Mudasir A. Dar, PhD

Associate Professor *(Waste valorization; Gut-microbiome, Environmental Biotechnology)*

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Summary

- 7+ Years of Professional experience at academia and research levels.
- Research interest: Bioengineering, Gut microbiome, Biomass, Biocatalysis, Waste valorization
- Teaching experience in both undergraduate and postgraduate levels, 2+ courses.
- Supervised >15 students (Masters/PhD) either as a direct supervisor or a co-supervisor.
- 130+ publications & 7 books (75+ SCI articles and 31 Book chapters)
- Two highly-cited papers, 2000+ Citations, *H-index* 25 (as of January 2026 on Google Scholar).

Education

2018 **National Eligibility Test**: **All India Rank 41**
Counsel of Scientific & Industrial Research-University Grants Commission, Govt. of India.

2014 - 2019 **PhD in Zoology**
Department of Zoology, Savitribai Phule Pune University, India. (**MANF Awardee**)
Dissertation title: Bioprospecting the gut micro-flora of giant African land snail, *Achatina fulica* for agro-biomass degradation
Dissertation Committee: Prof. B. P. Kapadnis, and Prof. B.B. Nath

2012 - 2013 **M. Phil. in Zoology**
Department of Zoology, University of Pune, India.
Dissertation title: Isolation of lignocellulolytic bacteria from Gastropods
Dissertation Committee: Prof. B.B. Nath and Prof. R. S. Pandit

2010 - 2011 **Mushroom Production Technology** (Certificate Course)
Department of Botany, A'nagar College, Ahmednagar, MS, India.
Dissertation title: Cultivation of edible mushrooms
Dissertation Committee: Dr. Prasad Y. Lamrood

2009 - 2011 **Masters in Zoology**
Department of Zoology, University of Pune, India.
Dissertation title: Studying entomo-fauna diversity of Kapurwadi lake
Dissertation Committee: Dr. Balraj Khobragade

Area of Expertise

- ***Main research area*:** Biofuels, Waste valorization, Microbial bioengineering, Gut-microbiome, Insects
- ***Specific research interests:***
  - Omics (metagenomics, metatranscriptomics, proteomics, and metabolomics).
  - Bioengineering (Gut microbes for waste valorization into value-added chemicals).
  - Biocatalysis (Nature-inspired catalysis, biomimetics).
  - Biomass and waste processing, Fermentation technology.

Research Experience

2019.3 - 2022.6 (**>3 Years**)	**Postdoctoral Fellow**, Biofuels Institute, Jiangsu University, China. ***Responsibilities:*** *Design research and conducting experiments; project writing and fund application; guiding postgraduate and PhD students; manuscript writing and publication; development of analytical methods.*
2018.9 – 2019.2 (**>8 months**)	**Research Associate**, Department of Zoology, S. P. Pune University, India. ***Responsibilities:*** *Conducting experiments; guiding postgraduate students; manuscript writing and publication; Preparation of research proposal.*

Professional Appointments

2022.7 - Present (**3 years**)	**Associate Professor**, School of Environment & Safety Engineering, Jiangsu University, China. ***Responsibilities:*** *Grant application; Teaching (Postgraduate students); Masters, PhD, and Postdoc Supervision; Research & Publication; International collaboration, etc.*
2024.6 - Present (**1+ years**)	**Visiting Scientist**, National Research and Innovation Agency (BRIN), Indonesia. ***Responsibilities:*** *Masters, and PhD, Supervision; Research & Publication; Grant application; Seminar presentations; International collaboration, etc.*
2007.3 - 2009.6 (**2+ years**)	**Teacher**, IMEI model secondary school, Narwa, Pulwama, India. ***Responsibilities:*** *Teaching (Elementary and secondary students)*

