

**Dr. M.N. KATHIRAVAN**, M.Sc., M.Phil., Ph.D., PDF (South Korea)., DMLT., PGDBI.  
 Department of Biotechnology,  
 Dr. NGP Arts and Science College,  
 Coimbatore - 641048.  
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## Education

Degree	Specialization	Year of Awarded
PGDBI.	<b>Bioinformatics</b> <b>Department of Biotechnology</b> Bharathiar University, Coimbatore, India	(Jun' - 2024)
Post-Doctoral Fellow (PDF).,	<b>Microbial Biotechnology Lab,</b> <b>Chosun University,</b> Gwangju, Republic of South Korea.	(Mar' - 2013)
Ph.D.,	<b>Microbial Biotechnology</b> <b>Anna University,</b> Chennai, India.	(Dec' - 2010)
M.Phil.	<b>Biotechnology</b> <b>Department of Biotechnology,</b> Bharathidasan University, Trichirappalli, India.	(Aug' - 2008)
M.Sc.	<b>Biochemistry</b> <b>Department of Biochemistry</b> Bharathidasan University, Trichirappalli, India.	(Aug' - 1998)
B.Sc.	<b>Plant Biology &amp; Biotechnology (Botany)</b> <b>Department of Botany,</b> University of Madras, Chennai, India.	(Jun' - 1996)
DMLT.	<b>Diploma in Medical Laboratory Technology,</b> AIIMT, Kolkatta, India.	(Dec' - 2002)

## Certificate Courses

SWAYAM	<b>Technology Enabled Learning - NITTTR, Chennai.</b>	(Oct' - 2022)
SWAYAM	<b>Academic Writing - CEC, Delhi.</b>	(Oct' - 2022)
SWAYAM	<b>ICT Skills in Education - CEC, Delhi.</b>	(Oct' - 2022)
NPTEL	<b>Training of Trainers - IIT, Roorkee.</b>	(Oct' - 2022)
NPTEL	<b>Body Language: Key to Professional Success - IIT, Roorkee.</b>	(Oct' - 2022)
NPTEL	<b>Psychology of Everyday - IIT, Kanpur.</b>	(Sep' - 2022)
NPTEL	<b>Accreditation and Outcome Based Education - IIT, Kharagpur.</b>	(Oct' - 2022)
SWAYAM	<b>Quality Assurance through NAAC Accreditation Process - NITTTR, Chennai.</b>	(Feb' - 2022)
SWAYAM	<b>Intellectual Property - CEC, Delhi.</b>	(Feb' - 2022)
NPTEL	<b>Outcome Based Pedagogic Principles for Effective Teaching - IIT, Kharagpur.</b>	(Mar' - 2022)
NPTEL	<b>Enhancing Soft Skills and Personality - IIT, Kanpur.</b>	(Mar' - 2022)
NPTEL	<b>Introduction to Research - IIT, Madras.</b>	(Mar' - 2022)
NPTEL	<b>Cell Culture Techniques - IIT, Kanpur.</b>	(Sep' - 2021)
NPTEL	<b>Intellectual Properties - IIT, Madras.</b>	(Apr' - 2021)
NPTEL	<b>Patent Law for Engineers and Scientists - IIT, Madras.</b>	(Apr' - 2021)
NPTEL	<b>Patent Drafting for Beginners- IIT, Madras.</b>	(Feb' - 2021)
NPTEL	<b>Tissue Engineering - IIT, Madras.</b>	(Nov' - 2020)

## **TEACHING EXPERIENCE**

<b>Dec' 2019 - Till Date</b>	<b>Professor,</b> PG & Research Department of Biotechnology, Dr. NGP Arts and Science College, Coimbatore - 641048.
<b>June'-2018 - Oct'2019</b>	<b>Head,</b> <b>Department of Biotechnology,</b> AJK College of Arts & Science, Palakkad Main Road, Navakkarai, Coimbatore.
<b>Mar'-2013 - Jun'-2018</b>	<b>Research Professor,</b> <b>Department of Environmental Engineering,</b> Chosun University, Gwangju, Republic of South Korea.
<b>July- 2010 - Feb'-2012</b>	<b>Assistant Professor,</b> <b>PG &amp; Research Department of Biochemistry,</b> Mohamed Sathak College of Arts & Science, Sholiganallur, Chennai, India.
<b>June-2004 - May-2007</b>	<b>Senior Lecturer &amp; Head,</b> <b>Department of Biotechnology,</b> Karpaga Vinayaga College of Engineering & Technology (KVCET), Maduranthagam, Chennai, Tamil Nadu, India.
<b>June-1999 - June-2004</b>	<b>Lecturer &amp; Head,</b> <b>Department of Biochemistry,</b> Dr. M.G.R Chokkalingam College of Arts & Science, Arani, Tamil Nadu. India.

## **RESEARCH EXPERIENCE**

Mar' 2012 - Feb' 2013	<b>Postdoctoral Research Fellow (Post-Doc),</b> <b>Environmental Microbiology Lab,</b> Department of Environmental Engineering, Chosun University, Gwangju, Republic of South Korea.
Oct' 2007 - Sep' 2010	<b>UGC-JRF (Science Meritorious Students Fellowship Award)</b> <b>Biochemical Engineering Lab,</b> A.C. College of Technology, Anna University Chennai, India.
June' 2007 - Oct' 2007	<b>TEQIP - Fellow</b> A.C. College of Technology, Anna University Chennai, India.

## **FELLOWSHIPS, HONORS, AWARDS & OTHER ACADEMIC SERVICES**

2024	"NPTEL Enthusiast Award - 2024", by - IIT - Madras.
2022	"India Top 100 Professors Winner - 2022", by - India Prime Awards 2022, Delhi.
2022	"NPTEL Believer Award by - IIT, Madras.
2022	"Education Leadership Award - 2022", by - Glantor X Education Leadership Awards 2022.
2022	"Appreciation and Active Participation in One Day One Unit Blood Donation Campaign" by - Rotary Club of Coimbatore Meridian" RI Dist - 320, Coimbatore.
2022	"NPTEL Motivated Learner (STAR Performer) by - IIT, Madras.
2013- 2018	Chosun University Research Foundation (CURF) Grant for Research Assistant Professor, Gwangju, Republic of South Korea.
2013	Young Scientist Award, Chonbuk National University, Jeonju, Republic of South Korea.
2012-2013	National Research Foundation (NRF) Post Doctoral Research Fellowship (PDF), Republic of South Korea.
2008 - 2011	Question Paper setting Member for B.Tech & M.Tech Biotechnology, Anna University - Chennai Anna University - Thirunelveli
2007 - 2010	Laboratory in-charge for Sophisticated lab (Instruments: HPLC, GC, AAS, FTIR, SEM-EDX) at Department of Chemical Engineering, A.C. Tech campus, Anna University Chennai, India.
2005 - 2007	100% pass percentage cash award (Five subjects).

2007	Organizing Chairman for “BLAZE’ 2007”, A National Conference on Biotechnology Budding Researchers.
2005 - 2006	Best Department (Biotechnology) of the Year at Karpaga Vinayaga College of Engineering & Technology, Chennai, India.
2004 - 2007	Anna University Representative (AUR)
1996 – 1998	University 10 <sup>th</sup> Rank at PG level.

