


<b>NAME</b>	Dr. Puniti Mathur		
<b>DESIGNATION</b>	Professor		
<b>EMAIL ID</b>	pmathur@amity.edu		
<b>CONTACT NUMBER</b>	0120-4392204		
<b>RESEARCH INTERESTS</b>	<ul style="list-style-type: none"> <li>○ Design, synthesis, bioactivity, and conformational studies of non-coded amino acids containing peptides as potential activators of glucokinase-Implications in Type 2 diabetes.</li> <li>○ Computer-aided drug design: Homology modelling, pharmacophore development, virtual screening, docking and molecular dynamics studies</li> </ul>		
<b>EDUCATIONAL QUALIFICATIONS:</b>			
Name of College / University		Degree	Year
All India Institute of Medical Sciences, New Delhi		Ph.D	2003
IIT Roorkee		MSc. Biotechnology	1997
<b>Title of Ph.D. thesis :</b> Synthesis and Conformational Studies on Bioactive Peptides containing $\alpha$ , $\beta$ - dehydroamino acids			
<b>EXPERIENCE (in chronological order)</b>			
Designation	Type of post held (teaching/ research)	Name of the Institute	Year (From – To)
Research Assistant	Research	International Center for Genetic Engineering and Biotechnology, New Delhi	2003-2004
Assistant Manager	Industry research	Dabur Pharma Research Foundation, Sahibabad, Ghaziabad	2004-2008
Assistant Professor	Teaching and research	Amity Institute of Biotechnology, Amity University, Noida	2008-May 2017
Associate Professor	Teaching and research	Centre for Computational Biology and Bioinformatics, Amity Institute of Biotechnology, Amity University, Noida	June 2017-November 2019
Professor	Teaching and research	Centre for Computational Biology and Bioinformatics, Amity Institute of Biotechnology, Amity University, Noida	December 2019-till date
<b>No. OF PhD STUDENTS SUPERVISED</b>		Awarded: 3	
		Ongoing: 3	

<b>RESEARCH PROJECTS as PI (completed)</b>	DBT Sponsored Design, synthesis and biological activity of non-coded amino acids containing peptides as potential activators of hepatic glucokinase: Implications in Type 2 diabetes therapy for Rs. 56.41 lakh: 2017-21
<b>PATENTS (filed/granted)</b>	(1) A modified peptide as glucokinase activator for treatment of Type 2 diabetes and method thereof, Patent granted (2023) No.462368 (2) Novel peptides containing unnatural amino acids as activators of human glucokinase - Filed on May 31, (1) 2022, Application no. 202211031250
<b>Databases created</b>	(1) <a href="http://www.glucokinasedb.in">www.glucokinasedb.in</a> (2) <a href="http://www.pepengine.in">www.pepengine.in</a>
<b>PUBLICATIONS</b>	<ol style="list-style-type: none"> <li>1. Das AP, <b>Mathur P</b>, Agarwal SM (2024) Machine Learning, Molecular Docking, and Dynamics-Based Computational Identification of Potential Inhibitors against Lung Cancer <i>ACS Omega</i> 9,4, 4528-4539 DOI: 10.1021/acsomega.3c07338 (IF: 4.1)</li> <li>2. Das AP, Nandekar P, <b>Mathur P</b>, Agarwal SM (2023) A systematic pipeline of protein structure selection for computer-aided drug discovery: A case study on T790M/L858R mutant EGFR structures <i>Protein Science</i> 32(10): <a href="https://doi.org/10.1002/pro.4740">https://doi.org/10.1002/pro.4740</a> (IF: 8.0)</li> <li>3. Yadav S, Bharti S, <b>Mathur P</b>. (2023) GlucoKinaseDB: A comprehensive, curated resource of glucokinase modulators for clinical and molecular research <i>Computational Biology and Chemistry</i> <a href="https://doi.org/10.1016/j.compbiolchem.2023.107818">https://doi.org/10.1016/j.compbiolchem.2023.107818</a> (IF: 3.73)</li> <li>4. Yadav Siddharth, Ahamad, Shahzaib, Gupta, Dinesh, <b>Mathur Puniti</b> (2023) Lead optimization, pharmacophore development and scaffold design of Protein kinase CK2 inhibitors as potential COVID-19 therapeutics <i>Journal of Biomolecular Structure and Dynamics</i> 41(5):1811-1827 doi: <a href="https://doi.org/10.1080/07391102.2021.2024449">10.1080/07391102.2021.2024449</a> (IF: 5.23)</li> <li>5. Buddham R, Chauhan S, Narad P, <b>Mathur P</b> (2022) Reconstruction and Exploratory Analysis of mTORC1 Signaling Pathway and Its Applications to Various Diseases Using Network-Based Approach. <i>J. Microbiol. Biotechnol.</i> 32 (3):365-377. <a href="https://doi.org/10.4014/jmb.2108.08007">https://doi.org/10.4014/jmb.2108.08007</a> (IF: 3.277)</li> <li>6. Siddharth Yadav, Samuel Bharti, Priyansh Srivastava, <b>Punith Mathur</b> (2022) PepEngine: A manually curated structural database of peptides containing <math>\alpha</math>, <math>\beta</math>- dehydrophenylalanine (<math>\Delta</math>Phe) and <math>\alpha</math>-aminoisobutyric acid (Aib). <i>International Journal of Peptide Research and Therapeutics</i> 28, 57 doi: 10.1007/s10989-022-10362-9 (IF: 2.19)</li> <li>7. Richa Buddham, Siddharth Yadav, Priyanka Narad, <b>Punith Mathur</b> (2022) Network based identification of Potential Key Genes Associated with Alzheimer disease and Type 2 Diabetes using mTOR signalling. <i>Research Journal of Biotechnology</i> 17</li> </ol>

