







AMBUJ KUMAR

DOCTORAL RESEARCHER (PMRF) IN DIGITAL HEALTH

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hl=en&user=B1k2WssAAAAJ](https://scholar.google.com/citations?hl=en&user=B1k2WssAAAAJ)

DRY LAB SKILLS

- Operating System: Windows/Linux/Ubuntu
- Languages: R, Python
- Web Development: PHP, SQL, HTML, CSS
- Databases: Pubmed, cBioPortal, GEO, GDSC, DepMap
- Others: Big data analysis (RNA/DNA seq), MS Office, ImageJ, XAMPP, Molecular Docking, Primer designing

WET LAB SKILLS

- Polymerase chain reaction (PCR)
- Agarose Gel Electrophoresis
- Western Blotting
- Cloning
- UV-Vis Spectrophotometer

INTERNSHIPS & WORK EXPERIENCE

1. Summer Research Fellowship at IISc Bengaluru

Duration: November 2020 to January 2021
Title: Construction of RAD51D shRNA resistant plasmid
Supervisor: Prof. Ganesh Nagaraju, IISc Bengaluru

2. CSIR-Summer Research Training Program (Online)

Duration: June 2020 to August 2021
Title: Nutraceuticals and Functional Food
Supervisor: Prof. Debashis Dutta

3. Teaching Assistant (TA)

Indian Institute of Technology Hyderabad
August 2021 to June 2023

- Taking practical of subject "Big Data Biology and Biological Databases"
- Assisting professors in academic activities

4. Teaching Assistant (TA) [PMRF]

NITTE University: Introduction to Machine learning
January 2023 to April 2024

EDUCATION HISTORY



Doctor of Philosophy (Ph.D) in Digital Health

Institution: Indian Institute of Technology Bombay

Enrolled in: August 2023

Prospective project: Multi-omics AI/ML driven approach



Master of Technology in Medical Biotechnology

Institution: Indian Institute of Technology Hyderabad

GPA: 9.12 Year of Graduation: June 2023

Thesis: MyeloDB: a multi-omics resource for multiple myeloma

Supervised by: Dr. Rahul Kumar, Assistant Professor IITH



Bachelor of Technology in Biotechnology

Institution: Noida Institute of Engineering & Technology, Greater Noida

GPA: 8.91 Year of Graduation: June 2021

Thesis: Investigation of inhibitory potential of bioactive compounds of *Allium sativum* and *Allium cepa* against COVID-19: Molecular Docking Approach

Supervised by: Dr. Fahad Khan, Assistant Professor NIET, Gr Noida

AWARDS / ACCOMPLISHMENTS



Prime Minister Research Fellowship (PMRF) Ministry of Education (MOE)



Research Appreciation award 2023

Indian Institute of Technology Hyderabad



Qualified GATE BT 2021

AIR 508



Awardee of Summer Research Fellowship Program (SRFP) 2020 BY INSA-IASc-NASI

Under Prof. Ganesh Nagaraju, Dept. of Biochemistry, IISc Bengaluru
Project title: Construction of RAD51D shRNA resistant plasmid



3rd Prize in Poster presentation conference 2020

Title: "An In silico approach towards screening of potent inhibitors against COVID - 19 from *Allium sativum* and *Allium cepa*"
Organization: Sharda University, Greater Noida



2nd Prize in Poster presentation conference 2019

Title: "In silico screening of potential organosulfur compounds of *allium sativum* against emerging immune checkpoint targeting PD-1"
Organization: Noida Institute of Engineering and Technology, Gr. Noida

RESEARCH PUBLICATIONS



Khan, F., Pandey, P., Mishra, R., Arif, M., **Kumar, A.**, Jafri, A., & Mazumder, R. (2021). Elucidation of S-allylcysteine role in inducing apoptosis by inhibiting PD-L1 expression in human lung cancer cells. *Anti-Cancer Agents in Medicinal Chemistry (Formerly Current Medicinal Chemistry-Anti-Cancer Agents)*, 21(4), 532-541.



Pandey, P., Khan, F., **Kumar, A.**, Srivastava, A., & Jha, N. K. (2021). Screening of potent inhibitors against 2019 novel coronavirus (Covid-19) from *Allium sativum* and *Allium cepa*: An in silico approach. *Biointerface Res Appl Chem*, 11(1), 7981-7993.



Viswanathan, A., Kundal, K., Sengupta, A., **Kumar, A.**, Kumar, K. V., Holmes, A. B., & Kumar, R. (2022). Deep learning-based classifier of diffuse large B-cell lymphoma cell-of-origin with clinical outcome. *Briefings in Functional Genomics*.



Kumar, A., Kumar, K. V., Kundal, K., Sengupta, A., Sharma, S., & Kumar, R. (2024). MyeloDB: A multi-omics resource for Multiple Myeloma. *Functional & Integrative Genomics*, 24(1), 17.



Kunjulakshmi, R., **Kumar, A.**, Kumar, K. V., Sengupta, A., Kundal, K., Sharma, S., ... & Kumar, R. (2024). AgingBase: a comprehensive database of anti-aging peptides. *Database: The Journal of Biological Databases and Curation*, 2024.

BOOK CHAPTERS



Advancement of in silico tools for stem cell research. **Ambuj Kumar**, Keerthana Vinod Kumar, Kunjulakshmi R, Kavita Kundal, Avik Sengupta, Rahul Kumar [Chapter "in press" for Elsevier's upcoming book "Computational Biology for Stem Cell Research.]