


NAME	Dr. Hina Bansal	
DESIGNATION	Assistant Professor	
EMAIL ID	hbansal@amity.edu , hinabansal@gmail.com	
RESEARCH INTERESTS	Network pharmacology, Genome analysis, functional Genomics and Genome informatics, Python scripting for Data Science, Biological Database and Software development, Drug Designing and docking studies.	

EDUCATIONAL QUALIFICATIONS:

Name of College / University	Degree	Year
C.C.S. University Campus, Meerut (U.P.)	Ph.D. Bioinformatics	2015
C.C.S. 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 (From – To)
Assistant Professor	Teaching and Research	Amity Institute of Biotechnology	2008 - till date
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	

PUBLICATIONS	<ol style="list-style-type: none"> Kohli M, Bansal H, Mishra GP, Dikshit HK, Reddappa SB, Roy A, Sinha SK, Shivaprasad KM, Kumari N, Kumar A, Kumar RR. Genome-wide association studies for earliness, MYMIV resistance, and other associated traits in mungbean (<i>Vigna radiata</i> L. Wilczek) using genotyping by sequencing approach. PeerJ. 2024 Jan 26; 12: e16653. doi: 10.7717/peerj.16653 (IF-3.8) Nabajit Kumar Borah, Yukti Tripathi, Aastha Tanwar, Deeksha
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Tiwari, Aditi Sinha, Shailja Sharma, Neetu Jabalia, Ruchi Jakhmola Mani, Seneha Santoshi, Hina Bansal Artificial Intelligence Powered Molecular Docking: A Promising Tool for Rational Drug Design, Artificial Intelligence and Machine Learning in Drug Design and Development, Wiley-Scrivener

<https://scrivenerpublishing.com/cart/title.php?id=957#toc>

3. Banashree Bondhopadhyay, Hina Bansal, Navya Aggarwal, Shinjini Sen, Gurleen Kaur. (2024). Empowering Maternal Health through Soft Computing: Challenges and Opportunities, Modernizing Maternal Care With Digital Technologies
4. Banashree Bondhopadhyay, Hina Bansal, Navya Aggarwal, Aastha Tanwar, (2024). Exploring the Application of Digital Twin Technology in Investigating the Relationship Between Contraceptive Use and Breast Cancer Incidence: Application of Digital Twin Technology in Contraceptive Use and Breast Cancer, Exploring the Advancements and Future Directions of Digital Twins in Healthcare 6.0
5. 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.
6. **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>
7. Bansal, H., Saxena, A., Himanshu, P. K. S., & Tiwari, A. (December 2023). Elucidation of omics approaches and computational techniques for wastewater treatment: A deep insight. *Clean Technologies Toward a Sustainable Future*, 19. IWA Publishing https://doi.org/10.2166/9781789063783_0019 (ISBN: 9781789063783)
8. 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*, vol 132, 211-239, Springer, Cham. https://doi.org/10.1007/978-3-031-38325-0_10.
9. Mandal, B., Singh, A., Dhingra, C., Bansal, H., & Santoshi, S. (2023). 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.
10. Sharma, A., Dhingra, C., Chaurasia, A., Santoshi, S., & Bansal, H. (2023). 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.
11. Nagrath L, **Bansal H**, Smitha MS. Nanomaterials in Wastewater Management. In *Advanced Application of Nanotechnology to Industrial Wastewater 2023 Jun 25* (pp. 279-297). Singapore: Springer Nature Singapore. DOI: https://doi.org/10.1007/978-981-99-3292-4_14
 12. Pravallika, Vusala Sri Sai, Shravani M. Phatak, Veronica Kumar, Saksham Selly, Sarim Ahmed, Neetu Jabalia, Seneha Santoshi, and **Hina Bansal**. "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, 2023.
 13. Rai, Manshi, Amanpreet Kaur, Priya Sharma, M. Nithya Kruthi, Seneha Santoshi, and **Hina Bansal**. "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, 2023.
 14. **Bansal, Hina**, Vusala Sri Sai Pravallika, Shravani M. Phatak, and Veronica Kumar. "A Deep Insight into IoT and IoB Security and Privacy Concerns—Applications and Future Challenges." *Internet of Behaviors (IoB)* (2023): 101-124. <https://doi.org/10.1201/9781003305170>.
 15. Bansal, Hina, and Shambhawi Jha. "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, 2023. (ISBN: 9781668435335) DOI: 10.4018/978-1-6684-3533-5.ch006
 16. **Bansal, H.**, Kohli, R. K., Saluja, K., & Chaurasia, A. (2022). Recent advancements in biomedical research in the era of AI and ML. *Artificial Intelligence and Computational Dynamics for Biomedical Research*, 8, 1.
 17. **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.
 18. 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.
 19. **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.

