NAME	Dr. Hina Bansal	
DESIGNATION	Assistant Professor	
EMAIL ID	hbansal@amity.edu, hinabansal@gmail.com	
RESEARCH INTERESTS	Network pharmacology, Genome analysis, functional Genomics and Proteomics, Data Science, Biological Database and Software development, Molecular Modeling and docking studies.	

EDUCATIONAL QUALIFICATIONS:

Name of College / University	Degree	Year
Ch. Charan. Singh University Campus, Meerut (U.P.)	Ph.D. Bioinformatics	2015
Ch. Charan. Singh University Campus, Meerut (U.P.)	M.Sc. Bioinformatics	2004
R.G. College, Meerut (U.P.)	B.Sc. Botany	2002

Title of Ph.D. thesis: Information technology-based farm management system for higher income group in rural India

EXPERIENCE (in chronological order)

Designation	Type of post held (teaching/ research)	Name of the Institute	Year
Assistant Professor - II	Teaching and Research	Amity Institute of Biotechnology, Amity University, Noida.	2017-till date
Assistant Professor - I	Teaching and Research	Amity Institute of Biotechnology, Amity University, Noida.	2013 - 2016
Lecturer	Teaching and Research	Amity Institute of Biotechnology, Amity University, Noida.	2008-2012
Lecturer	Teaching	Department of Biosciences, Institute of Management Studies, Ghaziabad, U.P.	November 2006 – October 2007
Lecturer	Teaching	Department of Biotechnology, IILM Academy of Higher Learning, Greater Noida, U.P.	March 2006 – October 2006
Lecturer	Teaching	Sikkim Manipal University Center 2017, Patel Nagar, New Delhi.	Sept. 2005 – Feb. 2006
Research fellow	Research	Unit of Simulation and Informatics, Indian Agricultural Research Institute, New Delhi	Sept. 2004 – Aug. 2005
No. of Ph.D. students supervised	Ongoing: 1		
No. of PG and UG students supervised	20		

KEY PUBLICATIONS	1. Choudhary, A., Tiwari, A., and **Bansal, H**. (2025). Molecular docking analysis of laccase mediated bioremediation of pharmaceutical compounds from wastewater. *Systems Microbiology and Biomanufacturing*, 1-11. 2. Bhattacharjya, R., **Bansal, H**., Santoshi, S., Rastogi, S., and Tiwari, A. (2024). Characterization of natural compounds derived from diatom C. gracilis as potential therapeutic agents: An in-silico networking and docking study. *Algal Research*, 103712. https://doi.org/10.1016/j.algal.2024.103712. **(IF-4.6)** 3. Kohli, M., Bansal, H., Mishra, G. P., Dikshit, H. K., Reddappa, S. B., Roy, A., Sinha, S.K., Shivaprasad, K.M., Kumari, N., Kumar, A. and Kumar, R.R. (2024). Genome-wide association studies for earliness, MYMIV resistance, and other associated traits in mungbean (Vigna radiata L. Wilczek) using genotyping by sequencing approach. *PeerJ*, *12*, e16653. **(IF-2.7)** doi: 10.7717/peerj.16653 **(IF-3.8)** 4. Mandal, B., Singh, A., Dhingra, C., Bansal, H., and Santoshi, S. (2023, May). Computational Studies of Phytochemicals from Allium Sativum with H7N9 Subtype in Avian Influenza. In *International Conference on Emergent Converging Technologies and Biomedical Systems* (pp. 419-432). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-8646-0_33 5. Sharma, A., Dhingra, C., Chaurasia, A., Santoshi, S., & Bansal, H. (2023, May). Implementation of Machine Learning Algorithms for Cardiovascular Disease Prediction. In *International Conference on Emergent Converging Technologies and Biomedical Systems* (pp. 473-486). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-8646-0_37 6. Pravallika, V. S. S., Phatak, S. M., Kumar, V., Selly, S., Ahmed, S., Jabalia, N., ... & Bansal, H. (2023, March). Computational Studies to Access the Potency of Phytochemicals as a Potent Inhibitor for Primary Sclerosis Cholangitis Illness. In *2023 10th International Conference on Computing for Sustainable Global Development (INDIACom)* (pp. 450-454). IEEE. 7. Rai, M., Kaur, A., Sharma, P., Kruthi, M. N., Santoshi, S., & Bansal, H. (2023, March). In Silico Evaluation of Antifungal Compounds from Nigella Sativa Against Black Fungus. In *2023 10th International Conference on Computing for Sustainable Global Development (INDIACom)* (pp. 455-459). IEEE. 8. Bansal, H., Pravallika, V. S. S., Srivastava, G., & Ganjewala, D. (2022). Bioactivity assessment of essential oils of Cymbopogon species using a network pharmacology approach. *Biologia futura*, *73*(1), 107-118. https://doi.org/10.1007/s42977-022-00111-w **(IF-1.069)** 9. Marella, T. K., Bansal, H., Bhattacharjya, R., Parmar, N., Chaurasia, A., Watanabe, M. M., Bhatnagar, A. and Tiwari, A. (2021). Deciphering functional biomolecule potential of marine diatoms through complex network approach. *Bioresource Technology*, *342*,