#### **Administrative Responsibility - Current**

<b>Coordinator</b>	DST-FIST - (Under Dean - R&D)
<b>Coordinator</b>	Research Advisory Committee - (Under Dean - R&D)
<b>Coordinator</b>	BT - Department IQAC - (Under Dean - Academics)
<b>Member</b>	R&D - (Under Dean - R&D and Faculty of Biological Sciences)
<b>In-charge</b>	Chemicals Purchase & Register Maintenance (Under HoD/BT)
<b>BoS Member</b>	Department of Biotechnology, DrNGPASC

#### **Administrative Responsibility (Total Administrative Experience – 15 Years)**

Head,	Department of Biotechnology	2018 to Oct’2019
Research Group in-charge	Microbial Biotech Lab (Chosun University, Korea)	2012 to 2018
Head	Department of Industrial Biotechnology	2004 to 2007
Head,	Department of Biochemistry	1999 to 2004
Member	Academic Council Team	2018 to Oct’2019
Expert Member	IQAC	2018 to Oct’2019
Committee member	NAAC	2018 to Oct’2019
Co Coordinator	Research Scholar Forum	2018 to Oct’2019
Member	Intellectual Property Rights (IPR) Cell	2018 to Oct’2019
Member	Sports Committee	2018 to Oct’2019
Member	Library Committee	2018 to Oct’2019
Member	Ragging Curb Committee	2018 to Oct’2019
Co Coordinator	ICT	2018 to Oct’2019
Convener	Higher Education Scholarship	2018 to Oct’2019
Editor-in- Chief	Biotech - Newsletter	2018 to Oct’2019
Faculty President	“BioinGENEnio”	2018 to Oct’2019
Founder	“BioinGENEnio” Mushroom Cultivation Centre (BMCC)	2018 to 2019

#### **Programs Organized (June’ 2018 - Aug’ 2019)**

- Invited Talk on “Papain Enzyme Manufacturing and Applications”
- Invited Talk on “Cost Effective Mushroom Cultivation, Processing, and Value Addition’
- Guest Lecture on “Recent Advancements in Anti-Rabies Vaccine Production”
- Workshop: “Two Days Hands-on Training for Tribal Women on Milky and Oyster Mushroom Production”
- Guest Lecture on “Recent Advancements in Microbial Biotechnology”
- Guest Lecture on “Carbohydrate polymers in Targeted Drug Delivery”
- Guest Lecture on “Opportunities in Life Sciences”
- Association of Biotechnology started and actively inaugurated: “**BioinGENEnio**”
- Started “**BioinGENEnio Mushroom Cultivation Centre**” (BMCC)

#### **MoU signed (June’ 2018 - Aug’ 2019)**

- **Mar’ 2019 - Department of Biotechnology** with **Saveetha Institute of Medical & Technical Sciences (SIMATS)**, Chennai.
- **May’ 2019 - Department of Biotechnology** with **SynkroMax Biotech Private Limited**, SIDCO Industrial Estate, Thirumazhisai, Chennai, Tamil Nadu 600124.
- **Aug’ 2019 - Department of Biotechnology** with **Nature Agro Future Tech (NAFT)**, Palakkad, Kerala.
- **Aug’ 2019 - Department of Biotechnology** with **Senthil Papain & Food Products Pvt., Ltd.**, Veerapanur, Coimbatore.

## **TEACHING SKILLS: COURSE TAUGHT**

B.Sc., M.Sc., M.Phil., Ph.D., B.Tech., & M.Tech – Biochemistry, Biotechnology, Chemical Engineering, Environmental Science and Technology

## **SYNERGISTIC ACTIVITIES**

### **Editorial Board Member**

- American Journal of Biochemistry and Molecular Biology
- International Journal Biological Chemistry
- Research Journal of Phytochemistry
- Research Journal of Nanoscience and Nanotechnology
- Research Journal of Environmental Toxicology

### **Professional Journal Peer Reviewer**

- Journal of Hazardous Materials
- Process Biochemistry
- Clean - Water, Air and Soil
- The Journal of Canadian Journal of Chemical Engineering
- Nanoletters Research
- Environmental Progress & Sustainable Energy
- Cleaner Production
- African Journal of Microbiological Research
- Journal of Agricultural Research and Development
- Journal of Microbiological Research
- Research Journal of Phytochemistry
- Pathology & Infectious Diseases

## **MEMBERSHIP IN PROFESSIONAL BODIES**

May'2020-Dec'2022	Institute For Engineering Research and Publication (IFERP)
Jan'2008 - Present	International Association of Engineers (IAENG)
May'2012 - Present	Federation of Korean Microbiological Societies (FKMS)
May'2012 - Present	Korean Society for Microbiology and Biotechnology (KMB)
Jan'2013 - Present	Korean Society of Food Science and Technology (KoSFoST)
Jan'2013 - Present	Korean Society for Applied Biological Chemistry (KSABC)
Apr'2013 - Present	Korean Society for Biotechnology and Bioengineering (KSBB)
Jun'2013 - Present	Microbiological Society of Korea (MSK)

## **DISSERTATION TOPICS**

- Ph.D:** "Microbial Chromium Reduction Using Free and Immobilized *Bacillus* sp."
- M.Phil:** "Comparative Analysis of Extracellular Alkaline Protease Production from *Bacillus* sp., and *Pseudomonas* sp.,"
- M.Sc:** "Effect of Rifampicin on SGOT, SGPT, ALP & ASP on Drug Induced Mice"

## **PROJECTS SUPERVISED**

### **M.Sc., Biotechnology & Biochemistry**

- *Agrobacterium* mediated transformation of *Tospovirus* resistant gene in Tobacco (*Nicotina tabacum*) plant.
- Cloning, expression and characterization of thermophilic lipase (Tslip) gene from *Geobacillus thermoleovorans* KL3.
- Genetic manipulation of tomato plant with *Annexin* gene through *Agrobacterium* mediated transformations.
- RFLP finger printing analysis of the microbial diversity of *Rhizobacteria* associated with system of rice intensification (SRI) and their biocontrol potential.
- Cloning and over expression of *Nuo-G* gene.
- A prelude *Salmonella* vaccine study by using SDS-PAGE.
- Isolation, characterization and purification of detergent resistant protease from *Vibrio alginolyticus*.
- Isolation and Identification of Novel Chitinase Producing bacterial species Korean Yellow Loess Agricultural soils.
- Studies on isolation and fusion of protoplast from *Aspergillus falvus* and *Aspergillus nidulans*.
- Production, isolation and characterization of *protease* from *Aspergillus niger* under solid state fermentation (SSF) using agro and dairy wastes.

### **B.Tech., Biotechnology**

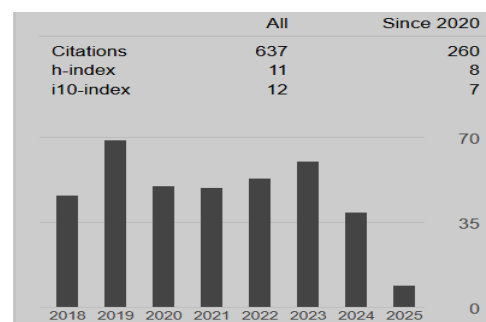
- Industrial production of Rifampicin b and its optimization by *Amycolaptosis mediterrani*.
- Separation and identification of plant pigments by using different solvents in column chromatographic techniques.
- A study of biochemical changes in Endosulfan treated snack head cat fish (*Channa punctata*).
- Antioxidant potential and antimicrobial activity of *Solanum melongena* and pseudo stem of *Musa paraadisica*.
- Production, purification and characterization of laccase from *Bacillus subtilis*.
- Effect of mutagenesis on microorganisms in responsible for biodegradation of textile wastewater.
- Biosorption of Ni, Hg and Cd by free and immobilized *Cunninghamia echinulata* in *Luffa cylindrica* (Loofa sponge).
- Biodiesel production using marine microalgal species.
- Effect of Sodium chloride and house hold synthetic detergent on *Spirulina platensis*.

### **Metagenomic library from Korean Yellow Loess Agricultural Soils (KYLAS)**

- |  |                                     |
|--|-------------------------------------|
| • <i>Acetobacter orleanensis</i> strain DrNGPASC-BT001   | (GenBank No. - ON077357)            |
| • <i>Pantoea</i> sp. strain DrNGPASC-BT003               | (GenBank No. - ON077507)            |
| • <i>Bacillus cereus</i> strain DrNGPASC-BT008           | (GenBank No. - ON137232)            |
| • <i>Pseudomonas aeruginosa</i> strain DrNGPASC-BT010    | (GenBank No. - ON130974)            |
| • Uncultured <i>Leifsonia</i> bacterium clone KYLS1-05   | (GenBank No. - KF031066)            |
| • Uncultured <i>Chloroflexi</i> bacterium clone KYLS2-27 | (GenBank No. - KF031067)            |
| • Uncultured bacterium clone KYLS3-50                    | (GenBank No. - KF031068)            |
| • Uncultured <i>Acetobacterium</i> sp. clone KYLAS – 1   | (GenBank No. - KM114273)            |
| • Uncultured <i>Paenibacillus</i> sp. clone KYLAS – 4    | (GenBank No. - KM114274)            |
| • Uncultured <i>Acinetobacter</i> sp. clone KYLAS 6-2    | (GenBank No. - KM114275)            |
| • Uncultured <i>Duganella</i> sp. clone KYLAS – 6        | (GenBank No. - KM114276)            |
| • Uncultured <i>Sulfitobacter</i> sp. clone KYLAS 8      | (GenBank No. - KM114277)            |
| • Uncultured <i>Ralstonia</i> sp. KYLAS 8-2.1            | (GenBank No. - KM114278)            |
| • Uncultured <i>Arthrobacter</i> sp. clone KYLAS 9       | (GenBank No. - KM114279)            |
| • Uncultured <i>Brevibacterium</i> sp. clone KYLAS 9-4   | (GenBank No. - KM114280)            |
| • Uncultured <i>Flavobacterium</i> sp. clone KYLAS 9.7   | (GenBank No. - KM114281)            |
| • <i>Bacillus licheniformis</i> strain KYLS-CU01         | (GenBank No. - KF111800)            |
| • <i>Bacillus licheniformis</i> strain KYLS-CU02         | (GenBank No. - KF111801)            |
| • <i>Bacillus subtilis</i> strain KYLS-CU03              | (GenBank No. - KF111802)            |
| • <i>Bacillus</i> sp. KYLS-CU05                          | (GenBank No. - KF111803)            |
| • <i>Alloactinosynnema</i> sp. KYLS-CU07                 | (GenBank No. - KF111804)            |
| • <i>Cohnella</i> sp. KYLS-CU08                          | (GenBank No. - KF111805)            |
| • <i>Geobacillus thermoleovorans</i> strains KL3         | (GenBank No. - KC952053)            |
| • <i>Streptomyces</i> sp. KL4                            | (GenBank No. - KC952054)            |
| • <i>Geobacillus thermoleovorans</i> KL3 (tslip gene)    | (Locus Accession Number – HF955514) |