20. Thomas Kiran Marella, **Hina Bansal**, Raya Bhattacharjya, Himanshu, Nitesh Parmar, Ankur Chaurasia, Makoto M. Watanabe, Amit Bhatnagar, Archana Tiwari, Deciphering functional biomolecule potential of marine diatoms through complex network approach, *Bioresource Technology* 342 (2021), <https://doi.org/10.1016/j.biortech.2021.125927>
21. Bhattacharjya, R., Tiwari, A., Marella, T.K., **Bansal, H.**, Srivastava, S., New paradigm in diatom omics and genetic manipulation, *Bioresource Technology* (2021), doi: <https://doi.org/10.1016/j.biortech.2021.124708>.
22. JABALIA N AND **BANSAL H*** (2021) Docking studies and protein – protein interaction analysis to unveil the proteins responsible for hyperthyroidism in human. *International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)*, March 2021, 10(3): X-X (Accepted) (ISSN:2277-4998)
23. **Hina Bansal** (2021) Advances in Omics and Bioinformatics Tools for Phyllosphere Studies. *Phytomicrobiome Interactions and Sustainable Agriculture*. Wiley publication. 240-253.
24. Priyanka Narad, Himanshu, **Hina Bansal*** (2020) 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 (JMB)*. PubMed PMID: 33323673. DOI: [10.4014/jmb.2007.07006](https://doi.org/10.4014/jmb.2007.07006)
25. **Hina Bansal**, Evolution of agriculture from information to informatics, Scholar' Press. 1-132, (February 2018)
26. **Hina Bansal**, Neetu Jabalia (2017) *in silico* characterization and molecular modelling of sodium-dependent serotonin transporter protein from homo sapiens. *Asian J Pharm Clin Res*. Vol 10, Issue 8, 299-303.
27. **Hina Bansal**, Kriti (2016) In - silico Characterization of Smad nuclear interacting protein 1 (SNIP1) from Human. *International Journal of Basic and Applied Biology*. 3(1), 8-10.
28. **Hina Bansal**, Kriti, M. Vimal Kumar and Priyanka Narad (2016) Homology Modeling and Docking Studies on SEMA3A as a Receptor for Targeting Multiple Myeloma. *Int. J. Pharm. Sci. Rev. Res.*, 36(1), January – February 2016; Article No. 08, Pages: 50-53
29. 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.

30. **Hina Bansal** and Neetu Jabalia (2015) Identification and Computational Characterization of miRNAs of *Apis florea* and their Phylogenetic Analysis. International Journal of Basic and Applied Biology. 2(5), 304-309.
31. Neetu Jabalia, **Hina Bansal**, P.C. Mishra and Nidhee Chaudhary (2015) *In-silico* Comparative analysis of Papain Family Cysteine Protease using Computational Tools and Servers. International Journal of Basic and Applied Biology. 2(5), 310-314.
32. **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
33. **Hina Bansal**, Sakshi Srivastava, Ankur Chaurasia and Neetu Jabalia.(2014) A comparative study of antifreeze proteins from *Antarctomyces psychrotrophicus* and *Typhula ishikariensis* using computational tools and servers. VIVECHAN International Journal of Research. 5(1), 21-28 .
34. **Hina Bansal**, Drishti Narang, Ankur Chaurasia and Neetu Jabalia. (2013) *In – silico* characterization of antifreeze proteins of *Typhula ishikariensis* using computational tools and servers. Journal of Proteins and Proteomics. 4(2), 36.
35. **Hina Bansal**, Sakshi Srivastava, Ankur Chaurasia and Neetu Jabalia. (2013) A comparative *in – silico* study of functional properties of two fungal antifreeze proteins from *Antarctomyces psychrotrophicus* and *Typhula ishikariensis*. Journal of Proteins and Proteomics. 4(2), 48
36. Neetu Jabalia, **Hina Bansal**, P.C. Mishra, Nidhee Chaudhary. (2013) Computational analysis of protease sequences from *Zingiber officinale*. Journal of Proteins and Proteomics. 4(2), 37
37. **Bansal Hina**, Chaurasia Ankur, and Jabalia Neetu. (2013) *In - Silico* Characterization and Structural Analysis of Pathogenesis-Related Protein-5 of *Zingiber offocinale*. Souvenir and Conference Book: NCEEER – 2013, 153-157.
38. Jabalia Neetu, Srivastava Sakshi, Chaurasia Ankur and **Bansal Hina**. (2013) Computational Characterization of Homoserine Dehydrogenase from *Saccharomyces cerevisiae*. Souvenir and Conference Book: NCEEER – 2013, 142-147.
39. **Hina Bansal**, P.K. Sharma, Neetu Jabalia, Ankur Chaurasia, Malti Rani and H. Pathak (2012) Characterization of Soil Resources Using Geographical Information System for Improved Crop Management. International Journal of Advanced Bioinformatics and Computational Biology, 1(1), 12-21.
40. **Hina Bansal**, Neetu Jabalia, Ankur Chaurasia, Nidhee Chaudhary (2012) Phylogenetic analysis and *in-silico* structural characterization of parkinson protein 2, E3 ubiquitin protein ligase gene. Journal of Protein and Proteomics. 3(2), 32
41. Neetu Jabalia, **Hina Bansal**, Nidhee Chaudhary, Nameet Kaur, Prakash Chandra Mishra (2012) *In-silico* prediction of structural