125927. https://doi.org/10.1016/j.biortech.2021.125927 **(IF-9.642)**

10. Bhattacharjya, R., Tiwari, A., Marella, T. K., Bansal, H., & Srivastava, S. (2021). New paradigm in diatom omics and genetic manipulation. *Bioresource Technology*, *325*, 124708. DOI: 10.1016/j.biortech.2021.124708. **(IF-9.642)**

11. Narad, P., & Bansal, H. (2021). Computational identification of essential enzymes as potential drug targets in Shigella flexneri Pathogenesis using metabolic pathway analysis and epitope mapping. *Journal of Microbiology and Biotechnology*, *31*(4), 621. DOI: 10.4014/jmb.2007.07006 **(IF-2.351)**

12. Bansal, H., & Jabalia, N. (2017). In silico characterization and molecular modeling of sodium dependent serotonin transporter protein from Homo sapiens. *Asian Journal of Pharmaceutical and Clinical Research*, *10*, 299-303.

13. Bansal, H., Kriti, K. M., & Narad, P. (2016). homology modeling and docking studies on SEMA3A as a receptor for targeting multiple myeloma. *Int J Pharm Sci Rev Res*, *36*(1), 50-3. (ISSN 0976 – 044X)

14. Neetu Jabalia, **Hina Bansal**, P.C. Mishra and Nidhee Chaudhary (2015) In silico investigation of cysteine proteases from Zingiber officinale. Journal of Proteins and Proteomics. 6(3), 245-253. [IF-0.5]

15. **Hina Bansal**, Drishti Narang, Neetu Jabalia (2014) Computational characterization of antifreeze proteins of *Typhula ishikariensis* – Gray Snow Mould. Journal of Proteins and Proteomics. 5(4), 169-176. [IF- 0.5]

16. **Hina Bansal,** P.K. Sharma, Ankur Chaurasia and H. Pathak (2012) Information technology-based farm management system for enhancing farmers' income. *Current Advances in Agricultural Sciences* 4(1): 53-56.

BOOKS PUBLISHED: 1	**Hina Bansal (2018)** Evolution of agriculture from information to informatics, Scholar' Press. 1-132. (ISBN no. - 978-620-2-30655-3)
BOOK CHAPTERS	1. Karn, A. K., Sinha, P., Kaur, S., & **Bansal, H.** (2024). Quantum-Enhanced Strategies for Optimizing Disaster Response: A Machine Learning Approach. In *The Rise of Quantum Computing in Industry 6.0 Towards Sustainability* (pp. 193-204). Springer, Cham. https://doi.org/10.1007/978-3-031-73350-5_12 2. Borah, N. K., Tripathi, Y., Parashar, A., Santoshi, S., & **Bansal, H.** (2024). A Comprehensive and Intricate Dynamics of Aspergillus: Implications, Therapeutic Challenges, and Drug Resistance. In *Recent Advances in Human Fungal Diseases: Progress and Prospects* (pp. 427-455). Singapore: Springer Nature Singapore.

https://doi.org/10.1007/978-981-97-4909-6_18

3. Rai, A., shastri, J., & **Bansal, H**. (2024). Artificial Intelligence Techniques in Predictive Maintenance, Their Applications, Challenges, and Prospects. *Artificial Intelligence-Enabled Digital Twin for Smart Manufacturing*, 565-579.

4. Borah, N. K., Tripathi, Y., Tanwar, A., Tiwari, D., Sinha, A., Sharma, S., Jabalia, N., Mani, R.J., Santoshi, S. and **Bansal, H**. (2024). Artificial Intelligence-Powered Molecular Docking: A Promising Tool for Rational Drug Design. *Artificial Intelligence and Machine Learning in Drug Design and Development*, 157-188. https://scrivenerpublishing.com/cart/title.php?id=957#toc

5. Bondhopadhyay, B., **Bansal, H**., Aggarwal, N., Sen, S., & Kaur, G. (2024). Empowering Maternal Health Through Soft Computing: Challenges and Opportunities. *Modernizing Maternal Care With Digital Technologies*, 31-50.

6. Bondhopadhyay, B., **Bansal, H**., Aggarwal, N., & Tanwar, A. (2024). Exploring the Application of Digital Twin Technology in Investigating the Relationship Between Contraceptive Use and Breast Cancer Incidence. In *Exploring the Advancements and Future Directions of Digital Twins in Healthcare 6.0* (pp. 358-384). IGI Global.

