation renal infections. ***Single Cell Biology***. 6(2): 1-3. DOI: 10.4172/2168-9431.1000164. ISSN: 2168- 9431.

10. Vasdev K and **Mani I (2017)**. CRISPR/Cas-9 System: Magnificent Tool for Genome Editing. ***International Journal of Biotechnology and Bioengineering*.** 3(10): 293-297. ISSN: 2475-3432.

11. Singh V and **Mani I** (2017). A potential screening of peptide deformylase inhibitors towards the control of *Aeromonas hydrophila*. ***Current Synthetic and Systems Biology***. 5(1): 1-7. DOI: 10.4172/2332-0737.1000131. ISSN: 2332-0737.

12. Chaudhary DK, **Mani I,** and Singh V **(2012).** Identification of T-cell antigenic determinants in the proteins of human papillomavirus. ***International Journal of Advanced Biotechnology and Bioinformatics*****.** **1**(1): 79-86. ISSN 0976-4550.
13. Chaudhary DK, **Mani I,** and Singh V **(2012).** Comparative structural and functional analysis of E6 oncogene of Human papillomavirus type 16. ***International Journal of Applied Biology and Pharmaceutical Technology*****.** **3**(4): 439-450. ISSN:0976-4550.
14. Singh V, **Mani I,** and Chaudhary DK **(2012).** Molecular Assessment of 16S-23S rDNA Internal Transcribed Spacer Length Polymorphism of *Aeromonas hydrophila*. ***Advances in Microbiology*****. 2:** 72-78. ISSN: 2165-3402.
15. Singh V, Chaudhary DK, and **Mani I (2012).** Molecular characterization and modeling of secondary structure of 16S rRNA from *Aeromonas veronii*. ***International Journal of Applied Biology and Pharmaceutical Technology*****.** **3**(1): 253-260. ISSN:0976-4550.
16. Chaudhary DK, **Mani I,** and Singh V **(2012).** Identification of T-Cell epitopes in structural proteins of Tickborne encephalitis virus for vaccine development. ***International Journal of Applied Biology and Pharmaceutical Technology*****.** **3**(2): 39-43. ISSN:0976-4550.
17. **Mani I,** Chaudhary DK, Somvanshi P, and Singh V **(2010).** Codon optimization of the potential antigens encoding genes from *Mycobacterium tuberculosis*. ***International Journal of Applied Biology and Pharmaceutical Technology*****.** **I** (2): 292–301.ISSN: 0976-4550.
18. Singh V, Chaudhary DK, **Mani I,** Somvanshi P, Rathore G, and Sood N **(2010).** Molecular Identification and codon optimization analysis of major virulence encoding genes of *Aeromonas hydrophila. **African Journal of Microbiology Research*****.** **4**(10)**:** 952–957. ISSN: 1996-0808.
19. Singh V, Chaudhary DK, **Mani I,** Somvanshi P (**2009**). HLA Class I and II binding promiscuity of the T-cell epitopes in putative proteins of Hepatitis B virus. ***Journal of Computer Science & Systems Biology.*** **2**(1):069-073. DOI:10.4172/jcsb.1000018. ISSN:0974-7230.
20. Singh AK, Rathore G, Singh V, **Mani I**, Singh RK, Mishra SK, Mishra BN, and Verma OP **(2009).** Bacterial resistance to oxytetracycline in different life stages of Indian freshwater carp aquaculture system. ***International Journal of Microbiology Research*****.** **1**(1): 25–34. ISSN: 0975-5276.

BOOKS (Publishers– Academic press, Elsevier, and Springer Nature**)**

1. **Mani I** and Singh V (**2024**). Multi-omics analysis of the human microbiome-From technology to clinical applications. **Springer Nature Singapore.** Pages: ~350. ***ISBN:*** *9789819718436.*
2. **Mani I** and Singh V (**2023**). Receptor Endocytosis and Signalling in Health and Disease. **Part A. PMBTS Vol 194. Elsevier.** Pages: 406. ***ISBN:*** *9780443191855*
3. **Mani I** and Singh V (**2023**). Receptor Endocytosis and Signalling in Health and Disease**. Part B. PMBTS Vol 196. Elsevier.** Pages: 360. ***ISBN:*** *9780323955591*
4. **Mani I,** Singh V, Khalid J. *Alzahrani, and Dinh-Toi Chu* (Eds) (**2023**). Microbial Genomic Islands in Adaptation and Pathogenicity. **Springer Nature Singapore.** Pages: 356. *ISBN 9789811993411*
5. Singh V and **Mani I** (Eds) (**2023**). Epigenetics in Health and Disease. **Part A. PMBTS Vol 197. Elsevier.** Pages: 309. ***ISBN:*** *9780443186691.*
6. Singh V and **Mani I** (Eds) (**2023**). Epigenetics in Health and Disease**. Part B. PMBTS Vol 198. Elsevier.** Pages: 277. ***ISBN****: 9780443214448.*