and functional aspects of hypothetical protein of *Staphylococcus epidermidis*. *Journal of Protein and Proteomics*. 3(2), 33

42. Nidhee Chaudhary, Nameet Kaur, Neetu Jabalia, **Hina Bansal** (2012) Studies on thermostable superoxide dismutase enzyme isolated from *Zingiber officinale* peel: A therapeutically important enzyme. *Journal of Protein and Proteomics*. 3(2), 4
43. Nidhee Chaudhary, Nameet Kaur, Neetu Jabalia, **Hina Bansal** (2012) Biochemical investigations on thermostable superoxide dismutase isolated from *Jatropha curcas* stem. *International Journal of Environment Engineering and Management*, 3 (5), 323-326.
44. Chaudhary Nidhee, Kaur Nameet, Jabalia Neetu, **Bansal Hina** (2012) Studies on biochemical aspects of thermostable superoxide dismutase isolated from *Jatropha curcas* root. *Biologix*, 1st edition, 173-176.
45. **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
46. Neetu Jabalia, **Hina Bansal**, Rahul VV, Nidhee Chaudhary, Alka Grover and Jitendra Narayan (2011) Role and utilization of web services in bioinformatics. *Journal of Natural Science, Biology and Medicine*, 2 (3), 90.
47. Chander, S., Seghal, M., Goel, R., **Bansal, H.**, Singh, M., and Kalra, N. (2005) Maize Information System - A User's Friendly Software for Growth Assessment and Inputs' Options *Bioinformatics India Vol. 3(2): 33-36*.
48. Chander, S., Seghal, M., Goel, R., **Bansal, H.**, Singh, M., and Kalra, N. (2005) Chickpea- A Traditional Source of Protein: A software for crop growth, inputs' requirement, pedigree and associated pests *Bioinformatics India Vol. 3(2): 53-56*.
49. **Bansal, H.**; Kansal, S.; Goel, R.; Anand, P.; Batra, K.; Pillai, M.S.; Kapoor, S.; Mishra, A.K.; Ahmed, O.; Chander, S.; Seghal, M.; Pathak, H. and Kalra, N. (2004) Information System for Rice (ISR)-The golden cereal. *Bioinformatics India* 2(3):119-122.
50. Anand, P.; **Bansal, H.**; Kansal, S.; Goel, R.; Ahmed, O.; Mishra, A.K.; Batra, K.; Chander, S.; Pathak, H.; Seghal, M.; Soni, U.A. and Kalra, N. (2004) Soil information system: Evaluating soil moisture and fertility indices for land capability classification. *Bioinformatics India*. 2(4): 35-38.
51. Goel, R.; Kansal, S.; **Bansal, H.**; Anand, P.; Chander, S.; Seghal, M.; Batra, K.; Pillai, M.S. and Kalra, N. (2004) Rice pest informatics-IPMIS (Integrated Pest Management Information System). *Bioinformatics India* 2(4): 87-91.
52. Kansal, S.; **Bansal, H.**; Goel, R.; Anand, P.; Chaudhry, H.B.; Batra, K.; Pillai, M.S.; Kapoor, S.; Mishra, A.K.; Ahmed, O.; Chander, S.; Seghal, M. and Kalra, N. (2004) Informatics for pedigree and morphological diversity in wheat *Bioinformatics India* 2(4): 39-42.