## JOURNAL PUBLICATIONS: Scopus (SCI/SCIE) UGC-CARE

Particulars	Ranking/Score
<b>Total Impact Factor</b>	<b>125.66</b>
<b>Total citations</b>	<b>637</b>
<b>h-index</b>	<b>11</b>
<b>i10-index</b>	<b>12</b>



Google Scholar Link:

<https://scholar.google.com/citations?user=GN43qlkAAAAJ&hl=en&authuser=1>

S.No.	Title of the Research Article	Indexed in	ISSN	Impact Factor (IF)
1.	<b>Mathur Nadarajan Kathiravan</b> , 2025, "Plant Leaf Disease Detection and Crop Yield Improvement Using a Hybrid Machine Learning Framework", <i>IEEEExplore</i> , (Accepted).	Scopus	1803-7232.	-
2.	Kanchana, K., Anoop, K.J., Vinod, V.P. K. K. Kavitha & <b>Mathur Nadarajan Kathiravan</b> , 2025. "Electromagnetic shielding effectiveness of surface modified porous watermelon rinds biochar nutmeg short fibre reinforced lightweight vinyl ester biocomposite". <i>J Mater Sci: Mater Electron</i> <b>36</b> , 830.	Scopus/ SCIE	0957-4522	2.8
3.	<b>Mathur Nadarajan Kathiravan</b> , 2024, "Precision Agriculture with Wireless Sensor Networks Using a Hybrid K-Means-DNN Model for Efficient Irrigation", <i>IEEEExplore</i> , (Accepted).	Scopus	1803-7232.	-
4.	<b>Mathur Nadarajan Kathiravan</b> , 2024, "IoT-Integrated Graph Convolutional Networks and LSTM Models for Smart Plant Growth Monitoring in Controlled Environment Agriculture", <i>IEEEExplore</i> , (Accepted)	Scopus	1803-7232.	-
5.	<b>Mathur Nadarajan Kathiravan</b> , 2024, "Leveraging IoT & CNN-CBAM for Early Blight Detection and Optimal Fungicide Application in Potato and Tomato Crops", <i>IEEEExplore</i> , (Accepted)	Scopus	1803-7232.	-
6.	<b>Mathur Nadarajan Kathiravan</b> , 2023, "Deep Learning Methods and Integrated Digital Image Processing Techniques for Detecting and Evaluating Wheat Stripe Rust Disease", <i>The Scientific Temper</i> , Vol. 14 (3), 864-869.	Web of Science	0976-8653	-
7.	<b>Mathur Nadarajan Kathiravan</b> , 2023, "Soil Analysis and Classification to Improve the Crop Yield in Agriculture Using Fast Graph - CRNN Approach", <i>IEEEExplore</i> , 98 - 104.	Scopus	1803-7232.	-
8.	<b>Mathur Nadarajan Kathiravan</b> , 2023, "Integrating Technology for Sustainable Agriculture: Enhancing Crop Productivity while Minimizing Pesticide Usage using Image Processing & IoT", <i>IEEEExplore</i> , 462 - 468.	Scopus	1803-7232.	-
9.	<b>Mathur Nadarajan Kathiravan</b> , 2023, "An Intelligent Method for Predicting Skin Disease using OM-Extreme Learning Machine", <i>IEEEExplore</i> , 1241 - 1246.	Scopus	1803-7232.	-
10.	<b>Mathur Nadarajan Kathiravan</b> , 2023, "BERT-BiGRU-CRF Application in Insulin Dosage Monitoring System for Control of Blood Glucose Levels in Type 2 Diabetic Patients", <i>IEEEExplore</i> , 755 - 760.	Scopus	1803-7232.	-
11.	Selvakumar Sakthivel, Anand Raj Dhanapal, Radha Palaniswamy, Soundarya Dhandapani, <b>Mathur Nadarajan Kathiravan</b> , 2022, "Biodegradation of endosulfan - An chlorinated cyclodiene pesticide by Indigenous <i>Pseudomonas</i> sp. MSCAS B1". <i>Applied Biochemistry and Biotechnology</i> , 194(6):2747-2761. T0	Scopus SCIE	0273-2289	3.094
12.	<b>Mathur Nadarajan Kathiravan</b> , Geun Ho Gim, Jaewon Ryu, Pyung Il Kim, Chul Won Lee, & Si Wouk Kim, 2015. "Enhanced method for microbial community DNA extraction and purification from agricultural yellow loess soil". <i>Journal of Microbiology</i> , 53, 11 & 767-775. (DOI: 10.1007/s12275-015-5454-0)	Scopus SCI	1225-8873	3.422
13.	<b>Mathur Nadarajan Kathiravan</b> , Geun Ho Gim, Jaewon Ryu, Gui Hawn Han, and Si Wouk Kim, 2015, "Evaluation of Steady State and Unsteady State Mass Transfer Rate of Cr(VI) in Immobilized <i>Bacillus</i> sp.". <i>Biotechnology and Bioprocess Engineering</i> , 20, 2 & 267-275. (DOI: 10.1007/s12257-014-0689-x)	Scopus SCIE	1226-8372	3.386