BOOK CHAPTERS (Publishers– Academic press, Elsevier, Springer, CRC press, and Studium Press**).**

1. Jain K, Pandita P, Mathuria A, Mehak, Das D, Saini A and **Mani I*** (**2024**). Emerging tools for generating genomics data. **Advances in Genomics-Methods and Applications**. Singh V (eds). Springer Nature (*Accepted*).
2. Mathuria A, Chaudhary A, Sharma H, Singla S, Mehak, Verma C, Saini A and **Mani I*** (**2024**). Chloroplast genomics and their uses in crop improvement. **Advances in Genomics-Methods and Applications**. Singh V (eds). Springer Nature (*Accepted*).
3. Hora J, Rambhia N and **Mani I*** (2024) Drug repurposing for personalized medicine. **Progress in Molecular Biology and Translational Science.** Vol 207. Academic Press, Elsevier (**IF-4.025**). (*Accepted*).
4. Mathuria A, Chaudhary A, Sharma H and **Mani I*** (**2024**). Multi-omics in gut microbiome. Mani I and V. Singh (eds). **Multi-omics analysis of the human microbiome-From technology to clinical applications.** Springer Nature. ***ISBN:*** *9789819718436.*
5. Mathuria A, Jain K, Saini A, Verma C and **Mani I*** (**2024**). Metatranscriptomics, metaproteomics and metabolomics approaches for microbiome characterization. Mani I and V. Singh (eds). **Multi-omics analysis of the human microbiome-From technology to clinical applications.** Springer Nature. ***ISBN:*** *9789819718436.*
6. Mathuria A, Chaudhary A, Sharma H and **Mani I*** (**2024**). Metagenomics insight into the mycobiome analysis. Mani I and V**. Singh** (eds). **Multi-omics analysis of the human microbiome-From technology to clinical applications.** Springer Nature. ***ISBN:*** *9789819718436.*
7. Hora J and **Mani I*** (**2024**). Metagenomics in the census of microbial diversity. Mani I and V**. Singh** (eds). **Multi-omics analysis of the human microbiome-From technology to clinical applications.** Springer Nature. ***ISBN:*** *9789819718436.*
8. Mathuria A, Ali N, **Mani I*** and Singh V (**2024**). Overview on multi-omics research in microbiome analysis. Mani I and V. Singh (eds). **Multi-omics analysis of the human microbiome-From technology to clinical applications.** Springer Nature. ***ISBN:*** *9789819718436.*
9. Mathuria A, Mehak, **Mani I*** (2024). Role of Bioinformatics in Non-coding RNA Analysis. In: Singh, V., Kumar, A. (eds) **Advances in Bioinformatics**. Springer Nature. Pp. 113-136. https://doi.org/10.1007/978-981-99-8401-5_5. *ISBN978-981-99-8401-5.*
10. Mittal M, Tripathi S, Saini, A and **Mani I* (2023).** Phage for treatment of *Vibrio cholerae* infection. **Progress in Molecular Biology and Translational Science.** Vol 201. Academic Press, Elsevier (**IF-4.025**). Pp. 1-21. *ISSN 1877-1173. ISBN: 9780323955652. UGC Journal No.* 31898.
11. **Mani I* (2023).** Phage and phage cocktail formulations. **Progress in Molecular Biology and Translational Science.** Vol 200. Academic Press, Elsevier (**IF-4.025**). Pp. 1-11. *ISSN 1877-1173. ISBN: 9780323955638. UGC Journal No.* 31898.
12. Sakshi, Ragini, **Mani I*** and Singh V (**2023**). Applications of Bioinformatics in Epigenetics. **Progress in Molecular Biology and Translational Science.** Vol 198. Academic Press, Elsevier (**IF-4.025**). Pp. 1-13. *ISSN 1877-1173. ISBN: 9780443214448. UGC Journal No.* 31898.
13. Sakshi, Ragini, Saini A, Verma C and **Mani I*** (**2023**) Epigenetics in renal diseases. **Progress in Molecular Biology and Translational Science.** Vol 198. Academic Press, Elsevier (**IF-4.025**). Pp. 1-13. *ISSN 1877-1173. ISBN: 9780443214448.*
14. Saini A, Varshney A, Singh N, Saini, A and **Mani I* (2023).** Insight into Epigenetics and Human Diseases. **Progress in Molecular Biology and Translational Science.** Vol

