Amina Hussain

Place of birth: Baramullaha, India | **Nationality:** Indian | **Phone number:** (+91) 09149771155 (Mobile) | **Email address:** aaminahussain15@gmail.com | **LinkedIn:** Amina Hussain | **Address:** 193401, Baramullaha, India (Home) |

Address: No. 14, Lane 26, Zhengbin Road, Zhongzheng District, Keelung City 202, 202, Keelung, Taiwan (Work)

ABOUT ME

Motivated biotechnology researcher with a Master's degree in Bioscience & Biotechnology from National Taiwan Ocean University and a Bachelor's degree in Biotechnology from Era University, India. Passionate about cancer nanomedicine with hands-on experience in nanomaterial synthesis, in vitro and in vivo cancer models, and natural product-based therapeutics. Proven ability to work across molecular biology, cancer biology, and materials science for translational research in triple-negative breast cancer (TNBC).

RESEARCH INTEREST

Investigating the molecular mechanisms underlying the development and progression of various types of cancer.

Studying the role of specific genes or proteins in cancer initiation, growth, and metastasis.

Exploring novel therapeutic approaches and targeted therapies for different types of cancer.

Understanding the mechanisms of drug resistance in cancer cells and developing strategies to overcome it.

Exploring the potential of immunotherapy and immunomodulatory approaches in cancer treatment.

EDUCATION AND TRAINING

13/09/2022 – 16/01/2025 Keelung , Taiwan

M.SC. IN BIOSCIENCE & BIOTECHNOLOGY National Taiwan Ocean University, Taiwan

Molecular Biology, Special Topics in Analytical Chemistry, Application of Genome editing in the gene therapy, Special topics in Microbiology, Cell signaling and Human disease, Scientific paper Reading , writing and Database application in life science , seminar and Academic Research Ethics

Website https://www.ntou.edu.tw/ | **Field of study** Cancer Biology , molecular biology | **Final grade** GPA 4.0/ 4.0 |

Level in EQF EQF level 7 | **National classification** Masters | **Type of credits** Academic Credits (Graduate level) |

Number of credits 24 |

Thesis Polysaccharide-Fatty Acid Derived Carbon Nanoparticles for Anti-Metastasis in TNBC via FASN Downregulation and Apoptosis Induction

10/08/2018 – 15/08/2021 Lucknow, India

B.SC. IN BIOTECHNOLOGY Era University

Cell Biology, Basic professional Communication, Microbiology, Plant science, Computer fundamentals, Enzymology, Genetics , Human physiology, Fundamentals of Immunology, Medical Biotechnology, Developmental Biology,

Recombinant DNA technology, Proteomics, Genomics and Metabolomics, Biomolecules and Metabolism, Molecular Biology, Industrial and Pharmaceutical Biotechnology and Biostatistics.

Website https://www.erauniversity.in/ | **Field of study** Biotechnology | **Final grade** CGPA 7.1/10 | **Level in EQF** EQF level 6 |

National classification Bachelors

PROJECTS

01/10/2022 – 01/01/2025

"Polysaccharide-Fatty Acid Derived Carbon Nanoparticles for Anti-Metastasis in TNBC via FASN Downregulation and Apoptosis Induction"

linoleic acid-incorporated alginate carbon nanoparticles (ALA-CNPs-240) with potent anti-metastatic effects against TNBC. These nanoparticles selectively induced mitochondrial-mediated apoptosis in cancer cells (4T1, MDA-MB-231) while sparing normal cells (MCF10A), due to linoleic acid's affinity for FABPs overexpressed in TNBC. ALA-CNPs-240 inhibited migration and invasion by disrupting Arp2/3-mediated F-actin polymerization and triggered ROS generation, DNA damage, and cell cycle arrest. Their dual functionality offers a promising, targeted therapeutic strategy for TNBC.

DISSERTATION

01/06/2021 – 31/07/2021

Antioxidant activity of solanum nigram extract and its cytotoxic effect against triple negative breast cancer cells MDA-MB-231 at Era university Lucknow

1. To evaluate the antioxidant activity of Solanum nigram extract (leaves) against brea cancer cell MDA-MB-231.
2. To evaluate the cytotoxicity activity of Solanum nigram leave extract.
3. General characterization and culture of MDA-MB-231 human breast cancer cells.

PROJECT INTERN

09/2020 – 12/2020

Observership

Part of a multicenter , double-blind , study evaluating Filgotinip in rheumatoid arthritis patients
King George's Medical University, Lucknow, India

04/2021 – 06/2021

Industry and Training Experience

QA/QC Trainee
Hi-Tech Medics Pvt. Ltd., Lucknow, India

VOLUNTEERING

10/03/2020 – 09/08/2020 kashmir , india

COVID-19 outreach & Volunteering

Home care support and SPO2 screening during the pendemic

Lucknow ,India

Project Wellness-Destination Simple

QA/QC Trainee

Lucknow ,India

Music and Language Learning Workshop

New Delhi, India

Aerospace Aviation Academy

SKILLS

molecular and cellular immunology | nanomaterials | Analytycal and Research | Material characterization (Confocal microscopy optical microscopy SEM Raman UV) | In Vivo and In Vitro experiments | Cancer biology | Gel Electrophoresis Western Blotting Southern Blotting | Cell Culture (cell viability assays like mtt, wst1, wst8, apoptosis and cell cycle) | DCF analysis

PUBLICATIONS

2024

Hussain, A. et al. (2024). Fluorescent carbon dots for labeling of bacteria: mechanism and prospects

Publisher: Analytical and Bioanalytical Chemistry.

CONFERENCES AND SEMINARS

25/05/2023 – 26/05/2023 Taiwan

International Advanced Drug Delivery symposium

14/05/2019 – 14/05/2019 Lucknow, India

Popular Lecture series on Biotechnology

LANGUAGE SKILLS

Mother tongue(s): **URDU** | **KASHMIRI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C1	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HOBBIES AND INTERESTS

Music, Sports and Reading Books

Write here the description...

RECOMMENDATIONS

Dr. Shiow-Yi Chen Professor, Dept. of Bioscience & Biotechnology, NTOU, Taiwan

During my Master's program, I conducted research under the supervision of Professor Shiow-Yi Chen, who served as my academic guide. She provided valuable mentorship throughout my thesis work, helping me develop strong research, analytical, and academic writing skills.

Email sherry0930@mail.ntou.edu.tw

Dr. Chih-Ching Huang Professor, Dept. of Bioscience & Biotechnology, NTOU, Taiwan

During my Master's program, I conducted research under the supervision of Professor Dr. Chih-Ching Huang (Co-advisor) , who served as my academic guide. He provided valuable mentorship throughout my thesis work, helping me develop strong research, analytical, and academic writing skills.

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I hereby solemnly declare that all the information provided here is as per the best of my knowledge.

Taiwan , 05/03/2025

Amina Hussain