14.	<b>Mathur Nadarajan Kathiravan</b> , Siluvai Antony Praveen, Geun Ho Gim, Gui Hawn Han, Si Wouk Kim, 2014, "Biodegradation of Methyl Orange by alginate-immobilized <i>Aeromonas</i> sp. in a packed bed reactor: external mass transfer modeling", <b>Bioprocess and Biosystems Engineering</b> , 37, (11) & 2149-2162. (DOI: 10.1007/s00449-014-1192-7)	Scopus SCIE	1615-7591	3.434
15.	Sivarajan Meenatchisundaram, Murugan Devaraj, Chockalingam Lajapathi Rai, <b>Kathiravan Mathur Nadarajan</b> , 2014, "An integrated approach for enhanced textile dye degradation by pre-treatment combined biodegradation", <b>Clean Technologies and Environmental Policy</b> , 16, 501-511.( DOI: 10.1007/s10098-013-0649-8)	Scopus SCIE	1618-9558	4.700
16.	Geun Ho Gim, Jung Kon Kim, Hyeon Seok Kim, <b>Mathur Nadarajan Kathiravan</b> , Hetong Yang, Sang-Hwa Jeong, Si Wouk Kim, 2014, "Comparison of biomass production and total lipid content of freshwater green microalgae cultivated under various culture conditions", <b>Bioprocess and Biosystems Engineering</b> , 37:99–106. (DOI: 10.1007/s00449-013-0920-8)	Scopus SCIE	1615-7591	3.434
17.	<b>Mathur Nadarajan Kathiravan</b> , Ramalingam Karthick and Karuppan Muthukumar, 2011, "Ex-situ Bioremediation of Cr(VI) Contaminated Soil by <i>Bacillus</i> sp.: Batch and Continuous Studies", <b>Chemical Engineering Journal</b> , 169, (1-3), 107-115. (DOI: 10.1016/j.cej.2011.02.060)	Scopus SCI	1385-8947	16.744
18.	<b>Mathur Nadarajan Kathiravan</b> and Karuppan Muthukumar, 2011, "Ultrasound mediated reduction of Cr(VI) using Sludge obtained during electrocoagulation". <b>Environmental Technology</b> , 32 (13), 1523-1531. (DOI: 10.1080/09593330.2010.543928)	Scopus SCI	0959-333	3.475
19.	Raman Srinivasan, <b>Mathur Nadarajan Kathiravan</b> and Kannappan Panchamoorthy Gopinath, 2011, "Degradation of Tectilon Yellow 2G by Hybrid Technique: Combination of Sonolysis and Biodegradation Using Mutant <i>Pseudomonas putida</i> ", <b>Bioresource Technology</b> , 102, (3), 2242-2247. (DOI: 10.1016/j.biortech.2010.10.022)	Scopus SCI	0960-8524	11.889
20.	Kannappan Panchamoorthy Gopinath, <b>Mathur Natarajan Kathiravan</b> , Raman Srinivasan and Subramanian Sankaranarayanan, 2011, "Evaluation and Elimination of Inhibitory Effects of Salts and Heavy Metal Ions on Biodegradation of Congo red by <i>Pseudomonas</i> sp. Mutant", <b>Bioresource Technology</b> , 102, (4), 3687-3693. (DOI: 10.1016/j.biortech.2010.11.072)	Scopus SCI	0960-8524	11.889
21.	Ravichandran Ashwin, Krishnaswamy Sethurajan Athinthra, Mani Sriramvignesh, <b>Mathur Nadarajan Kathiravan</b> and Kannappan Panchamoorthy Gopinath, 2011, "Treatment of Textile Effluent Using SBR with Pre and Post Treatment: Kinetic Modeling, Simulation and Optimization of Process Time for Shock Loads", <b>Desalination</b> , 275(1-3), 203-211. (DOI: 10.1016/j.desal.2011.03.002)	Scopus SCI	0011-9164	11.211
22.	<b>Mathur Nadarajan Kathiravan</b> , Ravikumar Karthiga Rani, Ramalingam Karthick, Karuppan Muthukumar, 2010, "Mass transfer studies on the reduction of Cr(VI) using calcium alginate immobilized <i>Bacillus</i> sp. in packed bed reactor". <b>Bioresource Technology</b> , 101, (3), 853 - 858. (DOI: 10.1016/j.biortech.2009.08.088)	Scopus SCI	0960-8524	11.889
23.	<b>Mathur Nadarajan Kathiravan</b> , Ramalingam Karthick, Naggapan Muthu, Karuppan Muthukumar & Manickam Velan, 2010, "Sonoassisted Microbial Reduction of Chromium". <b>Applied Biochemistry and Biotechnology</b> , 160, (7), 2000 - 2013. (DOI: 10.1007/s12010-009-8716-7)	Scopus SCI	0273-2289	3.094
24.	Gayathiri G S, Raveena Devi S, Gowtham G and <b>Mathur Nadarajan Kathiravan</b> . Medicinal important and pharmacological study of <i>Phyllanthus maderaspatensis</i> : Review. <b>GIS SCIENCE JOURNAL</b> , Vol 8, No. 6, pp. 1003 – 1015. 2021.	UGC- CARE	1869-9391	-
25.	Gowtham G, Gayathiri G S, Mohan P, and <b>Mathur Nadarajan Kathiravan</b> . Economic and Medicinal Importance of <i>Ulva</i> sps. – An Overview. <b>GIS SCIENCE JOURNAL</b> , Vol 8, No. 7, pp. 105 – 116. 2021.	UGC- CARE	1869-9391	-

## **SELECTED NATIONAL PEER REVIEWED JOURNAL PUBLICATIONS**

### **TITLE OF THE PAPER**

E.S. Sangeethapriya, **Kathiravan M.N.**, 2024, "Studies on Bioaccumulation of Cr(VI) Using *Rhizopus oryzae*: Optimization by Response Surface Method", **International Journal of Biological Sciences. (Submitted)**

**Mathur Nadarajan Kathiravan**, 2019, "Acid Xylanase Production from Low Cost Solid State Fermentation Medium", **Journal of Emerging Technologies and Innovative Research, Accepted, March' 2019, Vol.6 (3).**

**Mathur Nadarajan Kathiravan** and Si Wouk Kim, 2013, Synthesis, Characterization and Evaluation of antimicrobial efficacy of silver nanoparticles using *Paederia foetida* L., leaf extract, **International Research Journal of Biological Sciences**, 2, (3), 28-34.

A.Purushothaman, Thabraz Ahmad, P.Meenatchi, **M.N.Kathiravan**, M.Shahjahan, 2012, Combined effects of *Solanum trilobatum* and *Solanum melongena* against  $\beta$ - galactosamine induced hepatic damage in rats with referenSce to marker enzymes and antioxidants status, **BioChemistry: An Indian Journal**, Volume, (6), issue 2.

Meenatchi. P, Purushothaman. A, Deepalakshmi. J, **Kathiravan. M.N** and Shahjahan. M, 2011, "Protective Effect of *Hibiscus* Polyphenol-Rich Extract Against H<sub>2</sub>O<sub>2</sub> Induced Oxidative Damage of Human Erythrocytes", **Journal of Cell and Tissue Research (JCTR)**, 11(1), 2545-2550.

Purushothaman, A., Meenakshi, P., **Kathiravan, M.N.**, Shahjahan, M., and Deepalakshmi, J, 2011, Investigation of Cadmium and Lead induced phytotoxicity on seed germination, seedling growth and antioxidant metabolism of chick pea(*Cicer arietinum* L.), **International Journal of Current Research (IJCR)**. 3 (6), 18-23.

M.J. Mohamed Hanifa Sarjoon, P. Meenatchi, **M.N. Kathiravan**, M. Shahjahan and A. Purushothaman, 2011. "Optimization of operating parameters and kinetic studies on removal of hexavalent chromium from aqueous solutions using *Citrus lelimetta* peel biomass", **International Journal of Environmental biology (IJEB)**. 1(2): 8-14.

Saratha, K., M. Packirisamy, **M.N. Kathiravan** and A. Purushothaman, 2012. Isolation and characterisation of Cr(VI) reducing *Bacillus* sp. from tannery effluents contaminated soil and its potential use in bioremediation of chromium containing wastewater. **J. Modern Sci.** (J. Tamil Nadu State Council Higher Educ.), 4: 24-35.

## **BOOK PUBLICATION**

1. **Dr. M.N. Kathiravan**, Dr. Arun P & Dr. P. Chidambara Rajan, 2025, "**International Conference on Integrating Indian Knowledge Systems (IKS) with Cutting-Edge Biotechnology and Innovative Technologies to Achieve Sustainable Development Goals (ICONIKS-BIOTECH 2025)**" Inam Pathippagam, Tamil Nadu (ISBN: 978-93-95137-30-0).
2. **Dr. M.N. Kathiravan**, Dr. M. Shanmugavadivu, Dr. K. Kalimuthu, Dr. P. Chidambara Rajan & Dr. M.A. Shibu, 2024, "**AI, ML and IoT for Sustainable Smart Agriculture Practices**", Cosmas Scientific Publications, India (ISBN: 978-936-0965-03-7).
3. **Dr. M.N. Kathiravan**, 2024, "**AI and ML in Biotechnology: Revolutionizing Genomics and Drug Discovery**", Vinsa Publishing Company, India.
4. Dr. K. Kalimuthu, **Dr. M.N. Kathiravan**, Dr. P. Chidambara Rajan & Dr. M. Shanmugavadivu, 2024, "**Modern Plant Tissue Culture: Concepts, Techniques and Innovations (From Lab to Land)**", Thanuj International Publications, India (ISBN: 978-939-4638-40-2).
5. **Dr. M.N. Kathiravan**, Dr. M. Shanmugavadivu, Dr. P. Chidambara Rajan, Dr. Arun P & Ms. K. Thilagavathi, 2024, "**Medicinal Phytochemicals: Exploring Nature's Pharmacy**", Inam Pathippagam, Tamil Nadu (ISBN: 978-939-5137-80-5).