**PAPERS
PRESENTED/ACCEPTED
IN CONFERENCES**

1. Hiya Luthra, T. Arun Sai Nihith, V. Sri Sai Pravallika, Raghuram Shree R, Ankur Chaurasia and **Hina Bansal*** (2021) New Paradigm in Healthcare Industry Using Big Data Analytics. IOP Conference Series: Material Science and Engineering.
2. "A systematic computational and protein – protein interaction network analysis approach for unveiling the proteins responsible for hyperthyroidism in human" at International conference on New Horizons in Biotechnology (NHBT 2019) organised by CSIR- National Institute of Interdisciplinary Science and Technology, and Biotech Research Society, at Thiruvanthapuram, India during 20-24 Nov. 2019.
3. "Computational identification of essential enzymes as potential drug targets in Shigella flexneri pathogenesis using comparative metabolic pathway analysis" at Wellcome Genome Campus – Scientific Conference : Applied Bioinformatics & Public Health Microbiology held at Wellcome Genome Campus, Hinxton Cambridge, UK during 5 – 7 June 2019.
4. Oral presentation on Molecular modelling and in – silico characterization of cytosolic alanine aminotransferase 1 (ALT-1) from human – an enzyme plays a key role in cellular nitrogen metabolism and in liver gluconeogenesis at the "World Biotechnology Congress" (WBC 2017), Endling Scientific Organization New Delhi held during 20- 22 Feb-2017.
5. Homology modelling and docking studies on riboflavin transporter as a receptor for targeting madras motor neuron disease in human in 2016 NextGen Genomics, Biology, bioinformatics and technologies (NGBT) conference held on 3 to 5 October 2016, COCHIN, KERALA, INDIA.
6. 'Role of Bioinformatics in GMOs analysis' in International seminar on 'Biosafety and Regulatory Affairs on Genetically Modified Organism (GMOs) and Genetically Engineered (GE) plants' organized by Amity Institute of Biotechnology in association with Biotech Consortium India Limited, New Delhi on 09 September 2016 at Amity University, Uttar Pradesh, Sec. 125, Noida.
7. In - silico Characterization of Smad nuclear interacting protein 1 (SNIP1) from Human," *International Conference* on Innovative Research in Biotechnology, Biomedical Sciences, Bioinformatics and Stem Cell Applications (BSC-2016) *Organized by "Krishi Sanskriti"* Jawaharlal Nehru University, New Delhi (30 January 2016)"
8. '*in - silico*' characterization and structure prediction of RuBisCo large subunit protein present in C₃ metabolic pathway of wheat (*Triticum aestivum*) in International Conference on Biotechnology and Bioinformatics (ICBB - 2014) organized by ICSCCB, Pune, India

	<p>On 1 – 2 February 2014.</p> <p>9. ‘Application of comparative genome analysis in Evolution and Medicine’ in National Conference on “New Trends in Bioinformatics” Theme: New Methods, Softwares, Databases, Web-tools of Bioinformatics organized by Supercomputing Facility for Bioinformatics & Computational Biology, IIT Delhi, New Delhi. (July 30-31, 2012)</p> <p>10. ‘Significant role of Systems Biology in Healthcare’ in National Conference on “New Trends in Bioinformatics” Theme: New Methods, Softwares, Databases, Web-tools of Bioinformatics organized by Supercomputing Facility for Bioinformatics & Computational Biology, IIT Delhi, New Delhi. (July 30-31, 2012)</p> <p>11. “Identification and Characterization of miRNAs from pea aphid (<i>Acyrtosiphon pisum</i>) through computational approaches”, International Conference on Biosciences and Bioengineering: A collaborative Approach. Organized by Department of Biotechnology, IMS Engineering College, Ghaziabad, U.P. (July 06-07, 2012).</p> <p>12. ‘Role and Utilization of Web Services in Bioinformatics’ in International Interdisciplinary Science Conference on ‘Bioinformatics: An Interface between Computer Science and Biology’ organizeds by Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi, (November 15-17, 2011)</p>
<p>AWARDS & HONOURS/ DISTINCTIONS</p>	<p>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 “<i>Oncology Conundrums:2024</i>” held at New Delhi in May 2024.</p>
<p>MEMBERSHIP with Professional/ Academic bodies</p>	<ul style="list-style-type: none"> • Life member: Bioinformatics Club for Experimenting Scientists (BIOCLUES) Society • Life member: Society for Bioinformatics and Biological Sciences