Honors/Awards/Recognitions

2025	**Journal Cover:** Volume 32, Issue 3: Insect Science https://doi.org/10.1111/1744-7917.70084
2024	**Visiting Scientist:** Badan Riset Dan Innovasi Nasional (BRIN), Indonesia
2023	**Foreign Expert:** Ministry of the Science and Technology of the People's Republic of China
2021	**Best Presentation Award**: Postdoctoral Academic Innovation Forum of Jiangsu University, China (Cash prize: ¥500.00)
2021	Letter of Appreciation for research: St. Xavier's College, Tamil Nadu, India.
2021	Doctor of Innovation and Entrepreneurship Award, Jiangsu Province, China.
2021	**Excellent Reviewer**: Research in Ecology.
2020	Best Paper Award: 3rd Sino-Foreign Postgraduate Academic Forum, School of Environment and Safety Engineering, Jiangsu University, China.
2020	**Excellent Manuscript Award**: 10th Sino-Foreign Postgraduate Academic Forum of Jiangsu University, China.

2020 **Best Presentation Award**: 10th Sino-Foreign Postgraduate Academic Forum of Jiangsu University, China.
2019 Maulana Azad National Fellow: UGC, Govt of India (Selected)
2017 **Maulana Azad National Senior Research Fellow**: UGC, Govt of India
2016 Maulana Azad National Junior Research Fellow: UGC, Govt of India.
2014 DST PURSE Fellow: BCUD, University of Pune, India.
2013 **Distinction Position in M. Phil** Zoology, University of Pune, India.
2012 UGC UPE-II Fellow: BCUD, University of Pune, India.
2011 **First Merit Position in MSc,** University of Pune, India.

Research Grants

1. Research Fund for International Young Scientists-I (RFIS-I), National Natural Science Foundation of China (NSFC)-国家自然科学基金外国青年专家项目(01/01/2023-31/12/2024). "**Elucidating the mechanism of symbiosis in the gut-regions of wood feeding termite, *Coptotermes formosanus* with emphasis on lignocellulolytic systems**". [400000 CNY]. Grant No: 32250410285. **Principal Investigator** (Completed)
2. State Administration of Foreign Experts Affairs, Ministry of the Science and Technology of the People's Republic of China-科技部外国学者研究基金 (01/01/2023-31/12/2024) "**Foreign Expert Scientist**: **Host-microbe interactions in termites**". [200000 CNY]. Grant No: WGXZ2023020L. **Principal Investigator** (Completed)
3. National Key Research & Development Project, Ministry of the Science and Technology of the P. R. China-(01/01/2024-31/12/2028) "**Understanding the molecular mechanism of Lignin depolymerization and its valorization into high-value products through bionics-基于智能设计与过程仿生的木质素定向生物解聚关键技术及高值化产品合成**". [2.2 million CNY]. Grant No: 2023YFC3403600. **Co-Investigator** (On-going)
4. China Postdoctoral Science Foundation, (01/01/2021-31/12/2021). "**Diversity and functional profile of the bacterial symbionts in the gut system of wood-feeding termite, *Coptotermes formosanus*".** [120000 CNY], Grant No: 5363000606. **Principle Investigator** (Completed)
5. National Natural Science Foundation of China (NSFC) (01/01/2020-31/012/2022). "**The lignin-degrading mechanisms and its processing characterizations in the digestive system of Formosan Subterranean termites-家白蚁消化系统木质素代谢及其过程特征与机制研**". [600000 CNY]. Grant No: 1601370039. **Co-investigator** (Completed)

Professional Membership

2024-Present	Regular member, Association of Microbiologists of India (AMI).
2024-Present	Regular member, Microbiology Society (UK).
2023-Present	Regular member, Chinese Chemical Society (CCS).
2023-Present	International Consortium of Research Staff Associations (ICoRSA), Ireland.
2021-Present	Regular member, Protistology (UK).
2023-Present	Regular member, Regular member, Biofuel Association of India.
2019-Present	Global Outreach Member, American Society for Microbiology (ASM).
2014-Present	Regular member, SARHAD, Pune, India.
2014-Present	Regular member, Muslim Satyashodak Mandal