197. Academic Press, Elsevier (**IF-4.025**). Pp. 1-21. *ISSN 1877-1173. ISBN: 978-0-443-18669-1.*

15. Saini A, Rawat Y, Jain K, and **Mani I*** (**2023**) State-of-the-Art Techniques to Study Epigenetics**. Progress in Molecular Biology and Translational Science.** Vol 197. Academic Press, Elsevier (**IF-4.025**). Pp. 23-50. *ISSN 1877-1173. ISBN: 9780443186691.*
16. Saini A, **Mani I*,** Rawal MK, Verma C, Singh V, and Mishra S **(2023).** An introduction of microbial genomic islands for evolutionary adaptation and pathogenicity. In: Mani, I., Singh, V., Alzahrani, K.J., Chu, DT. (eds). **Microbial Genomic Islands in Adaptation and Pathogenicity**. Springer Nature, Singapore. Pp.1-15. *ISBN***:** *9789811993411.*
17. Kumar M, Khaswal A, Mishra SK, Vashistha A, **Mani I**, Singh V (**2023**). Genomic Islands in Marine Bacteria. In: Mani, I., Singh, V., Alzahrani, K.J., Chu, DT. (eds). **Microbial Genomic Islands in Adaptation and Pathogenicity**. Springer Nature, Singapore**.** Pp.325-334. *ISBN***:** *9789811993411.* https://doi.org/10.1007/978-981-19-9342-8_15
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19. Mittal M, Varshney A, Singh N, Saini, A and **Mani I* (2023).** Yeast cell factory for biomolecules. In: V**. Singh** and Show PL (eds). **Biomanufacturing for Sustainable Production of Biomolecules**. Springer Nature, Singapore**.** Pp.211-251. *ISBN***:** *9789811979101.* https://doi.org/10.1007/978-981-19-9342-8_1
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22. Ragini, Sakshi, Saini A, **Mani I*** (**2023**). Endocytosis and signaling of 5-HT1A receptor. **Progress in Molecular Biology and Translational Science.** Vol 196. Academic Press, Elsevier (**IF-4.025**). Pp. 113-123. *ISSN 1877-1173. ISBN: 9780323955591.*
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24. **Mani I*** and Singh V (**2023**). Receptor biology: Challenges and opportunities. **Progress in Molecular Biology and Translational Science.** Vol 196. Academic Press, Elsevier (**IF-4.025**). Pp.337-349. *ISSN 1877-1173. ISBN: 9780323955591.*
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26. **Mani I*** (**2023**). Endocytosis and signaling of angiotensin II type 1 receptor. **Progress in Molecular Biology and Translational Science.** Vol 194. Academic Press, Elsevier (**IF-4.025**). Pp. 141-157. *ISSN 1877-1173. ISBN: 9780443191855.*
27. **Mani I*** and Singh V (**2023**). An overview of receptor endocytosis and signaling. **Progress in Molecular Biology and Translational Science.** Vol 194. Academic Press, Elsevier (**IF-4.025**). Pp. 1-18. *ISSN 1877-1173. ISBN: 9780443191855.*
28. Gupta A Singh V and **Mani I* (2022).** Dysbiosis of human microbiome and infectious diseases. **Progress in Molecular Biology and Translational Science.** Vol 192. Academic Press, Elsevier (**IF-4.025**). Pp. 33-51. *ISSN 1877-1173. ISBN: 9780323912105.*
29. **Mani I*,** Singh V and Kumar S (2022). Microbial production and emerging applications of lantibiotics. In: Singh M, Singh GP and Tyagi S(eds). **Microbial Products: Applications and Translational Trends.** CRC Press/Taylor and Francis Group**.** Pp. 361-371. *ISBN: 9781003306931.*
30. Saini A, Yadav S and **Mani I* (2022).** DNA/RNA-based self-assemblies for biosensing. In: A Pandya, R Bhosale, V Singh (eds). **Design, Principle and Application of Self-Assembled Nanobiomaterials in Biology and Medicine.** Elsevier. Pp. 227-249. *ISBN: 9780323909853*.
31. Gupta A and **Mani I* (2022).** Beneficial effects of psychobiotic bacteria, cyanobacteria, algae and modified yeast in various food industries. In: A Kumar, K. Patruni, V**. Singh** (eds). **Recent Advances in Food Biotechnology.** Springer Nature, Singapore**.** Pp. 161-173. *ISBN*: *9789811681240.*
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38. **Mani I* (2021).** Genome editing in cardiovascular diseases. **Progress in Molecular Biology and Translational Science.** Vol 181. Pp. 289-308. Academic Press, Elsevier (**IF-4.025**). *ISSN 1877-1173. ISBN: 9780323853231.*
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42. **Mani I* (2020).** Current status and challenges of DNA sequencing. In: V. Singh (eds). **Advances in Synthetic Biology.** Springer Nature, Singapore. Pp. 71–80. ***ISBN:*** *9789811500817.*
43. Bhattacharjee G, **Mani I,** Gohil N, Khambhati K, Braddick D, Panchasara H, and Singh V (**2019**). CRISPR Technology for Genome Editing. In: Joel Faintuch, Salomao Faintuch (eds). **Precision Medicine for Investigators, Practitioners and Providers.** Elsevier. Pp. 59–69. ***ISBN:*** *9780128191781*.
44. Singh V, **Mani I,** and Chaudhary DK (**2015**). Advancement of emerging tools in synthetic biology for the designing and characterization of genetic circuits. In: V. Singh, P. K. Dhar (eds.). **Systems and Synthetic Biology**. Springer, Dordrecht, Netherlands. Pp. 327–339. *ISBN: 9789401795142.*
45. Singh V, **Mani I,** and Chaudhary DK (**2015**). Metabolic engineering of microorganisms for biosynthesis of antibiotics. In: V. Singh, P. K. Dhar (eds.). **Systems and Synthetic Biology**. Springer, Dordrecht, Netherlands. Pp. 341–356. *ISBN: 9789401795142.*
46. Singh V, **Mani I**, and Chaudhary DK (**2014**). Biological computing by the cellular gene network engineering. In: V. Singh, J. N Govil (eds). **Applied Synthetic Biology**. Studium Press LLC, India. Pp.443-464. *ISBN:1626990190.*
47. Singh V, Chaudhary DK, and **Mani I** (**2014**). Role of Bioinformatics in Biotechnology. In: A.R. Rao (eds), **Bioinformatics and Computational Biology**. Studium Press LLC**,** India. Pp. 1–11. *ISBN: 1626990212.*
48. Chaudhary DK, Singh V, and **Mani I** (**2014**). Innate immunity: basic and applied perspective. In: B. Ganguly, S. Dey, J. N. Govil (eds). **Animal Biotechnology**. Studium Press LLC, India. Pp. 57–78. *ISBN: 1626990204.*