6. **Dr. M.N. Kathiravan**, Dr. P. Chidambara Rajan, Ms. B. Abivarshini & Ms. Oviya Gouthaman, 2023, **"Genomics for Next Generation: A MCQ Companion for Students and Professionals"**, Dharshan Publishers, India (ISBN: 978-938-6739-67-4).
7. **Dr. M.N. Kathiravan**, Dr. Arungandhi, Dr. Arun P, Dr. M. Shanmugavadivu & Ms. Thilagavathi, 2023, **"Green Engineering and Environment Sustainability"**, Cosmas Scientific Publishers, India (ISBN: 978-811-9359-15-8).
8. Thilagavathi K, Aarthi CR, Shanmugavadivu M & **M. N. Kathiravan**, 2023, **"Extraction, Identification, Evaluation of Antioxidant and Antimicrobial Activity of Pomegranate Peel Pigments"**, I I P Iterative International Publishers, India (ISBN: 978-935-7477-93-2).
9. Thilagavathi K, Abivarshini B, Oviya Gouthaman, Akileshwaran K & **M. N. Kathiravan**, 2023, **"Biodegradation of Polyethylene (PE) by Novel Marine Aeromonas sp. PED-MB01"**, I I P Iterative International Publishers, India (ISBN: 978-935-7477-93-2).
10. Dr. R. E. Ugandar, Mr. Imran Khan, **Dr. M. N. Kathiravan** & Dr. M. Shanmugavadivu, 2023, **"A Textbook of Fundamentals of Research Methodology and Statistics"**, J.K Publisher, India (ISBN: 978-811-9140-06-0).
11. **Dr. M. N. Kathiravan**, Mr. M. Mohammed Saindhavi, Dr. P. Chidambara Rajan & Dr. K. Arungandhi, 2023, **"A Textbook of Biomaterials and Artificial Organs"**, J.K Publisher, India (ISBN: 978-819-6213-35-0).
12. Dr. Radha Palaniswamy & **Dr. M.N. Kathiravan**, 2022, **"Plant & Animal Biotechnology Lab Manual"**, Dr. N.G.P Arts and Science College, Coimbatore (ISBN: 978-819-6002-14-5).
13. **Dr. M.N. Kathiravan** & Dr. Arun P, 2022, **"Genomics and Proteomics, Research Methodology & IPR"**, Dr. N.G.P Arts and Science College, Coimbatore (ISBN: 978-819-5993-93-2).
14. Deepalakshmi J, Lakshmi R. & **Kathiravan, M.N**, June' 2020, **"In-vitro Cytotoxic Activity of *Nyctanthes arbortristis* Extracts: Cytotoxic Activity of *Nyctanthes arbortristis* Extracts in HeLa and L132 Cell Line"**, Lambert Academic Publishing (LAP), Germany. (ISBN: 978-620-2-66850-7).
15. Deepalakshmi J, **Anupriya S**, & **Kathiravan, M.N**, 2021 **"Phytoremediation: A Research Note"**, Lambert Academic Publishing (LAP), Germany. (ISBN: 978-3-659-93183-3)

#### Patents

S.No.	Patent Title	Name of Applicant (s)	Patent No.	Award Date	Agency/ Country	Status
1	Design Patent - AI Based Chlorophyll Determination Device In Leaf Tissues	Dr. M.N.Kathiravan Dr. P. Arun Dr.M.Shanmugavadivu Dr.M.Poongothai Dr. K.Kalimuthu Dr.P.Chidambara Rajan	421987-001	02/07/2024	India	Grant
2	<i>In silico</i> based analysis of possible side effects of biomolecules used for Treating blood clots	Dr.P.Chidambara Rajan Dr. K. Arungandhi Dr. M.N.Kathiravan Dr. P. Arun Dr.M.Poongothai	No.2022410 11368 A	11/03.2022	India	Published
3	IoT Integrated Smart PTC Bottle	Dr. M.N.Kathiravan Dr. K.Kalimuthu Dr. R.Senthil Kumar Dr.P.Chidambara Rajan Dr.M.Shanmugavadivu	-	12/03/2025	India	Filed

#### PRESENTATIONS IN CONFERENCE

##### INTERNATIONAL

- Modern tools for Human Microbiome, International Conference on Horizon 2019: The Epitome of Bimedical Research, Saveetha Dental College, Chennai, Jan-2019.
- Plant Based Nanodrugs for Cancer Treatment, International Conference on PHARM-BIOTECH 2K19, Saveetha Dental College & Hospitals, SIMATS, Chennai, Jan-2019.

- Biodegradation of Chlorinated Pesticide by *Pseudomonas* sp., International Conference on Challenges in Biomedicine, Sri Narayana Guru College, K.G. Chavadi, Coimbatore, Jan-2019.
- Biological Synthesis of Zinc Oxide Nanoparticles and their Potential Applications of Zebra Fish Caudal Fin Development, International Conference on Challenges in Biomedicine, Sri Narayana Guru College, K.G. Chavadi, Coimbatore, Jan-2019.
- Cloning and Over-Expression of Thermostable Lipase in *E.coli*, International Conference on Challenges in Biomedicine, Sri Narayana Guru College, K.G. Chavadi, Coimbatore, Jan-2019.
- Isolation and Identification of Probiotic bacterial species from Korean Yellow Loess Agricultural soils, International Meeting of the Microbiological Society of Korea, Daegu, South Korea, May-2014.
- Isolation and Identification of Novel Chitinase Producing bacterial species Korean Yellow Loess Agricultural soils, International Meeting of the Microbiological Society of Korea, Daegu, South Korea, May - 2014.
- Production and characterization of antifungal chitinase from indigenous *Bacillus licheniformis*, Asian Congress on Biotechnology 2013, Bioprocessing for Sustainable Development, New Delhi, India, Dec-2013
- Isolation and characterization of antifungal lipopeptide producing *Bacillus amyloliquefaciens* from yellow loess soil, Asian Congress on Biotechnology 2013, Bioprocessing for Sustainable Development, New Delhi, India, Dec-2013
- Improved PCR amplification of soil microbial community DNA co-extracted with PCR Inhibitors, 2013 - International Meeting of the Federation of Korean Microbiological Societies, Seoul, Korea, Oct-2013.
- Novel chitinase gene (ChiA) identification from Yellow loess soil metagenomic DNA samples, 2013 - International Meeting of the Federation of Korean Microbiological Societies, Seoul, Korea, Oct-2013.
- Cloning, expression and characterization of thermophilic lipase (Tslip) gene from *Geobacillus thermoleovorans* KL3" 2013 - International Meeting of the Federation of Korean Microbiological Societies, Seoul, Korea, Oct-2013.
- Bioethanol Production from Sono and Microwave - Assisted Alkali Pretreated Corn Stover", Bioenergy Korea Conference - 2013 International Symposium, The 9<sup>th</sup> KSMB Annual Meeting & International Symposium, Jeju, Korea, Nov-2013.
- Biosorption of Zn(II) Cd(II) and Cr(III) from Aqueous solution using sewage sludge particles, 2013 KSBB Fall Meeting and International Symposium, South Korea, Oct-2013.
- Enhanced Bioethanol Production from Sono and Microwave-Assisted Alkali Pretreated Corn Stover, 1<sup>st</sup> International Conference on Bioenergy, Environment and Sustainable Technologies (BEST-2013), Arunai Engineering College, Thiruvannamalai, Tamil Nadu, India, Jan-2013.
- Decolouration of Azo Dye Methyl Orange using Zero Valent Iron (nZVI) Nanoparticles, 2<sup>nd</sup> International Workshop on Advanced Functional Nanomaterials, (SIWAN - 2013), Centre for Nanoscience and Technology and Centre for International Affairs, Anna University, Chennai, India, Jan-2013.
- Production and characterization of xylanase from *Aspergillus niger* during solid state fermentation, The Federation of Korean Microbiological Societies, Seoul, South Korea, Aug-2012.
- Biohydrogen production from enzymatically digested cotton wastes using *Citrobacter freundii*, The Federation of Korean Microbiological Societies, Seoul, South Korea, Aug-2012.
- Investigation of the antioxidant and antimicrobial activity of methanolic extracts of raw and cooked scallion (*Allium wakegi*), International Conference on Biosciences - Trends in Molecular Medicine, D.G.Vaishnav College, Chennai, India, Jan-2012.
- Synergistic effects of *Solanum trilobatum* and *Solanum melongena* extract against  $\beta$ -galactosamine induced hepatic damage in rats, International Conference on Biosciences - Trends in Molecular Medicine, D.G.Vaishnav College, Chennai, India, Jan-2012.
- Synthesis and Characterization of Octa (Maleimidophenyl Silsequioxane) - Silica/Alumina Hybrid Sol-Gel Nanocomposite Materials for High Performance Applications, Functional Polymers, An International Conference, National Institute of Technology (NIT), Calicut, Kerala, India, Jan-2011.