Pedagogy

2025: Jiangsu University, Academic writing and Presentation, Postgraduate and PhD students
2024: Jiangsu University, Academic writing and Presentation, Postgraduate and PhD students
2018: University of Pune, DNA Barcoding in Insects, Postgraduate students

Supervision & Academic Activities

- **Five (05) master students** at Jiangsu University, China (***Co-supervisor***).
- **Four (04) PhD students** at S. P. Pune University, India (***Co-supervisor, as a group member***)
- **Six (06) master students** at Savitribai Phule Pune University, India (***Co-supervisor***)
- ***Thesis paper examiner/working as a graduation committee member***: 5 PhD, 2 Master's.

Editorial & Reviewer Role

2025-Present	**Associate Editor**, Frontiers in Microbiology (IF 4.0)
2025-Present	Editor, Discover Agriculture-Springer Nature
2025-Present	Editor, Research in Ecology
2025-Present	Editor, Sustainable Processes Connect
2024-Present	**Brand Ambassador**, Bentham Science, Multiple Journals
2024-Present	Editor, Discover Applied Sciences (IF 2.8)
2023-Present	Editor, BMC Microbiology (IF 4.1)
2023-Present	Editor, Engineering Microbiology (CiteScore 3.9)
2023-Present	Editor, European Journal of Environment & Earth Sciences EJGEO
2024-Present	Associate Editor, Frontiers in Microbiology (IF 4.0)
2024-Present	Review Editor, Frontiers in Energy Research
2024-Present	Review Editor, Frontiers in Bioengineering and Biotechnology (IF 4.5)
2019 - 2021	Editor, Research in Ecology
2020-Present	Editor, Acta Scientific Biotechnology
2019-Present	Editor, Annals of Environmental Science and Toxicology
2021-Present	Editor, International Journal of Microbiology and Biotechnology
2021-Present	Editor, SciRA Journal of Biology
2021-Present	Editor, Advances in Modern Agriculture
2021-Present	Editor, Delta Journal of Science
2015-Present	***Reviewer*** for **100+ journals,** including Communications Biology (**Nature; IF >5.2)**, Bioresource Technology (**Elsevier; IF >9.8**), Renewable & Sustainable Energy Reviews (**Elsevier; IF >12**), Journal of Cleaner Production (**Elsevier; IF >12)**, Physiological Entomology (**Royal Entomological Society; IF >1.6**), BMC-Microbiology (**BioMed Central; IF >4.1**), RSC Advances (**Royal Society of Chemistry; IF >3.9**), Journal of Basic Microbiology (Wiley-Blackwell**; IF >3.5**), etc.

Guest Editor

1. ***Frontiers in Microbiology*** (IF: 4.0, SCI indexed): Special Issue, "Advancement in Microbial Genomics for Environmental Sustainability", https://www.frontiersin.org/research-topics/70114/advancements-in-microbial-genomics-for-environmental-sustainability

2. ***Discover Agriculture*** (DOAJ indexed): Special Issue, "Net Zero Agriculture: Climate Smart Strategies and Sustainable Energy Solutions by Emerging Technologies", https://link.springer.com/collections/jefadeifab

3. ***Research in Ecology*** (Scopus indexed): Special Issue, "Advanced Biofuels and Ecological Resilience: Converging Technology, Economy, and Ecology for a Sustainable Energy Future", https://journals.bilpubgroup.com/index.php/re/topical_aber

Presentation at Scientific Conferences (Selected ones only)