Conferences

International conferences

1. Ramasamy C, Khurana R, **Mani I,** Kumar P, and Pandey KN **(2023).** MiR-128 and MiR-195 modulate ligand-dependent downregulation of Guanylyl Cyclase/Atrial Natriuretic Peptide Receptor-A. American Physiology Summit April 20-23, USA. ***Physiology*** 38: S1. https://doi.org/10.1152/physiol.2023.38.S1.5696100
2. Ramasamy C, Khurana R, **Mani I**, Kumar P, and Pandey KN (**2023**). MicroRNA-128 regulates ligand-dependent downregulation of guanylyl cyclase/atrial natriuretic peptide receptor-A. Southern Regional Meeting February 2-4. New Orleans, LA, USA. ***The American Journal of the Medical Sciences*** 365(S1): S54. https://doi.org/10.1016/S0002-9629(23)00107-6
3. Gogulamudi VR, **Mani I,** Subramanian U, and Pandey KN (**2019**). Genetic disruption of *Npr1* depletes T regulatory cells and provokes high levels of proinflammatory cytokines and fibrosis in the kidneys of female mutant mice. American Heart Association (AHA) Meeting, September 5-9, New Orleans, LA, USA. ***Hypertension*** 74: AP2045. https://doi.org/10.1161/hyp.74.suppl_1.P2045
4. Sharma SK, Sharma R, Singh BK, Upadhyay V and **Mani I** (**2019**). A Study of non-tuberculous Mycobacterial (NTM) disease among Tuberculosis suspects at a Tertiary Care Center in North India. American Thoracic Society (ATS) 2019 Interantional Conference, May 17-22, Dallas, TX, USA. ***American Journal of Respiratory and***

