BUSHRA HAQUE

Honours Biochemistry (B.Sc.), Year IV

289-684-8890
haqueb2@mcmaster.ca
www.linkedin.com/in/bushra-haque

Education

Honours Bachelor of Science - Biochemistry IV *Sept 2017 – Present*

McMaster University, Hamilton, ON

- Cumulative GPA: 11.0/12
- Gained laboratory and research skills through course completion in:
  - Integrated Science I, II (ISCI 1A24, 2A18)
  - Inquiry in Biochemical Techniques (BIOCHEM 2L06)
  - Introduction to Microbiology and Biotechnology (BIO 2EE3)
  - Genetics (BIO 2C03)
  - Organic Chemistry I, II (CHEM 2OA3, 2OB3)
  - Microbial/Eukaryotic Genetics (MOLBIO 3O03, 3II3)
  - Practical Bioinformatics in the Genomics Era (BIOCHEM 3BP3)
  - Metabolism and Regulation (BIOCHEM 3D03)

St. Thomas More Catholic Secondary School *Sept 2013 – June 2017*

1045 Upper Paradise Rd, Hamilton,ON

- Earned O.S.S.D
- Honour Roll recipient with grade point average of 95%
- Community involvement through executive role commitments

Research Experience

BIOCHEM 3R06 Research Project *Sept 2019 – April 2020*

McMaster University, Hamilton, ON

- Completed a research project under supervision under the Department of Pathology and Molecular Medicine
- Analyzed DNA methylation and QF-PCR data to characterize two patients exhibiting genome-wide mosaic paternal uniparental disomy

Work Experience

Lab Assistant - OQMT *Aug 2019 – April 2020*

McMaster Nuclear Operation & Facilities

- Use of Excel to create effective databases mandatory for record keeping of mandatory training documents for review by the Canadian Nuclear Safety Commission
- Updated and created new safety procedures, forms and presentations for use in safety training programs with Unipoint
- Conducted direct research and internal audits to improve training program and increase office accessibility

Administrative Assistant *April 2019 – Aug 2019*

McMaster Nuclear Operation & Facilities

- Monitored security access to Reactor and High-Level Laboratory Facilities
- Coordinated weekly tours of various facilities through use of effective skills in communication and organization
- Extracted and compiled daily cycling data and fuel core change documents of the McMaster Nuclear Reactor to update relevant databases

To be able to contribute acquired undergraduate knowledge and laboratory skills towards a research position.

Qualifications & Skills

WET LAB SKILLS

- Polymerase Chain Reaction (PCR)
- Gel electrophoresis
- SDS-PAGE
- Affinity, column, thin layer chromatography
- Blood mononuclear cells isolation
- Hematoxylin and eosin and Congo red staining
- Bradford protein assay
- *In vivo* experiments using *Dugesia tigrina* (planaria), crickets and green peach aphids

DRY LAB SKILLS

- I*n silico* modeling using PyMOL
- Use of BLAST, Pfam and Prosite tools
- Construction and visualization of phylogenetic trees with Clustal, Mesquite, CIPRES and Archaeopteryx
- Gene ontology interpretations using DAVID, KEGG and CARD
- Genome assembly with VELVET and Galaxy
- RNA-, bisulfite-seq data analysis
- X-ray structure solution, refinement and analysis with Phenix, Coot

Awards & Scholarships

2020 - NSERC Undergraduate Student Research Award Recipient

2019 - Scinapse Undergraduate Science Case Competition (Gold Recipient)

2018 - McMaster Energy Case Competition (Silver Recipient)

2017 - McMaster Entrance Scholarship Award

2017 - Chemistry Subject Award

2017 - Vida Dent Memorial Scholarship Award

BUSHRA HAQUE

Honours Biochemistry (B.Sc.), Year III

289-684-8890
haqueb2@mcmaster.ca
www.linkedin.com/in/bushra-haque

Work Experience

Ontario Liberal Party Call Centre Representative *May 2018 – July 2018*

Call Centre Technologies, Hamilton, ON

- Surveyed registered voters in Ontario ridings for provincial elections
- Provided customer service assistance regarding election-related inquiries

Cashier *Aug 2015 – Sept 2017*

Shoppers Drug Mart Pharmacy, Hamilton, ON

- Provided front line customer service for front store, cosmetics and pharmacy departments
- Completed transactions and returns of Shoppers Drug Mart and OLG LOTTO products
- Accurately scanned/entered product data and positively communicated with customers
- Answered inquiries regarding location of product, rain-checks, refunds, PC Optimum program

Volunteer Experience

President (formerly VP Administration) *Sept 2018 – Present*

- Responsible for leading executive team meetings
- Plan and coordinate astronomy themed events for the university
- Developing skills in communication, organization, leadership and networking

Ontario University Fair Representative *Sept 2019, 2018*

- Served as a McMaster University representative for Integrated Science I and Life Sciences I programs to provide post-secondary education information to prospective students
- Informed students about program of interest, admission requirements and student life at McMaster
- Developed skills in communication, leadership and networking

Merit Judge *March 2019, May 2020*

Bay Area Science and Engineering Fair (BASEF)

- Acted as a participating judge for the annual BASEF event for analysis and grading of Grade 7– 12 science and engineering-based projects
- Engaged in scientific communication and acted as a mentor in the facilitation of research process for young students

Publications

PEER REVIEWED JOURNAL ARTICLE

1. **Haque B**, Ahmed M, Au-Yeung C, Wang P. Biodegradable hemp plastic as a model for bioplastics, sourced from marijuana byproduct. *Undergraduate Research in Natural and Clinical Science and Technology (URNCST) Journal. 2019;*3(9). doi: 10.26685/urncst.163

2. **Haque B,** Ahmed M, Fogal M, Au-Yeung C, Wang P. Entomophagy as a solution to agricultural greenhouse gas emissions: A research study. *Undergraduate Research in Natural and Clinical Science and Technology (URNCST) Journal*. 2018;2 (3):1-4. doi: https: // doi.org/10.26685 /urncst.46

PRESENTATIONS

1. **Haque B**, Au-Yeung C. Combating the Freshwater Crisis: In vivo Studies Investigating the Elongation of the Loop of Henle. Presented at 2020 WiSTEM Case Competition at McMaster University, Hamilton, ON, Canada, March 18, 2020; PowerPoint

2. **Haque B**, Ahmed M, Au-Yeung C, Hon C, Stokes A. CortiCare: Advances in Quantifying Anxiety. Presented at 2019 Frontiers of Healthcare Conference at St. Michael's Hospital, Toronto, ON, Canada, July 7, 2019; PowerPoint

3. **Haque B**, Ahmed M, Au-Yeung C, Wang P. Biodegradable hemp plastic as a model for bioplastics, sourced from marijuana byproduct. Presented at 2019 Scinapse Case Competition at University of Ottawa, Ottawa, ON, Canada, March 23, 2019; Poster.