



# Mr. Nil Patil

Research Scholar,  
PIAS and R&D Cell,  
Parul University  
MH-SET 2024



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- Objective** A dedicated career, leveraging my demonstrated expertise in consistently achieving project deadlines, meeting critical milestones, and effectively communicating results. Committed to the unwavering pursuit of excellence in scientific endeavors, I aim to fulfill responsibilities with meticulous precision and uphold a commitment to quality work.

- Currently working** Currently working as Research Scholar, PIAS, Parul University (August 2022- Present)

- Education**
  - Parul University, Vadodara (August 2022 – Present)**
    - Ph.D. Life Sciences (Microbiology) ~ pursuing
    - Research Topic: “Exploring the therapeutic potential of secondary metabolites from *D. discoideum* in Alzheimer’s disease by using cell line as a model” under Dr. Mukul Jain at Parul Institute of Applied Sciences, Parul University, Vadodara.
  - Parul University, Vadodara (May 2022 – November 2023)**
    - Worked as Junior Research Fellow under Dr. Mukul Jain at R&D Cell, Parul University (Cell & Developmental Biology Lab).
    - Worked on project entitled “Isolation of secondary metabolites from different developmental stages of *D. discoideum*”
    - Performed Bacterial & Eukaryotic cell line maintenance, DNA & RNA extraction, PCR, Western blotting, Anti-microbial assays, and Agarose Gel Electrophoresis.
  - Parul University, Vadodara (July 2020 – May 2022)**
    - Master of Science (Microbiology)
    - Research Topic: “Identification of antimicrobial analytes from *D. discoideum*” under Dr. Mukul Jain.
    - First class with distinction (9.06 CGPA)
  - JNM Patel Science College, Surat (VNSGU University) (April 2017 – May 2020)**
    - Bachelor of Science (Microbiology)
    - First class with distinction (7.08 CGPA)

- Awards**
  - Anusandhan National Research Foundation (ANRF) International Travel Grant (ITS) (October 2025)**
  - DBT-CTEP (September 2025)**  
“XXVII World Congress of Neurology (WCN 2025), to be held in Seoul, South Korea, from October 12–15, 2025
  - Travel Award (September 2025)**  
Awarded the IBRO School of Neuroscience Travel Award for attending the program at Monash University, Malaysia.
  - Maharashtra State Eligibility**  
Qualify Maharashtra State Eligibility Test “(M-SET)- 2024” in Life Science.

- Publications**
  - Sharma, M., Singh, V. K., Sharma, M. M., **Patil, N.**, Jain, M., & Kaushik, P. (2025). Extensive assessment of *Datura metel* L. accessions: Geographical origins-based clustering coupled with morphological and phytochemical profiles to illuminate medicinal efficacy. *South African Journal of Botany*, 180, 358-368. **(Research)** <sup>IF:3.1</sup>
  - Jain, M., **Patil, N.**, Mohammed, A., & Hamzah, Z. (2025). Valorization of garlic (*Allium sativum* L.) byproducts: Bioactive compounds, biological properties, and applications. *Journal of Food Science*, 90(3), e70152. **(Review)** <sup>IF:3.167</sup>
  - Dhariwal, R., Upadhyay, A., Deshmukh, K., **Patil, N.**, Upadhyay, B., Janiyani, K., & Jain, M. (2025). Combinatorial Drug Therapy for *Salmonella* Biofilm Disruption. **(Book Chapter)**
  - Dhariwal, R., Deshmukh, K., Upadhyay, A., **Patil, N.**, Upadhyay, B., Janiyani, K., ... & Jain, M. (2025). Uncovering the Co-relationship Between *Salmonella* Biofilm Infections and Other Morbidities. **(Book Chapter)**
  - Patil, N.**, Dhariwal, R., Mohammed, A., Wei, L. S., & Jain, M. (2024). Network pharmacology-based approach to elucidate the pharmacologic mechanisms of natural compounds from *Dictyostelium discoideum* for Alzheimer's disease treatment. *Heliyon*, 10(8). **(Research)** <sup>IF:3.6</sup>
  - Abdi, G., Jain, M., **Patil, N.**, Upadhyay, B., Vyas, N., Dwivedi, M., & Kaushal, R. S. (2024). 14-3-3 proteins—a moonlight protein complex with therapeutic potential in neurological disorder: in-depth review with Alzheimer's disease. *Frontiers in Molecular Biosciences*, 11, 1286536. **(Review)** <sup>IF:4</sup>