Critical Care Medicine 199: A2048. https://doi.org/10.1164/ajrccm-conference.2019.199.1_MeetingAbstracts.A2048

5. Gogulamudi VR, **Mani I,** Subramanian U, and Pandey KN **(2018).** Effect of rapamycin on the expression of T regulatory cells, Foxp3, and Toll-like receptors in the kidneys of *Npr1*Gene-knockout mice. American Heart Association (AHA) Meeting, September 6-9, Chicago, Illinois, USA. ***Hypertension*** 72: AP161. https://doi.org/10.1161/hyp.72.suppl_1.P161.
6. **Mani I,** Garg R, Tripathi S, and Pandey KN **(2016).** Rapid internalization and trafficking of GC-A/NPRA via Endo-lysosomal compartments with concurrent generation of cGMP in mouse mesangial cells: Role of FQQI motif. Experimental Biology Meeting, April 2-6, San Diego, California, USA. ***The FASEB Journal*** 30(1); 867.2. https://doi.org/10.1096/fasebj.30.1_supplement.967.19
7. **Mani I,** Tripathi S, Garg R, and Pandey KN **(2016).** Immunofluorescence localization of ligand-induced internalization, trafficking, and signaling of eGFP-tagged guanylyl cyclase/natriuretic peptide receptor-A into the subcellular compartments. Experimental Biology Meeting, April 2-6, San Diego, California, USA. ***The FASEB Journal*** 30(1); 967.19. https://doi.org/10.1096/fasebj.30.1_supplement.867.2
8. Pandey KN, Subramanian U, Kumar P, **Mani I,** Kessler I, Raghavaraju G **(2016).** Genetic basis of cardiac dysfunction: protective role of all-trans retinoic acid and histone deacetylase inhibitor. Cardiology Meeting, July 30-August 1, Bostan, Massachusetts, USA. ***Cardiology*** 134(suppl 1): 1-460.
9. **Mani I** and Pandey KN **(2015).** FQQI motif in the C-terminus of guanylyl-cyclase/natriuretic peptide receptor-A mediates intracellular trafficking in mouse mesangial cells. Experimental Biology Meeting, March 28-April1, Boston, Massachusetts, USA. ***The FASEB Journal*** 29(1); 574.24. https://doi.org/10.1096/fasebj.29.1_supplement.574.24
10. **Mani I** and Pandey KN **(2015).** Visualization of internalization and intracellular trafficking of guanylyl cyclase/natriuretic peptide receptor-A with concurrent generation of cGMP. American Federation for Medical Research (AFMR), Southern regional meeting. February 26-28, New Orleans, Louisiana, USA. ***Journal of Investigative Medicine*** 63(2); 428.
11. Gogulamudi VR, Subramanian U, **Mani I,** and Pandey KN **(2015).** Increased renal expression of toll-like receptor-4 in guanylyl cyclase/natriuretic peptide receptor-A gene-disrupted female mice. Experimental Biology Meeting, March 28-April1, Boston, Massachusetts, USA. ***The FASEB Journal*** 29(1); 710.22. https://doi.org/10.1096/fasebj.29.1_supplement.710.22
12. **Mani I,** Tripathi S, and Pandey KN **(2014).** A novel cytoplasmic tail FQQI motif mediates internalization and intracellular trafficking of guanylyl-cyclase/natriuretic peptide receptor-A. Experimental Biology Meeting, April 26-30, San Diego, California, USA. ***The FASEB Journal*** 27:553.9. https://doi.org/10.1096/fasebj.28.1_supplement.539.4
13. **Mani I,** Garg R, and Pandey KN **(2013).** Immunofluorescence visualization of the internalization and intracellular trafficking of guanylyl cyclase/natriuretic peptide receptor-A in sub-cellular compartments. American Society for Cell Biology (ASCB), Annual meeting. December 14-18. New Orleans, Louisiana, USA. ***Molecular Biology of the Cell*** 24, 3775.

http://www.molbiolcell.org/content/suppl/2013/12/11/24.24.3775.DC1/2013Abstracts.pdf

