Dr. Reena Vishvakarma
Assistant Professor, Department of Bioengineering, Faculty of Engineering & IT,
Integral University, Lucknow
reenav@iul.ac.in
Google Scholar | ORCID ID | Scopus | Web of Science | Research Gate

PROFILE

Dr. Reena Vishvakarma is an Assistant Professor in the Department of Bioengineering at Integral University, Lucknow. She holds a Ph.D. and M. Tech. in Biochemical Engineering from IIT (BHU), Varanasi, and a B.Tech. in Biotechnology from Sardar Vallabhbhai Patel University. Dr. Vishvakarma has earned several accolades, including qualifying GATE with an All-India Rank of 182, the Vice-Chancellor's Gold Medal (B. Tech.), and the IIT (BHU) Medal for academic excellence, in addition to MHRD scholarships during her M. Tech. and Ph.D. studies. She has led various projects, including a SEED grant on biosurfactant production from endophytic fungi and is experienced in microbial fermentation, enzyme production, and bio-based waste valorization. Her research has been widely published in prestigious SCI-indexed journals, contributing significantly to fields such as fungal biotechnology, mycoactive compounds, oxidative stress, and agro-waste valorization. She has also co-authored book chapters in bioprocess technology and plant-nanoparticle interactions. In addition to her research, she has a substantial teaching experience of over 5 years, guiding undergraduate and postgraduate students, and contributing to academic administration. She has actively participated in national and international conferences and workshops, sharing her expertise in fungal bioactives production, their downstream processing and therapeutic applications and also served as a reviewer for various scientific journals.

RESEARCH INTEREST:

- Fermentation Technology
- Downstream Processing
- Enzyme Technology
- Agro-waste valorization

SUMMARY OF RESEARCH ACCOMPLISHMENT:

- Number of Publications in SCI/Scopus Indexed Journals: 11
- Number of Patents (Published /Grant): 01
- Book Chapters: 04
- Reviewer for scientific journals: 05
- Citations: 160
- H-index: 05

- i10-index: 04
  (As on 15.10.2024)

PROFESSIONAL MEMBERSHIP:

- Life member of the Biotech Research Society of India (BRSI)
- Life member of the Association of Food Scientists and Technologists (AFSTI)

COURSE TAUGHT:

- Biochemistry
- Enzymology
- Animal Biotechnology
- Biochemical Analysis and Techniques
- Food Microbiology

ADMINISTRATIVE/DEPARTMENTAL RESPONSIBILTY

- Member of Departmental Quality Assurance Cell (DQAC)
- Departmental NAAC Criteria 6 In-charge
- Member of Departmental Program Coordination Committee
- Departmental Time Table Coordinator
- B. Tech. Biotechnology 3rd Year Course Coordinator
- Department Artistic Club Coordinator

STUDENTS SUPERVISION

- B.Tech.-07
- M. Tech.-01
- PhD- 02 (Under supervision)

PUBLISHED/GRANT PATENTS

- *Sharma, P., Younis, K., Sharma, S., Vimal, A., Vishvakarma, R., Gaur, V.K., Farooqui, A.; Langenaria Siceraria based Low Fat Functional Mayonnaise; India Patent No202311029273, 2024 September 26.*

PUBLISHED/ACCEPTED SCI/SCOPUS RESEARCH PAPERS

- **Vishvakarma R** and Mishra A. Production of a protease inhibitor from edible mushroom Agaricus bisporus and its statistical optimization by response surface methodology." ***Preparative Biochemistry and Biotechnology***, (5), **47** (2017) 450-457. https://doi.org/10.1080/10826068.2017.1286851(**SCI Indexed, IF: 2.9**).
- **Vishvakarma R** and Mishra A. Protective effect of a protease inhibitor from Agaricus bisporus on Saccharomyces cerevisiae cells against oxidative stress." ***Preparative Biochemistry and***

Biotechnology, (3), **49** (2019) 244-254.https://doi.org/10.1080/10826068.2018.1536992(**SCI Indexed, IF: 2.9**).