(5): 38-50 doi: 10.25303/1705rjbt38050

8. Siddharth Yadav, **Puniti Mathur** (2020) Orthosteric and allosteric modulation of human kinases: A mechanistic view. *Frontiers in Bioscience, Landmark*, 25, 8,1462-1487 doi: [10.2741/4864](https://doi.org/10.2741/4864) (IF: 2.34)
9. Dua D, Nagoorvali D, Chauhan MS, Palta P, **Mathur P**, Singh MK (2019) Calcium ionophore enhanced developmental competence and apoptotic dynamics of goat parthenogenetic embryos produced in vitro. *In Vitro Cellular & Developmental Biology – Animal* Mar;55(3):159-168. doi: 10.1007/s11626-019-00322-x. (IF: 1.447)
10. Uzma Khanam, Balwant Kishan Malik, **Puniti Mathur** Bhawna Rathi (2019) Human Caveolin-1 a potent inhibitor for prostate cancer therapy: a computational approach *International Journal of Computational Biology and Drug Design* 12(3): 203-218 (IF:0.7)
11. Supriya Srivastava, Seneha Santoshi, Balwant Kishan Malik, **Puniti Mathur** (2017) Molecular modeling and molecular dynamics studies of SPECT protein of Plasmodium falciparum and in silico screening of lead compounds *International Journal of Pharmaceutical Sciences and Research* 8(12):5077-87 [https://doi.org/10.13040/IJPSR.0975-8232.8\(12\).5077-87](https://doi.org/10.13040/IJPSR.0975-8232.8(12).5077-87)
12. Rajesh Pal, Gauri Misra and **Puniti Mathur** (2017) In Silico Screening Of Small Molecule Modulators Of Zika Virus Proteins *Proceedings of the 7th International Conference Confluence 2017 on Cloud Computing, Data Science and Engineering* 7943179, pp. 381-386 (IEEE) doi: [10.1109/CONFLUENCE.2017.7943179](https://doi.org/10.1109/CONFLUENCE.2017.7943179)
13. Supriya Srivastava, **Puniti Mathur** (2016) Homology Modeling and Docking Studies of Pfmc2TM Maurer's cleft two transmembrane protein –A Potential Drug Target in Malaria. *International Journal of Control Theory and Applications* 9(3):219-225
14. Uzma Khanam, Balwant Kishan Malik, **Puniti Mathur**, Bhawna Rathi (2016) Identification of novel inhibitors for mitogen-activated protein kinase kinase 4 by virtual screening and molecular dynamics simulation techniques. *International Journal of Pharmacy and Pharmaceutical Sciences* 8(7): 262-268 (IF:0.55)
15. Madhvi Gupta Datta, **Puniti Mathur**, V.S. Chauhan (2011) De novo design, synthesis and solution conformational study of two didehydroundecapeptides: effect of nature and number of amino acids interspersed between  $\Delta$ Phe residues. *Journal of Peptide Science* 17(12): 783-790 (IF:1.95)
16. Gupta Madhavi, Bagaria Ashima, Mishra Aseem, **Mathur Puniti**, Basu Atanu, Ramakumar S, Chauhan VS (2007) Self-assembly of a dipeptide containing conformationally restricted dehydrophenylalanine residue to form ordered nanotubes. *Advanced Materials* 19(6): 858-861 (IF: 13.87)
17. **Puniti Mathur**, N.R. Jagannathan, V.S. Chauhan (2007)  $\alpha$ ,  $\beta$  - Dehydrophenylalanine containing cecropin-melittin hybrid peptides: conformation and activity. *J. Peptide Science* 13(4): 253-262. (IF: 1.95)