14. **Mani I,** Garg R, and Pandey KN **(2013).** Aromatic residue-based tetrapeptide Fqqi motif mediates internalization and trafficking of guanylyl-cyclase/natriuretic peptide receptor-A in mouse mesangial cells. American Heart Association (AHA) Meeting, September 11-14, New Orleans, LA, USA. ***Hypertension*** 62: A282-A282. https://doi.org/10.1161/hyp.62.suppl_1.A282
15. **Mani I,** Garg R, Nguyen VA, and Pandey KN **(2013).** Quantitative internalization kinetics of the green fluorescence protein-tagged guanylyl (guanylate) cyclase/natriuretic peptide receptor-A in human embryonic kidney-293 cells. Experimental Biology Meeting, April 20-24, Boston, Massachusetts, USA. ***The FASEB Journal*** 27:553.9. https://doi.org/10.1096/fasebj.27.1_supplement.553.9
16. **Mani I,** Garg R, Nguyen VA, and Pandey KN **(2013).** Immunofluorescence study demonstrates internalization and trafficking of guanylyl (Guanylate) cyclase/nautriuretic peptide receptor-A in human embryotic kidney-293 cells. American Federation for Medical Research (AFMR), Southern regional meeting. February 21-23, New Orleans, Louisiana, USA. ***Journal of Investigative Medicine*** 61(2); 488.
17. Subramanian U, Kumar P, **Mani I,** and Pandey KN **(2013).** Regulatory action of all-trans retinoic acid and sodium butyrate in the modulation of cardiac remodeling in guanylyl cyclase/nautriuretic peptide receptor-A gene targeted mice. American Federation for Medical Research (AFMR), Southern regional meeting. February 21-23, New Orleans, Louisiana, USA. ***Journal of Investigative Medicine*** 61(2):46.

National conferences

1. **Mani I**, Kumar R, Singh M, Nagpure NS, Kushwaha B, Srivastava PK, and Lakra WS **(2010).** Internal transcribed spacer 2 of ribosomal DNA: A molecular marker for phylogenetic and population analyses in mahseer (Pisces: Cyprinidae). In: International conference – "Role of Biomolecules in Food Security and Health Improvement" and "Silver Jubilee Convention of Indian Society of Agricultural Biochemists" and "Alumni Meet of Biochemist 17-20th February. Banaras Hindu University (BHU), Varanasi, India.
2. Singh V, **Mani I,** Chaudhary DK, Somvanshi P, Kirov B, and Jaramillo A (**2009**). Codon optimization of major antigen encoding gene from hepatitis B virus for heterologous expression system. Proceeding of national conference on 1st Annual Conference of Society of Professional Biotechnologist" on 1-2 December, Kanpur, India.

International Teaching/Workshops/Conference/Webinar

1. Attended two-day (February 1-2, 2023) International Multidimensional Conferences to celebrate 100 years of University of Delhi on "**Revisiting Wellbeing: Perspectives, Challenges, and the Road ahead"** Organized by Gargi College, DU, New Delhi.
2. Attended four days (November 8-11, 2022) 7th Annual International Conference of INSCR on "**Modulating the Environment with Microbes"** organized in association with the Department of Zoology (DU), Acharya Narendra Dev College (DU), Deen Dayal Upadhyaya College (DU), Gargi College (DU), Kirori Mal College (DU), PG Department of Zoology (MU), Maitreyi College (DU), Ramjas College (DU), Sri Venkateswara College (DU), C.M.P. College (AU), SGTB Khalsa College (DU), COCAS (PU) & PhiXgen Pvt. Ltd., Gurugram.
3. Attended four days (November 15-18, 2021) 6th Annual International Conference of INSCR on "**Microbes in Sustainable Development"** organized in association with the Department of Zoology (DU), Acharya Narendra Dev College (DU), Deen Dayal

Upadhyaya College (DU), Gargi College (DU), Kirori Mal College (DU), PG Department of Zoology (MU), Maitreyi College (DU), Ramjas College (DU), Sri Venkateswara College (DU), C.M.P. College (AU), SGTB Khalsa College (DU), COCAS (PU) & PhiXgen Pvt. Ltd., Gurugram.

4. Attended one day (September 6, 2021) International webinar on "**Journey from Biology to Machine Learning"** conducted by Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi.
5. Attended two days "**Teaching workshop**" on May 15-16, 2013, sponsored by the Center for Engaged Learning and Teaching and the Office of Graduate & Postdoctoral Studies, Tulane University, New Orleans, LA, USA.
   (This two-days workshop covered the teaching essentials, from utilizing technology in the classroom and leading discussions to classroom management and setting boundaries).