- **Vishvakarma R** and Mishra A. Effect of protease inhibitor from *Agaricus bisporus* on glucose uptake and oxidative stress in 3T3-L1 adipocytes".***Asian Pacific Journal of Tropical Biomedicine***, (3), **10** (2020) 136-146. http://doi.org/10.4103/2221-1691.276319(**SCI Indexed, IF:1.7**).
- **Vishvakarma R**[*] and Mishra A. Characterization of a Novel Protease Inhibitor from the Edible Mushroom *Agaricus bisporus*.***Protein and Peptide Letters***, 2022 Volume 29, Number 5, 2022, pp. 460-472(13)https://doi.org/10.2174/0929866529666220405161903(**SCI Indexed, IF:1.6**).
- Sharma P, Vimal A,**Vishvakarma R**, Kumar P, Vandenberghe LPS, Gaur VK, Varjani S (2022) Deciphering the blackbox of omics approaches and artificial intelligence in food waste transformation and mitigation ***International Journal of Food Microbiology***, 372: 109691. https://doi.org/10.1016/j.ijfoodmicro.2022.109691(Epub ahead of print,**SCI Indexed, IF: 5.4**).
- Sharma P, **Vishvakarma R**, Gautam K, Vimal A, Kumar Gaur V, Farooqui A, Varjani S, Younis K. (2022) Valorization of citrus peel waste for the sustainable production of value-added products. ***Bioresource Technology*** 26 (351):127064.https://doi.org/10.1016/j.biortech.2022.127064(Epub ahead of print. **SCI Indexed, IF:11.4**).
- **Vishvakarma R,** Vimal A, Mishra A, Sharma P, & Gaur VK (2022). *Trametes versicolor* (L.) Lloyd as a source of thermostable serine protease: production and characterization.***Indian Journal of Experimental Biology*** Vol. 60, pp. 672-680.https://doi.org/10.56042/ijeb.v60i09.65147(**Scopus Indexed, IF: 0.94**)
- Sharma P, **Vishvakarma R**, Varjani S, Gautam K, Gaur VK, Farooqui A, ... & Pandey A (2022). Multi-omics approaches for remediation of bisphenol A: Toxicity, risk analysis, road blocks and research perspectives. ***Environmental Research***, Vol 215, Part 2, 114198. https://doi.org/10.1016/j.envres.2022.114198(Epub ahead of print. SCI Indexed, IF:8.3).
- Gautam K, **Vishvakarma R**, Sharma P, Singh A, Gaur VK, Varjani S, Srivastava JK (2022). Production of biopolymers from food waste: Constrains and perspectives. ***Bioresource Technology***. Vol 361, 127650. https://doi.org/10.1016/j.biortech.2022.127650(Epub ahead of print.**SCI Indexed, IF:11.4**).
- Gaur VK, Gautam K, **Vishvakarma R**, Sharma P, Pandey U, Srivastava JK, Varjani S, Chang JS, Ngo HH, Wong JW. Integrating Advanced Techniques and Machine Learning for Landfill Leachate Treatment: Addressing Limitations and Environmental Concerns. Environmental Pollution. 2024 May 9:124134. https://doi.org/10.1016/j.envpol.2024.124134 (**SCI Indexed, IF:8.9**).

- Sarwar F, Ashhad S, Vimal A, Vishvakarma R*. Small molecule inhibitors of the VEGF and tyrosine kinase for the treatment of cervical cancer. Medical Oncology. 2024 Aug;41(8):1-5. https://doi.org/10.1007/s12032-024-02446-x (**SCI Indexed, IF:2.8**).

BOOK CHAPTERS

- Khan A, **Vishvakarma R**, Vimal A*, Sharma P, Usman H, Kumar A. Carbon Nanodots: A Novel Carbon Material with Multifacet Applications in Healthcare. InCarbon Nanostructures in Biomedical Applications 2023 May 5 (pp. 145-167). Cham: Springer International Publishing.https://doi.org/10.1007/978-3-031-28263-8_6
- Qidwai YN, **Vishvakarma R**, Farooqui A, Sharma P, Sharma S, Vimal A*. Aluminum Oxide Nanoparticles: Plant Response, Interaction, Phytotoxicity, and Defense Mechanism. InNanomaterials and Nanocomposites Exposures to Plants: Response, Interaction, Phytotoxicity and Defense Mechanisms 2023 Jun 1 (pp. 285-300). Singapore: Springer Nature Singapore.https://doi.org/10.1007/978-981-99-2419-6_14
- Khan A, **Vishvakarma R**, Sharma P, Sharma S, Vimal A*. Green Synthesis of Metal-Oxide Nanoparticles from Fruits and Their Waste Materials for Diverse Applications. In Nanomaterials from Agricultural and Horticultural Products 2023 Aug 1 (pp. 81-119). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-3435-5_5
- Khan F, Khan SA, Sharma G, **Vishvakarma R**, Farooqui A, Siddiqui MH, Vimal A* Introduction to Bioprocess Technology in In: Dhagat, S., Jujjavarapu, S.E., Sampath Kumar, N., Mahapatra, C. (eds) Recent Advances in Bioprocess Engineering and Bioreactor Design. Springer, Singapore. https://doi.org/10.1007/978-981-97-1451-3_1