7. Jain, M., Dhariwal, R., **Patil, N.**, Ojha, S., Tendulkar, R., Tendulkar, M., ... & Kaushik, P. (2023). Unveiling the Molecular Footprint: Proteome-Based Biomarkers for Alzheimer's Disease. *Proteomes*, 11(4), 33. **(Review)** <sup>IF:3.6</sup>
8. Jain, M., Agarwal, S., Rana, A., Tiwari, A., & **Patil, N.** (2023). miRNA as an Ultimate and Emerging Diagnostic Approach for the Detection of Alzheimer's Disease. *Microna (Sharjah, United Arab Emirates)*. **(Review)** <sup>IF:1.7</sup>
9. Dhariwal, R., Bhardava, K., **Patil, N.**, Jain, M (2023). Exploring the efficacy of natural antioxidants as potent tools for mitigating oxidative stress in the context of Alzheimer's disease. *Antioxidants- health & diseases*, 17-62. **(Book Chapter)**
10. Ojha, S., **Patil, N.**, Jain, M., Kole, C., & Kaushik, P. (2023). Probiotics for Neurodegenerative Diseases: A Systemic Review. *Microorganisms*, 11(4), 1083. 5. **(Review)** <sup>IF:4.1</sup>
11. Jain, M., **Patil, N.**, Abdi, G., Abbasi Tarighat, M., Mohammed, A., Ahmad Mohd Zain, M. R., & Goh, K. W. (2023). Mechanistic Insights and Potential Therapeutic Approaches in PolyQ Diseases via Autophagy. *Biomedicines*, 11(1), 162. **(Review)** <sup>IF:4.7</sup>
12. Jain, M., **Patil, N.**, Gor, D., Sharma, M. K., Goel, N., & Kaushik, P. (2022). Proteomic Approach for Comparative Analysis of the Spike Protein of SARS-CoV-2 Omicron (B. 1.1. 529) Variant and Other Pango Lineages. *Proteomes*, 10(4), 34. **(Research)** <sup>IF:3.6</sup>
13. **Patil, N.**, Chandel, V., Rana, A., Jain, M., & Kaushik, P. (2023). Investigation of Cannabis sativa Phytochemicals as Anti-Alzheimer's Agents: An in-Silico Study. *Plants*, 12(3), 510. **(Research)** <sup>IF:4.1</sup>