National Symposium/Workshop/Seminar/Webinar/Meeting

1. Attended ten days (Feb 6-15, 2024) Faculty Development Programme (FDP) on " **NEP Orientation & Sensitization Programme"** organized by organised by UGC- Malaviya Mission Teacher Training Centre (also GAD-MMTTC), Formerly GAD-TLC at S.G.T.B. Khalsa College, University of Delhi
2. Attended one day (Feb 3, 2024) webinar on "**NEP-2020: Internship/Apprenticeship Embedded Degree Program"** organized by Centre for Professional Development in Higher Education (CPDHE), UGC - Malaviya Mission Teacher Training Centre **(**UGC-MMTTC), University of Delhi, Delhi.
3. Attended two days (Nov 3-4, 2023) National conference on "**NEP-2020: Perspectives, Challenges and Way Forward**" organized by Gargi College, University of Delhi, New Delhi.
4. Attended one day (July 26, 2023) National Webinar on "**Understanding Open Access Publishing, Exploring Open Access: Strategies for Successful Publications**" organized by Taylor and Francis Group.
5. Attended three-day (June 25-27, 2023) Virtual workshop on "**Comparative Protein Structure Modelling and Molecular Docking"** Organized by Quaxon Bio & IT Solutions. MSME, Govt of India.
6. Attended seven days (December 8-14, 2022) Faculty Development Programme (FDP) on **"Development of MOOCs, e-Content and Teacher's e-Kit in Four Quadrant Format"** organized by Guru Angad Dev Teaching Learning Centre (GAD-TLC), a center under PMMMNMTT, Ministry of Education, Govt. of India and SGTB Khalsa College, University of Delhi, New Delhi.
7. Attended one day (Sept 17, 2022) National webinar on "**Microorganisms: Our invisible helpers**". Organized by Department of Microbiology, Institute of Home Economics, University of Delhi, New Delhi.
8. Attended one day (June 19, 2022) National webinar on "**Experiential learning as envisaged in NEP-2020**" organized by Guru Angad Dev Teaching Learning Centre, a center under PMMMNMTT, Ministry of Education, Govt. of India and SGTB Khalsa College, University of Delhi, New Delhi.
9. Attended one day (Feb 26, 2022) National webinar on "**Antibodies**". Organized by Ram Lal Anand College, University of Delhi, New Delhi.
10. Attended one day (Feb 25, 2022) National webinar on "**Intellectual Property Rights**". Organized by Department of Microbiology, Gargi College, University of Delhi, New Delhi.
11. Attended one day (October 1, 2021). National webinar on "**Small molecules make a**

big impact: A panoramic view of miRNAs in esophageal cancer" conducted by Department of Microbiology, Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi.

12. Attended one day (September 9, 2021) National webinar on "**Teacher's e-Kit: A four quadrant approach for development of OERs for higher education**" organized by Guru Angad Dev Teaching Learning Centre, a center under PMMMNMTT, Ministry of Education, Govt. of India and SGTB Khalsa College, University of Delhi, New Delhi.
13. Attended a talk (September 6, 2021) on "**Journey from biology to machine learning"** conducted by Department of Microbiology Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi.
14. Attended five days (August 5-12, 2021) Faculty Development Programme (FDP) on "**Qualitative Research & Issues in Plagiarism (An interdisciplinary approach)**" organized by Guru Angad Dev Teaching Learning Centre, a center under PMMMNMTT, Ministry of Education, Govt. of India and SGTB Khalsa College, University of Delhi, New Delhi.
15. Attended one day (August 12, 2021) National webinar on "**Miraculous herbal plants against microorganisms"** conducted by K.R. College of Arts and Science, Kovilapatti-628503.Taminlnadu.
16. Attended one day (July 8, 2021) National webinar on "**My Life with Rocket Science"** conducted by Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi.
17. Attended a talk (March 24, 2021) on "**Newer Approaches in Tuberculosis Diagnosis***"* on **World Tuberculosis Day** conducted by Department of Microbiology and Department of Physiology, Institute of Home Economics, University of Delhi, New Delhi.
18. Attended a talk (July 25, 2020) on "**Initiatives of BIRAC and National Biopharma Mission in the Biopharma Sector and in current Covid-19 Pandemic"** conducted by Department of Microbiology Bhaskaracharya College of Applied Sciences, University of Delhi, New Delhi.
19. Attended one day (May 29, 2020) National webinar through Zoom on "**Fighting Pandemics with Artificial Intelligence**". Organized by Department of Microbiology, Gargi College, University of Delhi, New Delhi.
20. Attended one day (May 23, 2020) National webinar through Zoom on "**Intellectual Property Right – A Kaleidoscope of Opportunity**". Organized by Department of Microbiology, Gargi College, University of Delhi, New Delhi.
21. Attended one day (May 23, 2020) National webinar through Zoom on "**Staying Centered with Mediation and Pranayam**". Organized by Department of Physical Education and Sports Sciences, Gargi College, University of Delhi, New Delhi.
22. Attended one day (May 21, 2020) National webinar through Zoom on "**Open Educational Resources**". Organized by Department of Chemistry, Gargi College, University of Delhi, New Delhi.
23. Attended one day (May 9, 2020) webinar through Zoom on "**COVID-19: Managing challenges and exploring opportunities**". Organized by Add on Courses Committee, Gargi College, University of Delhi, New Delhi.
24. Attended one day (Feb 22, 2020) National Seminar on "**CRISPR-Cas as an emerging tool for genome editing**". Organized by Department of Biotechnology, IMS Engineering College, Ghaziabad. UP.
25. Attended two days (March 29th to 30th 2019) Faculty Development Programme (FDP) on "**Writing Research Proposals and Addressing IPR Related Issues**", Organized by Research & IPR Cell, Ram Lal Anand College, University of Delhi, New Delhi.