- Synergetic effect of *Solanum trilobatum* and *Solanum melanginum* extract on hepatocellular carcinoma, National Level Seminar on Natural Products and Drug Discovery, ICMR – ISTE, New Delhi, Arunai Engineering College, Thiruvannamalai, TN, India, Dec-2011.
- Production of biopolymer (poly- $\beta$ -hydroxybutyrate) by *Bacillus* sp. isolated from sago waste using a low cost carbon source biomaterial, 2<sup>nd</sup> International Conference on Natural Biopolymers (ICNP-2010), Institute of Macromolecular Sciences and Engineering (IMSE), Kottayam, Kerala, India, Sep-2010.
- Production of biopolymer from industrial wastewater utilized for biohydrogen production: A co-generative Approach, 2<sup>nd</sup> International Conference on Natural Biopolymers (ICNP-2010), Institute of Macromolecular Sciences and Engineering (IMSE), Kottayam, Kerala, India, Sep-2010.
- Hexavalent Chromium Reduction by *Pseudomonas* sp. Isolated from Tannery Industry Effluents, Current Trends in Chemical & Bioprocess Engineering, Dept. of Chemical Engineering, Sri Venkateswara University, Trupati, AP, India, Oct-2007.
- Comparative analysis of Phosphatase enzyme activity in Earthworm and soil micro flora, Indo-US International Work Shop on Vermitechnology in Human Welfare, Kongu Nadu College of Arts & Science, Coimbatore, Tamil Nadu, India, June-2007.

## NATIONAL

- National Webinar on “Emerging Frontiers in Biological Sciences”, Department of Botany & Zoology, Manipur University, Canchipur, 20 July 2020 to 21 July 2020.
- National Webinar Series (NWS)-2020 - on “Immunity and infection: Biochemical approaches to therapies”, Department of Biochemistry and Society of Biological Chemists (India), Davangere University, Shivagangothri, Davangere-577007, Karnataka, 15 June 2020 to 21 June 2020.
- Biodegradation of Endosulfan (Chlorinated Cyclohexene) by indigenous *Pseudomonas* sp. MSCAS BT01, National Conference on Basic and Applied Biological sciences, Bharathiar University, Coimbatore, Oct-2018.
- Comparative study of antioxidant components and quercetin contents in raw and cooked *Allium* sp. using HPLC, National conference on Phytochemistry and Biomedicine, IBMS, University of Madras, Chennai, India, Jan-2012.
- Hexavalent Chromium Reduction using Ca-Alginate Immobilized *Bacillus* sp. in an Internal Loop Airlift Reactor (ILALR), “CHEMCON 2009”, Visakapattinum, Andhra Pradesh, India, Dec-2009.
- Kinetic studies on bioaccumulation of hexavalent chromium by *Rhizopus oryzae*, “CHEMCON 2008”, IChE, Chandigarh Regional Centre, Dept. of Chemical Engineering, Punjab University, Chandigarh. Punjab, India, Dec-2008.
- Biodiesel Production from vegetable oil using Ca-alginate immobilized *R. oryzae* as whole cell catalyst, Current Trends in Chemical & Bioprocess Engineering, Dept. of Chemical Engineering, Sri Venkateswara University, Trupati, AP, India, Aug-2007.

## PARTICIPATION IN FDP (Virtual Mode)

- FDP on “Advances in Mushroom Cultivation: A Sustainable Key to Food-Nutritional and Employment Security”, Department of Plant Pathology, N. M. College of Agriculture, Navsari Agricultural University, Navsari and Centre for Advanced Agricultural Science and Technology (CAAST), Navsari Agricultural University, Navsari (Gujarat), 21 Sep 2021 to 22 Sep 2021.
- FDP on “Framework for Internet of Things (IoT) Applications”, Center for Internet of Things (IoT), Dr.N.G.P.Arts and Science College, Coimbatore, Tamil Nadu, India, 21 Sep 2021 to 30 Sep 2021.
- FDP on “Cell Culture Techniques”, NPTEL-AICTE, Ministry of HRD, India, 26 July 2021 to 17 Sep 2021.
- ATAL FDP on “Drug Engineering through Bioprospecting”, AICTE Training And Learning (ATAL) Academy, New Delhi, India, 12 July 2021 to 16 July 2021.
- ATAL FDP on “Recent Advances in Biosimilars Development” AICTE Training And Learning (ATAL) Academy, New Delhi, India, 05 July 2021 to 09 July 2021.

- ATAL FDP on "Nano Furtherance of Pharmaceutical Engineering: An Industrial Perceive", AICTE Training And Learning (ATAL) Academy, New Delhi, India, 21 June 2021 to 25 June 2021.
- FDP on "Research Methodology and Pedagogy for Tertiary Education", Dr. N.G.P. Arts and Science College, Coimbatore, Tamil Nadu, India, 15 June 2021 to 21 June 2021.
- FDP on "Quality Assessment & Enhancement in Higher Education in the Light of New Framework of NAAC", GHG Khalsa College of Education, Gurusar Sadhar, Ludhiana, Punjab, India, 15 June 2021 to 21 June 2021.
- ATAL FDP on "Application of Computers in Biology", AICTE Training And Learning (ATAL) Academy, New Delhi, India, 07 June 2021 to 11 June 2021.
- FDP on "Revised NAAC Accreditation Guidelines 2020", School of Computer Science and IT, Jain University, Karnataka, India, 01 June 2021 to 05 June 2021.
- FDP on "Impact of COVID on Higher Education and Research Initiatives", Sri Venkateswarara College of Engineering & Technology, Pondicherry & ISTE, New Delhi, India, 24 May 2021 to 28 May 2021.
- FDP on "Energy and Environment Science, Technology and Management for Sustainable Development", Dr. D.Y Patil Institute of Technology, Pimpri, Pune, India & EduEnergy, Singapore, 20 May 2021 to 25 May 2021.
- FDP on "Future Challanges in Engineering and Technology", Krishna Engineering College, Mohan Nagar, Ghaziabad, India, 14 May 2021 to 18 May 2021.
- FDP on "Tissue Engineering", NPTEL-AICTE, Ministry of HRD, India, 14 Sep 2020 to 20 Dec 2020.
- FDP on "Patent Law for Engineers and Scientists", NPTEL-AICTE, Ministry of HRD, India, 18 Jan 2021 to 09 Apr 2021.
- FDP on "Intellectual Properties", NPTEL-AICTE, Ministry of HRD, India, 18 Jan 2021 to 09 Apr 2021.
- FDP on "Patent Drafting for Beginners", NPTEL-AICTE, Ministry of HRD, India, 18 Jan 2021 to 22 Feb 2021.
- FDP on "Outcome Based Education", IQAC, Swami Vivekanand Subartha University, Meerut. & In Association with Inpods India Pvt Ltd., Pune, 08 Oct 2020 to 10 Oct 2020.
- One week Faculty Development Programme on "Interdisciplinary Research: Need and Relevance in Science and Technology", RKDF University, Bhopal, 01 Sep 2020 to 05 Sep 2020.
- One week Faculty Development Program on "Outcome Based Education", Dr. D.Y. Patel Institute of Technology, Pune, 10 Sep 2020 to 16 Sep 2020.
- One Week Workshop on NAAC Revised Accreditation Framework - Resolving the Practical Snags (under UGC PARAMARSH Scheme), GHG Khalsa College of Education Gurusar Sadhar, Ludhiana, 17 Aug 2020 to 24 Aug 2020.
- Online Faculty Development Program on "NAAC Accreditation for affiliated colleges 2020 - Roadmap and Guidelines", Internal Quality Assurance Cell (IQAC), Gopalan College of Engineering and Management, Hoodi, Karnataka, 27 July 2020 to 31 July 2020.
- Outcome Based Education (OBE) Faculty Development Programme, KKR & KSR Institute of Technology & Sciences, Guntur, AP, 08 July 2020 to 10 July 2020.
- FDP on Responsibilities of Microbiologists in Combating Pandemic Diseases, K.S. Rangasamy College of Arts and Science, Tiruchengode, 08 July 2020 to 10 July 2020.
- Six Days Online Faculty Development Programme (FDP) on "Nanomaterial Synthesis, Process, Characterization and its Functional Applications, Hindustan College of Engineering and Technology, Coimbatore, 06 July 2020 to 11 July 2020.
- Outcome Based Education, Rai University, Ahmedabad, 22 July 2020 to 24 July 2020.
- International FDP on "Excellence in Teaching, Learning & Research in Higher Education", Patrician College, Chennai, 29 June 2020 to 03 July 2020.
- Online ICT Tools For Effective Teaching Learning, Priyadarshini Institute of Science and Technology for Women, Khammam, T.S, 30 June 2020 to 04 July 2020.
- Five days Faculty Development Programme on "IPRs for Professional Innovators", Institution Innovation Council - AVIT & Vinayaka Mission's Research Foundation (VMRF), Chennai, 16 June 2020 to 20 June 2020.