1. Research and Career Opportunities in Applied Zoology. Shri Mulikadevi College, Nighoj, Maharashtra, India. February 9, 2021 (***Invited Speaker***).
2. Diversity of bacterial symbionts across the gut systems of wood-feeding termite, *Coptotermes formosanus,* and their functional dynamics towards lignocellulose digestion. 4th National Symposium on Insect Microbiome, and Biomass Conversion and Utilization", organized by Entomological Society of China and Jiangsu University, Zhenjiang, P.R. China, on July 5-7th, 2024 (***Invited Speaker***).
3. Screening and Evaluation of a Novel Consortium of Termite-gut Bacteria for Valorization of Lignocellulosic Biomass into Biofuels. International Conference on Alternative Fuels, Energy and Environment: Future and Challenges *(ICAFEE 2023)*. Oct. 6-8th, 2023, Faculty of Engineering, Erciyes University, Kayseri, Turkey (***Plenary Speaker-online***).
4. Isolation and Evaluation of Cellulose-Degrading Bacteria from the Gut System of *Spodoptera litura*. 3rd International Conference, Bioresource Technology for Bioenergy, Bioproducts and Environmental Sustainability. May 17-19, 2021, Elsevier Publishers, Netherlands (***Plenary Speaker***).
5. Isolation of a Cellulose Degrading Bacterium from the Gut of *Helicoverpa armigera* (Arthropoda: Insecta) and its Role in Agro-waste Valorization. 87th Annual Session and Symposium on Basic Research - its role in national development. December 8-10, 2017, National Academy of Sciences, India (***Poster***).
6. Bioprospecting the Gut of *Helicoverpa armigera* for Cellulose-Degrading Bacteria. 58th Annual Conference of Association of Microbiologists of India and International Symposium on Microbes for Sustainable Development: Scope & Applications. November 17-19, 2017, Babasaheb Bhimrao Ambedkar University, Lucknow, India (***Poster***).
7. Isolation of Cellulolytic Bacteria from the Gastro-Intestinal Tract of Giant African Land Snail, *Achatina fulica*. International Conference on Contemporary Research in Chemical and Life Sciences (ICCRCLS). April 22, 2015, Sadguru Gadage Maharaj College, Karad, India (***Oral***).
8. Evaluation of Some Essential Oils against House Fly, *Musca domestica* by Using Residual Film Method. National conference, Harmony-2017. December 21-23, 2017, Kakatiya University, Telangana, India (***Invited Speaker***).
9. Valorization Potential of Cellulolytic Bacterium, *Bacillus tequilensis* G9 for the Bioconversion of Lignocellulose into Value-Added Chemicals. National Symposium on, "Accelerating Biology 2017-*Delivering Precision*". January 17-19 2017, C-DAC, Pune, India (***Poster***).
10. Exploiting the Gastrointestinal Tract of Snails for the Isolation of Lignocellulose-Degrading Bacteria. National symposium, *Insights in Biology 2025.* October 25, 2016, CSIR-National Chemical Laboratory, India (***Poster***).
11. Snail as a Dynamic Source for Isolation of Cellulose-Degrading Bacteria. National Symposium on Accelerating Biology 2016: "*Decoding the Deluge*". January 19-21, 2016, Center for Development of Advanced Computing, Pune, India (***Poster***).
12. Diversity of Cellulolytic Bacteria in the Gut of Giant African Snail, *Achatina fulica*. National

Conference, *IIRLSSD*. January 16 & 17, 2015, Department of Zoology, Nowrosjee Wadiya College, Pune, India (***Oral***).

13. Botanical Essential Oils as Potential Biological Agents against the pest, *Helicoverpa armigera*. International Conference, "*HARMONY-2013*". November 11-13, 2013, Deen Dayal Upadhaya University, Gorakhpur, India (***Oral***).