26. Attended five days (March 15-19, 2019) Faculty Development Programme (FDP) on "**Quality Assurance in HEs: Reorienting Teaching-Learning Paradigm**", Jointly organized by IQAC of Ram Lal Anand College and SGND Khalsa College, University of Delhi, New Delhi.

27. Attended one day (February 1st, 2019) National Seminar on "**Probiotics: Ameliorating the Burden of Lifestyle Disorders**", Organized by Department of Microbiology, Ram Lal Anand College, University of Delhi in association with Probiotic Association of India, New Delhi.

28. Attended two days (May 8-9, 2018) "**Star College Scheme- 2nd DBT Task force meet**" Organized by Gargi College, University of Delhi, New Delhi.

29. Attended 2 days (May 26-27, 2016) symposium on "**Recent advances in biomedical research: strategies and innovation**" organized by All India Institute of Medical Sciences (AIIMS), New Delhi.

30. Attended 1 day (April 30, 2016) World Immunology Day symposium on "**Immuno-Prophylaxis and Immunotherapy-New era in the War of Diseases**" organized by Indian Immunology Society & Department of Biochemistry, AIIMS, New Delhi.

31. Attended 3 days (July 2-4, 2009) National workshop on "**Advances in aquaculture & fisheries perspectives, prospects and challenges**" organized during ILDEX India at Pragati Maidan, New Delhi.

Submission of nucleotides sequences and protein 3-D models

1. More than 100 complete/partial nucleotide sequences of ribosomal genes of fishes including wild-type and synthetic genes from bacteria and viruses have been submitted to **NCBI-GenBank** (http://www.ncbi.nlm.nih.gov/nuccore/?term=mani+i).

2. More than 100 protein 3-dimensional (3-D) models have been generated using homology modeling and submitted to protein database **PMDB** (http://srv00.recas.ba.infn.it/PMDB/).

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and sustainability, Croatian Journal of Fisheries, Current Synthetic and Systems Biology.

Professional Memberships

1. Member of the American Federation of Medical Research (AFMR in 2013), USA.
2. Member of the American Association for the Advancement of Science (AAAS in 2012), USA.
3. Member of the American Heart Association (AHA in 2013), USA.
4. Life member of the Indian Network for Soil Contamination Research (INSCR), Delhi, India.
5. Life member of the Indian Science Congress Association (ISCA), Kolkata, WB, India.
6. Life member of Aquatic Biodiversity and Conservation Society (ABCS), Lucknow, UP, India.

Professional Training

1. Attended one day "**Blood borne Pathogens Training, Hazard Communication – GHS Training and Chemical Information Training** on May 15, 2013 sponsored by the Tulane University's Office of Environmental Health and Safety, New Orleans, LA, USA.
2. Attended one day "**Rodent training module workshop**" on January 26, 2012, sponsored by the Department of Comparative Medicine, School of Medicine, Tulane University, New Orleans, LA, USA.
3. Attended one day "**Hazardouswaste 11 Training"** on October 25, 2011, sponsored by the Tulane University's Office of Environmental Health and Safety, New Orleans, LA, USA.
4. Attended one day "**Radiation Protection Training"** on September 28, 2011, sponsored by the Department of Biophysics, School of Medicine, Tulane University, New Orleans, LA, USA.

Language & Skills

Hindi, Sanskrit

References

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