- One Week National Level Faculty Development Programme on "Effective & Quality Research Writing", IQAC, Patrician College of Arts and Science, Chennai, 07 June 2020 to 13 June 2020.
- One week Webinar cum FDP Series on "Current Progress and Future Prospects of Biotechnology", Department of Biotechnology, CBIT, Hyderabad, Telungana, 08 June 2020 to 13 June 2020.
- One Week International Faculty Development Programme on "Challenges in Restructuring the Innovative Teaching Learning Techniques" (35 Hours), Auxilium College(Autonomous), Vellore - 632006, 02 June 2020 to 08 June 2020.

## **PARTICIPATION IN CONFERENCE**

### **INTERNATIONAL**

- Bioinnovation, Patenting and entrepreneurship opportunities in Biotechnology for Sustainable Environment Oxford Engineering College, Bangalore, Karnataka, India, 29 Mar 2021 to 30 Mar 2021.
- Rayat-Bahra Connect webinar Series 2020 on " Characterization Techniques for Nanoparticles & Data Analysis", Department of Chemistry, BAHRA University, Soaln, HP, 13 Oct 2020 to 14 Oct 2020.
- International Webinar on Emerging Trends in Biotechnology - Current and Future Challenges in Biotechnology Research, Department of Biotechnology, Pachhunga University College (PUC), and Mizoram University, 22 June 2020 to 24 June 2020.
- Patent Searching, Drafting and Filing, Panimalar Institute of Technology, Chennai, 29 May 2020 to 02 June 2020.
- IIC Online Session on "promote Innovation, IPR, Entrepreneurship, and Start-ups among HEIs, Institution's Innovation Council (IIC) of MHRD's Innovation Cell, New Delhi, 28 April 2020 to 22 May 2020.
- How much you know about Corona Virus?, Dr. C.V. Raman University, Bilaspur, Chandigarh, May - 2020.
- Our Rights During Pandemic, The NorthCap University, Gurugram, May - 2020.
- UGC STRIDE Program - "Science Communication" & "Analysis of Scientific Publications for Enhanced visibility", Mizoram University Aizawl, India, May - 2020.
- Webinar on "Cyber Security ", Sri Krishna Adithya College of Arts and Science, Coimbatore, April - 2020.
- Webinar on Art of Achieving Teaching Excellence in Digital Era", SIIMS, Pollachi, April - 2020.
- International Conference on Challenges in Biomedicine, Sri Narayana Guru College, K.G. Chavadi, Coimbatore, Jan-2019.
- International Meeting of the Federation of Korean Microbiological Societies, Seoul, Korea, Oct-2013.
- 1<sup>st</sup> International Conference on Bioenergy, Environment and Sustainable Technologies (BEST-2013), Arunai Engineering College, Thiruvannamalai, Tamil Nadu, India, Jan-2013.
- International Conference on Materials Science and Technology (ICMST 2012), Kottayam, Kerala, India, Jan-2012.
- An International Conference Recent Technological Advancements in Nanomaterials, National Institute of Technology (NIT), Calicut, Kerala, India, Jan-2011.
- 2<sup>nd</sup> International Conference on Natural Biopolymers (ICNP-2010)", Institute of Macromolecular Sciences and Engineering (IMSE), Kottayam, Kerala, India, Sep-2010.
- International Conference on "Chromosomes to Genes", "Karyotypic analysis of DM patients", Centre for Cell and Molecular Biology, (CCMB), CSIR complex, Hyderabad. India, July' 2007.

### **NATIONAL**

- National Conference on Basic and Applied Biological sciences, Bharathiar University, Coimbatore, Oct-2018.

## **PARTICIPATION IN SEMINARS**

- Second International seminar on Frontiers of Stem Cell & Biotechnology in Human & Veterinary Medicine, Madras Veterinary College, Chennai, India, June-2011.

- BIOTECHNOLOGY: UK and Indian perspectives, Centre for Biotechnology & British Council, Anna University, Chennai-25, India, Sep-2007.
- National Seminar on Safety, Health and Environment (SHE-2008), Department of Chemical Engineering, Chennai and BARCF - Kallpakkam, Tamil Nadu, India, Feb-2008.

## **PARTICIPATION IN WORKSHOP**

- Online Short Term Course cum Workshop on "Manufacturing Technologies for Tissue Engineering and Drug Delivery Systems", Department of Biotechnology, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India, 03 Oct 2020 to 07 Oct 2020.
- TEQIP - III Sponsored, One week short term online course on "Intellectual Property Rights", r. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, 07 Sep 2020 to 11 Sep 2020.
- One week on line Certificate Course on "Digital Teaching Techniques", 10 Aug 2020 to 15 Aug 2020.
- One Week Online Short Term Training Program (Interdisciplinary) on "Research and Publication Ethics", Research Promotion Cell, PRMIT&R, Badnera and CSI, Amravati, 29 June 2020 to 03 July 2020.
- International Workshop on "SPARC-US Immunology Workshop, IIT, Ropar, India & The George Washington University, USA, 12 June 2020 to 13 June 2020.
- Online Course on "SPSS", J P College of Arts and Science, Ayikudi, Tamil Nadu, 03 June 2020 to 06 June 2020.
- E- Learning Program on Bioinformatics as Cartographic Tool in Drug Discovery, Department of Bioinformatics, Algappa University, Karaikudi, 19 May 2020 to 30 May 2020.
- Three Day online course on Apiculture, Ayya Nadar Janaki Ammal College, Sivakasi, Tamil Nadu, 13 May 2020 to 15 May 2020.
- One Day National Level Workshop on Attach Surface Enumeration", AJK College of Arts and Science, Coimbatore, Tamil Nadu, India, Oct-2019.
- One Day Workshop on "Revised Assessment and Accreditation Framework of NAAC" Kathir College of Engineering and Technology, Coimbatore, Jan-2019.
- Orientation Workshop on Accrediting the Unaccredited Institutions in South eastern Region", University Grants Commission and NAAC, Hyderabad, Andhra Pradesh, Oct-2018.
- Two Days Workshop on "Outcome Based Education", Chamber of Commerce, ASMAFM, Coimbatore, July-2018
- One day Workshop on "Outcome Based Education in Higher Education" AJK College of Arts and Science, Coimbatore, July-2018.
- Nanotechnology", Department of Chemical Engineering, SSN College of Engineering, Chennai- 110, Tamil Nadu, India, Mar-2009.
- Thesis Writing and Scientific Paper Publishing", Tamil Nadu Science & Technology, Science City, Department of Higher Education, Govt. of Tamil Nadu, India, Jan-2008.
- Medicinal Plant Research & marketing – Present Scenario", Srimad Andavan Arts & Science College, Tiruchirappalli-620 005, Tamil Nadu, India, Feb-2008.
- Innovative Approaches for Institute-Industry Partnerships; Education & Training in Biotechnology, (Sponsored by Department of Biotechnology, Government of India, New Delhi), Mar-2007.
- VERMITECH, Tamil Nadu Science & Technology, Science City, B.M. Birla Planetarium, Chennai. Tamil Nadu, India, Aug-2007.
- Recent Advances & Challenges in Biotechnology Processes, (under "TEQIP" community), National Institute of Technology, (NIT) Thiruchirappally, Tamil Nadu, India, Dec-2006.