Publications

Total SCI/ISI-indexed publications:	**83+**
Cumulative Impact Factor (IF):	**180+**
Total publications above IF >10:	**3**
***Total highly*-cited papers:**	**02**
Total citations:	**2000+**
h-index:	**25**
Book Chapters:	**31+**
Books:	**7+**

(A) Research/Review Articles

1. **Dar MA**, Loedji MAC, Lunggani AT, Napitupulu TP, Kanti A, Sudiana IM (2025) Statistical optimization of culture media components for enhanced production of lipase by lipolytic yeasts, Pichia sp. and *Trichosporon coremiiforme* using response surface methodology. **Biomass Conversion and Biorefinery** (2025). https://doi.org/10.1007/s13399-025-06569-7 ISSN: 2190-6823 JCR: Q1 (IF. 4.1)

2. **Dar MA,** Xie R, Zabed HM, Pawar KD, Dhole NP, Sun J (2025) *Current paradigms and future challenges in harnessing gut bacterial symbionts of insects for biodegradation of plastic wastes*. **Insect Science** 32, 726-752. https://doi.org/10.1111/1744-7917.13417 ISSN: 1744-7917 JCR: Q1 (IF. 3.0) **Journal Cover article** Vol **32**, Issue **3** https://doi.org/10.1111/1744-7917.70084

   Media coverage:
   *** This paper was showcased by the* **Official Newspaper** of the **Ministry of Science and Technology of China,** ***"Science and Technology Daily***, Beijing***"***. https://digitalpaper.stdaily.com/http_www.kjrb.com/kjrb/html/2024-10/08/content_578511.htm?div=-1
   *** It was also appreciated by **Jiangsu University**: https://mp.weixin.qq.com/s/EUPeNnVEbU84Me0rs3a3gA and the School of Environment & Safety Engineering of Jiangsu University, China. *https://biofuels.ujs.edu.cn/info/1018/4235.htm*

3. Shete RS, Kanade MB, Chavan SJ, **Dar MA***, Dhanavade MJ (2025) Extraction and characterization of bioactive compounds from a newly identified bryophyte, *Duthiella declinata*, and its antimicrobial potential. **Biocatalysis and Agricultural Biotechnology** 67, 103659. https://doi.org/10.1016/j.bcab.2025.103659 ISSN: 1878-8181 JCR: Q3 (IF. 3.8) ****Corresponding author***

4. Gacem A, Khan Z, Alreshidi MA, …, **Dar MA,** Wani AK (2025) Emerging threats of nanoparticles in marine and terrestrial environments: Toxicity mechanisms and risk management. **Marine Pollution Bulletin** 221, 118491. https://doi.org/10.1016/j.marpolbul.2025.118491 ISSN: 1879-3363 JCR: Q1 (IF. 4.9)

5. Ahmad F, Jinhao H, Nawaz MZ, **Dar MA,** Nasser R, Haider SZ, Haq WU, Sun J, Mo J, Zhu D (2025) Lignin disruption and ligninolytic enzyme activity in the symbiotic system

of *Macrotermes barneyi* termite. **Insect Science** 0, 1-15. https://doi.org/10.1111/1744-7917.70026 ISSN: 1744-7917 JCR: Q1 (IF. 3.0)

6. Ahmad F, Haider SZ, Nawaz MZ, Sethupathy S, **Dar MA**, Sun J, Zhu D (2025) Single-cell microliter droplet screening microfluidic system enables high-throughput isolation and cultivation of lignin-degrading bacteria from the termite gut. **Insect Science** 0, 1-18. https://doi.org/10.1111/1744-7917.7015 ISSN: 1744-7917 JCR: Q1 (IF. 3.0)

7. John A, Khan MA, Mashlawi AM, …, Dar MA, Wani AW,Wani AK (2025). Environmental contaminants and insects: Genetic strategies for ecosystem and agricultural sustainability. **Science of The Total Environment** 982, 179660. https://doi.org/10.1016/j.scitotenv.2025.179660 ISSN: 0048-9697 JCR: Q1 (IF. 8.0)