	<p>18. <b>Puniti Mathur</b>, U.A. Ramagopal, S. Ramakumar, N. R. Jagannathan, V.S. Chauhan (2006) Stabilization of unusual structures in peptides using <math>\alpha</math>, <math>\beta</math> – dehydrophenylalanine: Crystal and solution structures of Boc-Pro-<math>\Delta</math>Phe-Val-<math>\Delta</math>PheAla-OMe and Boc-Pro-<math>\Delta</math>Phe-Gly-<math>\Delta</math>Phe-Ala-OMe. <i>Biopolymers (Peptide Science)</i> 84 (3): 298-309 (IF:2.57)</p> <p>19. <b>Puniti Mathur</b>, S. Ramakumar, V. S. Chauhan (2004) Peptide Design using <math>\alpha</math>, <math>\beta</math> - dehydroamino acids: From <math>\beta</math>- turns to helical Hairpins. <i>Biopolymers (Peptide Science)</i> 76(2): 150-161 (IF: 2.57)</p> <p>20. Padyana A. K., Ramakumar S., <b>Mathur P.</b>, Jagannathan N. R., Chauhan V. S.(2003) Role of a two-residue spacer in an <math>\alpha</math>, <math>\beta</math>-didehydrophenylalanine containing hexapeptide: Crystal and solution structure of Boc-Val-<math>\Delta</math>Phe-Leu-Ala- <math>\Delta</math>Phe-Ala-OMe. <i>J. Peptide Science</i> 9: 54-63. (IF: 1.95)</p> <p>21. Ramagopal U. A., Ramakumar S., <b>Mathur P.</b>, Joshi, R. M., Chauhan V. S. (2002) Dehydrophenylalanine zippers: strong helix-helix clamping through a network of weak interactions. <i>Protein Engineering</i> 15: 331-335. (IF:3.02)</p> <p>22. Mathur P., Srivatsun S., Joshi R.M., Jagannathan N. R., Chauhan V. S. (1999) Dehydrophenylalanine containing analogs of Triterpticin show increased biological activity. <i>J. BioSciences</i>. 24: 42. (IF: 1.88)</p>
<p><b>AWARDS &amp; HONOURS/ DISTINCTIONS</b></p>	<ul style="list-style-type: none"> <li>• 50% Bursary awarded by Wellcome Trust, to attend advanced training on small molecule drug discovery at Wellcome Genome campus, Cambridge, UK (June 2018)</li> <li>• Senior Research Fellowship Council of Scientific and Industrial Research (CSIR) Government of India (2001-2003)</li> <li>• Qualified GATE (1997)</li> <li>• 2 years (1995-1997) Scholarship from Department of Biotechnology Government of India, during MSc. Biotechnology</li> </ul>
<p><b>MEMBERSHIP</b> with Professional/ Academic bodies</p>	<ul style="list-style-type: none"> <li>• Life member of Indian Biophysical Society</li> <li>• Life member of Indian Peptide Society</li> <li>• Member of American Peptide Society</li> <li>• Member of American Chemical Society</li> </ul>