7. Ganjewala, D., Srivastava, G., **Bansal, H**., & Srivastava, N. (2024). Status Review of Emerging Neuroprotective Potential of Moringa Oleifera and Desmodium Gangeticum. *Medicinal Plants for the Management of Neurodegenerative Diseases*, 150-168.

8. **Bansal, H**., & Aggarwal, N. (2024) Artificial Intelligence Techniques to Design Epitope-Mapped Vaccines and Diagnostics for Emerging Pathogens. In *Handbook of AI-Based Models in Healthcare and Medicine* (pp. 378-396). CRC Press. https://doi.org/10.1201/9781003363361-19

9. **Bansal, H**., Saxena, A., Himanshu, P. K. S., & Tiwari, A. (2023). Elucidation of omics approaches and computational techniques for wastewater treatment: A deep insight. *Clean Technologies Toward a Sustainable Future*, (pp. 19-31). https://doi.org/10.2166/9781789063783_0019 (ISBN: 9781789063783)

10. **Bansal, H**., Luthra, H., & Raghuram, S. R. (2023). A review on machine learning aided multi-omics data integration techniques for healthcare. *Data Analytics and Computational Intelligence: Novel Models, Algorithms and Applications*, 211-239. https://doi.org/10.1007/978-3-031-38325-0_10

11. Nagrath, L., **Bansal, H**., & Smitha, M. S. (2023). Nanomaterials in wastewater management. In *Advanced Application of Nanotechnology to Industrial Wastewater* (pp. 279-297). Singapore: Springer Nature Singapore. DOI: https://doi.org/10.1007/978-981-99-3292-4_14

	12. **Bansal, H**., Pravallika, V. S. S., Phatak, S. M., & Kumar, V. (2023). A Deep Insight into IoT and IoB Security and Privacy Concerns– Applications and Future Challenges. In *Internet of Behaviors (IoB)* (pp. 101-124). CRC Press. https://doi.org/10.1201/9781003305170. 13. **Bansal, H**., & Jha, S. (2023). Implementation of AI Techniques for Bioremediation and Wastewater Treatment. In *The Internet of Medical Things (IoMT) and Telemedicine Frameworks and Applications* (pp. 124-134). IGI Global. DOI: 10.4018/978-1-6684-3533-5.ch006 14. **Bansal, H**., Luthra, H., & Chaurasia, A. (2022). Impact of machine learning practices on biomedical informatics, its challenges and future benefits. In *Artificial Intelligence Technologies for Computational Biology* (pp. 273-294). CRC Press. (ISBN 9781032160009, eBook ISBN9781003246688), DOI: https://doi.org/10.1201/9781003246688) 15. **Bansal, H**., Kohli, R. K., Saluja, K., & Chaurasia, A. (2022). Recent advancements in biomedical research in the era of AI and ML. *Artif. Intell. Comput. Dyn. Biomed. Res*, *8*, 1-20. (ISBN: 9783110762044). https://doi.org/10.1515/9783110762044-001 16. Ganjewala, D., **Bansal, H**., Mittal, R., & Srivastava, G. (2022). Unraveling of inhibitory potential of phytochemicals against SARS-COV-2 using in-silico approach. In *Herbal Medicines* (pp. 471-500). Academic Press. (ISBN: 978-0-323-90572-5) https://doi.org/10.1016/B978-0-323-90572-5.00012-3 17. **Bansal, H**. (2021). Advances in Omics and Bioinformatics Tools for Phyllosphere Studies. *Phytomicrobiome Interactions and Sustainable Agriculture*, 240-253. (Print ISBN:9781119644620, Online ISBN:9781119644798) DOI:10.1002/9781119644798) 18. Chaudhary, N., Kaur, N., Jabalia, N., & **Bansal, H**. (2012). Studies on biochemical aspects of thermostable superoxide dismutase isolated from Jatropha curcas root. *Biologix*, *1*, 173-176.
AWARDS & HONOURS/ DISTINCTIONS	• Awarded a price of best paper presentation with the title "INSIGHTS FROM GENE EXPRESSION LANDSCAPE OF VULVAR CANCER: UNVEILING POTENTIAL BIOMARKERS AND THERAPEUTIC AGENTS FROM RIBES NIGRUM" during *"Oncology Conundrums:2024"* held at New Delhi in May 2024. • **Certificate of Excellence in Reviewing 2023** by the International Journal of Plant & Soil Science in recognition of an outstanding contribution to the quality of the journal.

MEMBERSHIP with Professional/ Academic bodies	• Life member: Bioinformatics Club for Experimenting Scientists (BIOCLUES) Society • Life member: Society for Bioinformatics and Biological Sciences