8. Selwal N, Sultana H, Rahayu F, … Dar MA, Chopra C, Abass KS, Wani AK (2025) Emerging technologies in biomass conversion: Bioengineering and nanocatalysts to AI-driven process optimization. **Biomass and Bioenergy** 200, 108054. https://doi.org/10.1016/j.biombioe.2025.108054 ISSN: 1873-2909 JCR: Q1 (IF. 5.8)

9. Abdelmula WIY, Gorish BMT, Dar MA, Sethupathy S, Altayeb HN, Han S, Arshad MI, Zhu D (2025) Lignin: A green material for sustainable antiviral application. **Sustainable Materials and Technologies,** 45, e01411. https://doi.org/10.1016/j.susmat.2025.e01411

10. Gacem A, Khan Z, Alreshidi MA, …, Dar MA, Wani AK (2025) Emerging threats of nanoparticles in marine and terrestrial environments: Toxicity mechanisms and risk management. **Marine Pollution Bulletin** 221, 118491. https://doi.org/10.1016/j.marpolbul.2025.118491 ISSN: 1879-3363 JCR: Q1 (IF. 4.9)

11. Wani AK, Alhegaili AS, Imam F…, Dar MA, Singh R (2025) Structural characterization, functional analysis and computational annotation of a metagenome-derived Glucoamylase enzyme: Effect of temperature, pH, metal Ions, and surfactants on enzyme activity. **Biocatalysis and Agricultural Biotechnology** 67, 103662. https://doi.org/10.1016/j.bcab.2025.103662 ISSN: 1878-8181 JCR: Q3 (IF. 3.8)

12. **Dar MA,** Xie R, Liu J, Ali S, Pawar KD, Sudiana IM, Sun J (2025) Current Paradigms and Future Challenges in Harnessing Nanocellulose for Advanced Applications in Tissue Engineering: A Critical State-of-the-Art Review for Biomedicine. **International Journal of Molecular Sciences** 26(4):1449. https://doi.org/10.3390/ijms26041449 ISSN: 1422-0067 JCR: Q1 (IF. 4.9)

13. Mir TG, Shukla S, Singh J, Dar MA, Wani AK (2025) Synthesis of molecularly imprinted polymer encapsulated with quantum dots for detection of crocin as an alternative approach for quality estimation of saffron. **Microchemical Journal** 113937(2025). https://doi.org/10.1016/j.microc.2025.113937 ISSN: 1095-9149 JCR: Q1 (IF. 4.9)

14. Hossain MM, Nawaz MZ, **Dar MA,** Alei G, Alghamdi HA, Han S, Zhu D (2025) Per- and polyfluoroalkyl substances (PFAS) exposure in biota and remediation strategies: Toxicological and biochemical perspectives. **Journal of Hazardous Materials Advances** 17 (2025) 100579. https://doi.org/10.1016/j.hazadv.2024.100579 ISSN: 2772-4166 JCR: Q1 (IF. 5.5)

15. Hossain MM, Jahan I, **Dar MA,** Dhanavade M, Mamtaz AFB, Maxwell SJ, Han S, Zhu D (2025) A review of potentially toxic elements in sediment, water, and aquatic species from the river ecosystems. **Toxics** 13, 26. https://doi.org/10.3390/toxics13010026 ISSN: 2315-6304 JCR: Q1 (IF. 3.9)

16. Jangid H, Shah NH, Dar MA, Wani AK (2025) Identification of potent phytochemical inhibitors against mobilized colistin resistance: molecular docking, MD simulations, ADMET, and toxicity predictions. In Silico Research in Biomedicine S3050-7871(25)00012-5(2025). https://doi.org/10.1016/j.insi.2025.100013 ISSN: 3050-7871

17. Mir TG, Shukla S, Singh J, … **Dar MA,** Atif Khurshid A (2025) Synthesis of Molecularly Imprinted Polymer Encapsulated with Quantum Dots for Detection of Crocin for Quality Estimation of Saffron. **SSRN** http://dx.doi.org/10.2139/ssrn.5154059