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| <ul style="list-style-type: none"> <li>• <b>Training &amp; Conference</b></li> </ul> | <ul style="list-style-type: none"> <li>• <b>DHR sponsored</b> training program on “Modern Biology in Health Research” at MGMARI, SBV, Pondicherry from 18th to 20th March 2024.</li> <li>• <b>43<sup>rd</sup> All India Cell Biology Conference</b>, held in Banaras Hindu University 2023. (Poster presented)</li> <li>• <b>XLI annual meeting of IAN and International conference</b> on BRAIN: CHEMISTRY TO COGNITION, held in Jiwaji University, Gwalior 2023. (Poster presented)</li> <li>• 12 Days Entrance exam <b>crash course workshop sponsored by GSBTM</b> at Uka Tarsadia University, Bardoli (Secured 1<sup>st</sup> rank among 21 students)</li> </ul> |
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| <ul style="list-style-type: none"> <li>• <b>Techniques</b></li> </ul> | <ul style="list-style-type: none"> <li>• Acquired competence in handling common analytical instruments and equipment's like UV/Vis spectrophotometer, FT-IR, HPTLC, Stereo zoom microscope (Olympus) Applied bio system Thermal cyclcer (PCR), Gel Electrophoresis (vertical/horizontal), SDS PAGE, Immunocytochemistry, Gel Doc, ELISA Reader, Autoclave, Laminar air flow unit etc.</li> <li>• Knack of using bioinformatics tools like BLASTP, BLASTN, primer design, multiple sequence alignments (ClustalW II), phylogenetic tree analysis. In addition, have experience of Computational modeling tools (Molecular Dynamics- GROMACS &amp; Molecular Docking – AutoDock, AutoDock Vina, PyRx etc.)</li> <li>• Also, have experience in molecular biology techniques such as amplification using PCR, RT-PCR, cloning, transformation and expression in bacterial host system.</li> <li>• Basic knowledge of MS Excel and Biorendor type of writing and figure making servers and software.</li> </ul> |
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| <ul style="list-style-type: none"> <li>• <b>Experience :</b></li> </ul> | <ul style="list-style-type: none"> <li>• <b>Temporary Visiting Student - IIT Gandhinagar, Gujarat under Dr. Sharad Gupta (Dept. of Bioscience Engineering)</b> (From July 2025 to December 2025)</li> <li>• <b>SHODH Awardee – PhD Fellowship by Government of Gujarat</b> (From October 2023 to September 2025)</li> <li>• <b>Junior Research Fellow at Parul University, Vadodara, Gujarat</b> (From May 2022 to September 2023)</li> </ul> |
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| <ul style="list-style-type: none"> <li>• <b>References</b></li> </ul>   | <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>1. <b>Dr. Mukul Jain</b><br/>Assistant Professor,<br/>Parul Institute of Applied Sciences,<br/>Young Scientist, DHR<br/>Parul University, Vadodara, Gujarat.<br/>Email – <a href="mailto:jmukul801@gmail.com">jmukul801@gmail.com</a></li> </ol> </td> <td style="width: 50%; vertical-align: top;"> <ol style="list-style-type: none"> <li>2. <b>Dr. Sharad Gupta</b><br/>Associate Professor,<br/>Biological Sciences and Engineering,<br/>IIT Gandhinagar, Palaj<br/>Gandhinagar, Gujarat.<br/>Email- <a href="mailto:sharad@iitgn.ac.in">sharad@iitgn.ac.in</a></li> </ol> </td> </tr> </table> | <ol style="list-style-type: none"> <li>1. <b>Dr. Mukul Jain</b><br/>Assistant Professor,<br/>Parul Institute of Applied Sciences,<br/>Young Scientist, DHR<br/>Parul University, Vadodara, Gujarat.<br/>Email – <a href="mailto:jmukul801@gmail.com">jmukul801@gmail.com</a></li> </ol> | <ol style="list-style-type: none"> <li>2. <b>Dr. Sharad Gupta</b><br/>Associate Professor,<br/>Biological Sciences and Engineering,<br/>IIT Gandhinagar, Palaj<br/>Gandhinagar, Gujarat.<br/>Email- <a href="mailto:sharad@iitgn.ac.in">sharad@iitgn.ac.in</a></li> </ol> |
| <ol style="list-style-type: none"> <li>1. <b>Dr. Mukul Jain</b><br/>Assistant Professor,<br/>Parul Institute of Applied Sciences,<br/>Young Scientist, DHR<br/>Parul University, Vadodara, Gujarat.<br/>Email – <a href="mailto:jmukul801@gmail.com">jmukul801@gmail.com</a></li> </ol> | <ol style="list-style-type: none"> <li>2. <b>Dr. Sharad Gupta</b><br/>Associate Professor,<br/>Biological Sciences and Engineering,<br/>IIT Gandhinagar, Palaj<br/>Gandhinagar, Gujarat.<br/>Email- <a href="mailto:sharad@iitgn.ac.in">sharad@iitgn.ac.in</a></li> </ol>   |   |   |