

FARZANA AKTER MUNNY

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Research Experience

Center for Health Innovation, Research, Action, and Learning Bangladesh

Dhaka, Bangladesh

Research Intern, Population Health Studies Division

Oct'2023-Present

Principal Investigator: Md. Jubayer Hossain

Project: Breast Cancer Epidemiology and Mental Health in University Students

Background: Addressing the rising concern of breast cancer and mental health issues among university students in Bangladesh.

Question: What are the predominant risk factors for breast cancer, and how do stress and anxiety levels correlate with the mental health of university students?

Experiment: Conducted extensive literature reviews on breast cancer epidemiology and participated in fieldwork for a mental health study among students.

Hypothesis: Novel statistical models can predict breast cancer risk based on identified factors, and there is a significant correlation between students' mental health and their perceived stress levels.

Preliminary Results: Developed three statistical models for breast cancer prediction; ongoing analysis of mental health data to establish a university screening system.

Master of Pharmacy Thesis

Dhaka, Bangladesh

Graduate Researcher

Jan'2021-July'2022

Principal Investigator: Dr. Md. Aslam Hossain

Project: Phytochemical and Biological Investigation of *Justicia gendarussa* Plant

Background: Exploring the medicinal potential of *Justicia gendarussa* through phytochemical analysis.

Question: What bioactive compounds are present in *Justicia gendarussa*, and what are their pharmacological properties?

Experiment: Employed TLC, PTLC, UV-Vis spectrophotometry, and NMR data analysis to identify compounds; conducted in-vivo and in-vitro biological studies using a mouse model.

Hypothesis: The plant contains compounds with significant analgesic, antidiabetic, and antimicrobial properties.

Preliminary Results: Isolated four bioactive compounds indicative of the plant's potential therapeutic uses in clinical studies.

Bachelor of Professional Pharmacy Project

Dhaka, Bangladesh

Undergraduate Researcher

Jan'2019-Dec'2019

Principal Investigator: Muhammad Asaduzzaman, PhD

Project: A Prospective Study on Irrational Prescribing and Drug-Drug Interactions

Background: Investigating prescription patterns and potential drug-drug interactions in various medications.

Question: What are the common prescription errors and drug-drug interaction patterns in medication prescribing?

Experiment: Surveyed patients with diverse drug prescriptions to observe prescribing patterns and potential interactions.

Hypothesis: Prescribing patterns often include significant errors and complex interaction patterns, particularly in pharmacokinetics and pharmacodynamics.

Preliminary Results: Identified a total of 87 drug-drug interactions among 972 drugs from 231 prescriptions, highlighting major prescribing errors and interaction complexities.

Professional Experience

Eskayef Pharmaceuticals Ltd.

Quality Control Executive

Dhaka, Bangladesh

Aug'2022 – Nov'2022

- Ensured the total quality of the product according to cGMP/GLP
- Sampling, analyzing, and documenting intermediate, bulk, finished, experimental batches (EB), and commercial stability products according to SOP, Control Direction, and Pharmacopeia

Dhaka Medical College and Hospital

Hospital Training

Dhaka, Bangladesh

Jun'2019 – Nov'2019

- Patient management and prescribing patterns in Surgery, Medicine, Pediatrics, Cardiology, Nephrology, Emergency, Pharmacy and other clinical departments

Square Pharmaceuticals Ltd.

Industrial Training

Dhaka, Bangladesh

February 2019

- Practical knowledge of different departments of production, quality assurance, engineering and warehouse, HVAC system, current Good Manufacturing Practices (cGMP), and regulatory activities

Education

University of Dhaka

Master of Pharmacy (Field: Pharmaceutical Chemistry) | GPA 3.54 / 4.0

Dhaka, Bangladesh

2019 – 2020

- Studied Pharmaceutical Analysis, Advanced Medicinal & Synthetic Chemistry, Chemical Biology & Molecular Pharmacology, Pharmaceutical Biotechnology & Biopharmaceuticals, Neutraceuticals & Phytomedicines, Research Methodology, thesis work

University of Dhaka

Bachelor of Pharmacy (Professional) | GPA 3.30 / 4.0

Dhaka, Bangladesh

2015 – 2019

- Studied Organic Chemistry, Inorganic Chemistry, Physiology and anatomy, Pharmacology, Pharmaceutical Technology, Microbiology, Biochemistry and Molecular Biology, Medicinal Chemistry, Biotechnology, Biopharmaceutics, Clinical Pharmacy, Statistics, Disease Management, Pharmacy Practice, and Quality Control

Technical Skills

Programming Languages: Python, R; **Analytics Software:** SPSS, Microsoft Excel, Microsoft Word, Mendeley; **Survey Tools:** KoboToolBox, Google Forms; **Creative (Non-Technical):** Collaboration, Relationship Management, Communication Strategy, Market Research; **Interests:** Exploring nature, drawing

Linguistic Proficiency

- **English-IELTS Academic Score 7** (Listening: 7.5, Reading: 6.5, Writing: 7, Speaking: 6)
- **Bengali** (Native Speaker)

Coursework & Training

- **Graduate Research Training:** From a non-profit organization Youth Society for Research and Action - (**YSRA**) according to the guidelines and Manual from the “**University of Oxford**”
- **R for Research, R for Bioinformatics:** From a non-profit organization Center for Health Innovation, Research, Action, and Learning - Bangladesh
- **Drug Discovery:** Online non-credit courses completed through "Coursera" authorized by the University of California San Diego
- **Anatomy: Human neuroanatomy:** Online non-credit courses completed through "Coursera" authorized by the University of Michigan
- **Mind control: Managing your mental health during COVID-19:** Online non-credit courses completed through "Coursera" authorized by the University of Toronto
- **Understanding the Brain: The Neurobiology of Everyday Life:** Online non-credit courses completed through "Coursera" authorized by the University of Chicago

Extra-curricular Activities

- Participated in the 18th International Congress of **International Society for Ethnopharmacology** & and 5th **International Congress of Society for Ethnopharmacology, India (ISE-SFEC 2018)** held at the University of Dhaka, Bangladesh
- Attended the **1st CAS** (Chemical Abstract Services - **A Division of the American Chemical Society**) Academic Conference in Bangladesh 2023, held at the University of Dhaka, Bangladesh.

References

- **Name: Dr. Md. Aslam Hossain**
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- **Name: Dr. Firoj Ahmed**
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