18. **Dar MA,** Xie R, Luohui J, Qing X, Ali S, Pandit RS, Shah CM, Sun J (2024) Elucidating the structure, and composition of bacterial symbionts in the gut regions of wood-feeding termite, *Coptotermes formosanus* and their functional profile towards lignocellulolytic systems. **Frontiers in Microbiology** 15, 1395568. https://doi.org/10.3389/fmicb.2024.1395568 ISSN: 1664-302X JCR: Q1 (IF. 4.0)

19. **Dar MA,** Xie R, Zabed HM, Ali S, Zhu D, Sun J (2024) ***Termite microbial symbiosis as a model for innovative design of lignocellulosic future biorefinery: Current paradigms and future perspectives.*** **Biomass** 4, 180-201. https://doi.org/10.3390/biomass4010009 ISSN: 2673-8783 JCR: Q2 (Cite score 4.2) ***Selected as **"Editor's Choice Article"**

20. Gorish BMT, Abdelmula WIY, Sethupathy S, **Dar MA,** Shahnawaz M, Zhu D (2024) Microbial degradation of polyethylene polymer: Current paradigms, challenges, and future innovations. **World Journal of Microbiology and Biotechnology** 40, 399. https://doi.org/10.1007/s11274-024-04211-8 ISSN: 1573-0972 JCR: Q1 (IF. 4.0)

21. Xie R, Danso B, Sun J, Al-Zahrani M, **Dar MA,** Al-Tohamy R, Ali SS (2024) Biorefinery and bioremediation strategies for efficient management of recalcitrant pollutants using termites as an obscure yet promising source of bacterial gut symbionts: A review. **Insects**, 15, 908. https://doi.org/10.3390/insects15110908 ISSN: 2075-4550 JCR: Q1 (IF. 2.7)

22. Xu Q, Ali S, Afzal M, Nizami AS, Han S, **Dar MA,** Zhu D (2024) Advancement in bacterial chemotaxis; Utilizing the navigational intelligence of bacteria and its practical applications. **Science of the Total Environment** 932, 172967. https://doi.org/10.1016/j.scitotenv.2024.172967 ISSN: 0048-9697 JCR: Q1 (IF. 9.8)

23. Wani AK, Chopra C, Ansari MA, **Dar MA,** Américo-Pinheiro JHP, Singh R (2024) Characterization of thermostable carboxypeptidase from high altitude hot spring metagenome. **International Journal of Biological Macromolecules** BIOMAC 133974. https://doi.org/10.1016/j.ijbiomac.2024.133974 ISSN: 1879-0003 JCR: Q1 (IF. 7.7)

24. Fatima M, **Dar MA,** Dhanavade MJ, Abbas SZ, Bukhari MN, Arslan A, Liao Y, Wan J, Bukhari JS, Ouyang Z (2024) Biosynthesis and pharmacological activities of the bioactive compounds of white mulberry (*Morus alba*): Current paradigms and future challenges. **Biology** 13(7), 506. https://doi.org/10.3390/biology13070506 ISSN: 2079-7737 JCR: Q1 (IF. 3.6)

25. Ghiasi SE, Gheibipour M, Motamedi H, **Dar MA** (2024) Screening and evaluation of the ruminal cellulolytic bacteria and their potential application as probiotics. **Iranian Journal of Microbiology** 16(3), 285-296. https://doi.org/10.18502/ijm.v16i3.4514 ISSN: 2008-4447 JCR: Q3 (IF. 1.3)

26. Zabed HM, Akhter S, Tian Y, **Dar MA**, Yun J, Zhao M, Ragauskas AJ, Li J, Qi X (2024) Assessing microbial systems and process configurations for improved ethanol production from sugary stovers by integrating soluble sugars and holocellulose. **Industrial Crops and Products** 212, 118269. https://doi.org/10.1016/j.indcrop.2024.118269 ISSN: 0926-6690 JCR: Q1 (IF. 5.9)