## CONFERENCE/SEMINAR/WORKSHOP ORGANIZED

- Faculty President & Program Coordinator, Association of Biotechnology “BioinGENEnio”, AJK College of Arts and Science, July’ 2018.
- Initiator & Advisor, BioinGENEnio Mushroom Cultivation Centre” (BMCC), AJK College of Arts and Science, July’ 2019.
- Organizing Secretary, MoU signing Ceremony Department of Biotechnology with Saveetha Institute of Medical & Technical Sciences (SIMATS), Chennai, Mar’ 2019.
- Organizing Secretary, MoU signing Ceremony, Department of Biotechnology with SynkroMax Biotech Private Limited, SIDCO Industrial Estate, Thirumazhisai, Chennai, Tamil Nadu 600124, may’ 2019.
- Organizing Secretary, MoU signing Ceremony, Department of Biotechnology with Nature Agro Future Tech (NAFT), Palakkad, Kerala, Aug’ 2019.
- Organizing Secretary, Two Days Hands-on Training for Tribal Women on Milky and Oyster Mushroom Production, AJK College of Arts and Science, July’ 2019.
- Organizing Secretary, Invited Talk on Papain Enzyme Manufacturing and Applications, AJK College of Arts and Science, June’ 2019.
- Organizing Secretary, Invited Talk on Cost Effective Mushroom Cultivation, Processing, and Value Addition, AJK College of Arts and Science, June’ 2019.
- Organizing Secretary, Guest Lecture on Recent Advancements in Anti-Rabies Vaccine Production, AJK College of Arts and Science, Mar’ 2019.
- Organizing Secretary, Guest Lecture on Recent Advancements in Microbial Biotechnology, AJK College of Arts and Science, Feb’ 2019.
- Organizing Secretary, Guest Lecture on Carbohydrate polymers in Targeted Drug Delivery, AJK College of Arts and Science, Jan’ 2019.
- Organizing Secretary, Guest Lecture on Opportunities in Life Sciences, AJK College of Arts and Science, Aug’ 2018.
- Organizing Secretary, National conference on Recent Advancements in Biotechnology (**BLAZE’2007**), Karpaga Vinagaya College of Engineering & Technology, Madhuranthagam, Chennai, Feb’ 2007.

## INVITED SPEAKER/SESSION CHAIR- CONFERENCE/SEMINAR/WORKSHOP

- Invited Speaker, “Metagenomics and Human Gut Microbiome: Health Perspective”, Dr. NGP Arts and Science College, Coimbatore, 15-Feb-2020.
- Invited Speaker, “Recent Developments in Agricultural Metagenomics and its implementation”, Chosun University, Gwangju, South Korea, 06-Mar-2017.
- Invited Speaker, “Metagenomics and Metabolic Engineering in Microbial Community”, Jeju National University, Jeju, Republic of South Korea, 02-Dec-2016.
- Invited Speaker, “Methods in Metagenomics”, Korea University, Seongbuk-gu, Seoul, Republic of South Korea, 28-Sep-2016
- Invited Speaker, “Culturable and Unculturable”, Gwangju Women University, Gwangju, Republic of South Korea, 12-Apr-2016.
- Invited Speaker, “Genes to Metagenomics”, Chonnum National University, Gwangju, Republic of South Korea, 09-Oct-2015.
- Invited Speaker, “Next Generation Sequencing and Shot Gun Sequencing”, Biocontrol Research Institute, Goksung-gu, Republic of South Korea, 21-May-2015.
- Invited Speaker, “Environmental Microbial diversity analysis through DGGE”, Incheon National University, Incheon, Republic of South Korea, 18-Nov-2014.
- Invited Speaker, “Novel approach in amplification of non-purified community DNA by PCR and qPCR”, Konkuk University, Gwangjin-gu, Republic of South Korea, 13-Mar-2015.
- Invited Speaker, “Troubles and Troubleshoots in Metagenomics” GIST, Gwangju, Republic of South Korea, 18-Feb-2014.

- Invited Speaker, “Novel Gene findings through Metagenomic Approach”, KRIBB, Dajeon, Republic of South Korea, 07-Dec-2013
- Invited Speaker, “Cloning and Expression of Lipase gene into *E.coli*” Jeju National University, Jeju, Republic of South Korea, 13-Aug-2013.
- Young Scientist Award Guest Presentation “Cloning and Expression of thermostable lipase (tslips) from *Geobacillus thermeleovorans* KL3 into *E.coli*” Chobuk National University, Jeonju, Republic of South Korea. 30-Aug-2013
- Invited Speaker, “How to Prepare and Publish a Scientific Research Article in a quality journal” Adiparasakthi Engineering College, Melmaruvathur, Tamil Nadu, India, 18-Feb-2013.
- Invited Speaker, “Problems in Doctoral and Post-Doctoral Research”, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai, India, 04-Feb- 2013.
- Invited Speaker, “Cloning and over expression of novel genes”, SSN Engineering College, Chennai, India, 14- Jan- 2013
- Invited Speaker, “Soil Metagenomics” - An innovative Approach, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai, India, 22-Aug- 2010
- Session Chair & Guest Speaker “Energy & Bioenergy”, Adiparasakthi Engineering College, Melmaruvathur, Tamil Nadu, India, 16-Apr-2010

## **EDITORIAL/REVIEW BOARD MEMBER**

### **Editorial Board Member**

- Editorial Board Member, American Journal of Biochemistry and Molecular Biology, Since 2011.
- Editorial Board Member, International Journal Biological Chemistry, Since 2011.
- Editorial Board Member, Research Journal of Phytochemistry, Since 2011.
- Editorial Board Member, Research Journal of Nanoscience and Nanotechnology, Since 2011.
- Editorial Board Member, Research Journal of Environmental Toxicology, Since 2011.

### **Review Board Member**

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- Review Board Member, Journal of Microbiological Research, Since 2014.
- Review Board Member, Research Journal of Phytochemistry, Since 2014.
- Review Board Member, Pathology & Infectious Diseases, Since 2014

## **SELECTED INVITED TALKS**

1. **“Energy & Bioenergy”**, Adiparasakthi Engineering College, Melmaruvathur, Tamil Nadu, India.
2. **“Soil Metagenomics” - An innovative Approach**, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai, India
3. **“Cloning and over expression of novel genes”**, SSN Engineering College, Chennai, India.
4. **“Problems in Doctoral and Post-Doctoral Research”**, Mohamed Sathak College of Arts & Science, Sholinganallur, Chennai, India
5. Young Scientist Award Presentation **“Cloning and Expression of thermostable lipase (tslips) from *Geobacillus thermeleovorans* KL3 into *E.coli*”** Chobuk National University, Jeonju, Republic of South Korea.



6. **"How to Prepare and Publish a Scientific Research Article in a quality journal"** Adiparasakthi Engineering College, Melmaruvathur, Tamil Nadu, India.
7. **"Cloning and Expression of Lipase gene into *E.coli*"** Jeju National University, Jeju, Republic of South Korea.
8. **"Novel Gene findings through Metagenomic Approach"**, KRIBB, Dajeon, Republic of South Korea.
9. **"Troubles and Troubleshoots in Metagenomics"** GIST, Gwangju, Republic of South Korea.
10. **"Novel approach in amplification of non-purified community DNA by PCR and qPCR"**, Konkuk University, Gwangjin-gu, Republic of South Korea.
11. **"Environmental Microbial diversity analysis through DGGE"**, Incheon National University, Incheon, Republic of South Korea.
12. **"Next Generation Sequencing and Shot Gun Sequencing"**, Biocontrol Research Institute, Goksung-gu, Republic of South Korea.
13. **"Genes to Metagenomics"**, Chonnum National University, Gwangju, Republic of South Korea.
14. **"Culturable and Unculturable"**, Gwangju Women University, Gwangju, Republic of South Korea.
15. **"Methods in Metagenomics"**, Korea University, Seongbuk-gu, Seoul, Republic of South Korea.

## **RESEARCH FOCUS**

- Metagenomic microbial diversity studies in agricultural soil, ocean and industrial polluted soil samples.
- To find out novel and industrially important Chitinase, Lipase, Protease, Beta-glucosidase, isomerases through uncultured approach.
- Cloning and Expression of novel (thermostable, salt tolerant) genes into *E.coli* and yeasts.
- Cloning and expression of viral capsid proteins (VLPs) in various plasmids and host systems for control the harmful algal bloom in sea.
- Microalgal growth under various growth conditions for alternate biofuel production.
- Enzymes production from fungal species using dye adsorbed biomass in solid state fermentation and Enhanced simultaneous saccharification and fermentation of lignocellulosic wastes for bioethanol production
- Co-generative production of biopolymer (PHB) and biohydrogen from paper and pulp industrial effluents
- Preparation and characterization of metal nanoparticles for toxic pollutant removal.
- Internal and external mass transfer studies on immobilized organisms in various reactors.
- Hybrid technology for textile dye degradation (Sono + Microbial degradation, Osonization + Microbial degradation, Photocatalytic + Microbial degradation and UV light + Microbial degradation).