27. Ali S, **Dar MA,** Liaqat F, Sethupathy S, Rani A, Khan MI, Rehan M, Zhu D (2024) Optimization of biomethane production from lignocellulosic biomass by a developed microbial consortium. **Process safety and Environmental Protection**, 184, PSEP5355. https://doi.org/10.1016/j.psep.2024.02.037 ISSN: 1744-3598 JCR: Q1 (IF. 6.9)

28. Sadalage PS, **Dar MA,** Paiva-Santos AC, Pawar KD (2024) Enhanced bioconversion of grass straw into bioethanol by a novel consortium of lignocellulolytic bacteria aided by combined alkaline-acid pretreatment. **Biomass Conversion and Biorefinery**, 14, 1-17. https://doi.org/10.1007/s13399-024-05289-8 ISSN: 2190-6823 JCR: Q1 (IF. 3.5)

29. Ali S, Ahmad N, **Dar MA,** Manan S, Rani A, Alghanem SMS, Khan KA, Sethupathy S, Elbourhdiri N, Mostafa YS, Alamri SA, Hashem M, Shahid M, Zhu D (2024) The nano-agrochemicals as substitutes of pesticides and herbicides: Prospects and risks. **Plants** 13, 109. https://doi.org/10.3390/plants13010109 ISSN: 2232-7747 JCR: Q1 (IF. 4.0)

30. Sankaran BG, Manimekalai K, Barwant MM, **Dar MA** (2024) Genetic polymorphic associations of anti-mullerian hormone and luteinizing hormone/ chorionic gonadotropin receptor in women suffering from polycystic ovarian syndrome: insights from south indian population. **Acta Scientific Biotechnology** 5.2, 34-42. https://actascientific.com/ASBT/pdf/ASBT-04-0202.pddf

31. Barwant M, Karande VC, **Dar MA*,** Muhammad M, Behera M (2024) Recent Advances in the Exploration of Bioactive Phytochemicals of Seaweeds for Neuroprotection. **J Med Plant Herbs** 3: 1-14. https://www.jscholaronline.org/articles/JMPH/Recent-Advances-in-the-Exploration-of-Bioactive-Phytochemicals.pdf ISSN: 2673-8783 **Co-correspondence*

32. Singh B, Dwivedi S, Barwant MM, Singh VK, Singh AK, Kumar S, **Dar MA*** (2024) Exploring the Antimicrobial Properties of Some Selective Mushroom Mycoflora. **Chemical and Biomolecular Engineering** 9: 52-61. https://doi.org/10.11648/j.cbe.20240904.11 ISSN: 2578-8884 ***Corresponding author*

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Laboratory Skills

- R studio and R programs (Data interpretation and visualization).
- Metagenomics and Bacterial transcriptomics
- Molecular biology techniques (DNA extraction, PCR & DNA sequencing, Gene cloning, phylogenetic analysis).
- DNA Barcoding and establishment of molecular markers like RAPD, ISSR for DNA fingerprinting.
- Bacterial identification by MALDI-TOF method.
- Well-versed with chromatographic techniques like HPLC and column chromatography.
- Proteome analysis by using LC-MS/MS method.
- Expertise in Spectrophotometric methods like FTIR, XRD, and microscopy viz., SEM, TEM, FESEM.

- Native and SDS-PAGE, Agarose Gel Electrophoresis, etc. apart from classic and modern Microbiological techniques.
- Well versed with statistical optimization of process parameters by using RSM approach.
- Hands on experience in collection, rearing and identification of insects based on Eco-geographical and Morphological variation analysis.
- Techniques involved for the *in vitro* culture of edible mushroom.
- Computer skills: Windows; MS Office Suite, LAN; various statistical software like Origin Lab, SPSS, PAST, EndNote, Mendeley, etc.

Dr. Mudasir A. Dar