

Curriculum Vitae, August 2022

MD ABUL KALAM AZAD

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Education

BSc (Honors) Major in Biochemistry and Biotechnology | 2021

Department of Biochemistry & Biotechnology,

University of Science and Technology Chittagong

CGPA: 3.78 on a scale of 4.00

Awards

2020 | Selected for Youth Council of Foreign Ministers Virtual Summit *organized by* OIC Youth Forum

2019 | Nominated for 1st National Biotechnology Summer Camp, Bangladesh

2019 | The Best Idea Poster Presentation Award in the *1st Science Carnival conference Organized by Chittagong University Scientific Society, Bangladesh*

2019 | The Best Idea Poster Presentation Award in the *World Environment Day conference Organized by Chittagong University Scientific Society, Bangladesh*

2018 | The Best Research Poster Presentation Award in the *World Environment Day conference Organized by Chittagong University Scientific Society, Bangladesh*

Professional Affiliations

Biochemist | March 2021-Present

Ibn Sina Diagnostic and Imaging Center, Dhaka 1209, Bangladesh

Role: **Automated biochemical and Immunological test, RT PCR, QC maintenance**

Research Assistant | Aug 2019-Present

ABEx Bio-Research Center, Dhaka1230, Bangladesh

Role: **Molecular breeding, Nutrition quality assessment**

Research Assistant | Oct 2019-Feb 2020

Bangladesh Council of Scientific and Industrial Research, Chittagong 4220, Bangladesh

Role: **Bacterial growth media preparation, isolation and culture, total viable bacterial count**

Research Intern | 2018-2019

Disease Biology and Molecular Epidemiology Research Group, Chittagong 4331, Bangladesh

Role: **Data Collection, Data entry, Primary data analysis**

Teaching Assistant | Jan 2020-Dec 2020

Department of Biochemistry and Biotechnology, University of Science and Technology Chittagong

Role: **Conduct lab sessions, Assist to prepare teaching materials and plans**

Member | Oct 2019-present

American Society for Microbiology (ASM)

Role: **Supporting community events, workshop and appearance**

Research Skills

Nucleic Acid Extraction and Purification

- Extraction of genomic DNA/RNA from supplied samples
- Purification of Nucleic acids by both column-based method and traditional method
- Proper storage of Nucleic Acids.

Polymerase Chain Reaction (PCR) and Gel Electrophoresis

- Primer Design
- Performed Real-Time PCR for plant DNA using Rotor Gen Q
- Performed Conventional PCR for detecting Rota-Virus from suspected samples.
- Agarose Gel electrophoresis for the separation of DNA
- Data analysis with Light Cyclers, Veri-Q, and Rotor gen Q software.

Gene Sequencing

- Plant gene sequencing using ABI 3730 XL, Hitachi Ltd., USA

Biochemical Test and Clinical Diagnosis

- Sample collection, preparation, analysis, and proper storage
- Quantifications of blood cells, and hormones
- Estimation of blood sugar, lipid profile, SGPT, SGOT, Protein, Uric acid from blood samples.
- Routine test for Urine, EGFR, ACR, Urea, Electrolytes,
- Using biomarkers for immunological and hormonal elevation assays.
- Culture sensitivity assay for testing antibiotic resistance
- Media preparation, bacterial culture, and sterilization

Computational Biology and Bioinformatics

- Drug design, Protein networks, Homology modeling, docking, and ADME-T using Schrodinger suite, Modeller, PyRx, AutoDock Vina,
- Protein-ligand, surfactant-drug interactions, using Desmond, YASARA.
- Basic programming with Python and R
- Basic data analysis using R program, data visualization with GraphPad Prism,
- Multiple sequence alignment, and phylogeny analysis using MEGA, ClustalW,

Extra-curricular activities

- Founder and Editor-in-Chief** at [Bio Daily](#) (A Science Media) | March 2020-Present
- Institute Representative** at Volunteer for Bangladesh | Jan 2019- Jun 2019
- Campus Ambassador** at 5th international Conference on Natural Science and Technology 2018

Conference Participation

-4th IPFS-ICBHA 2019-GNOBB Conference, Bangladesh | November 2019

-5th International Conference on Natural Science and Technology, Bangladesh | March 2018

Research Interest

Genetics, Molecular tool development, Cellular interaction at molecular level, Host-Pathogen interactions, and Computational Biology

Publications

(1) Amin, S., Ghosh, S., Biswas, B., Arifuzzaman, M., **Azad, M.A.** and Siddiki, A.Z., 2020. Molecular identification of four medicinal plants using DNA barcoding approach from Chittagong, Bangladesh. *Journal of Advanced Biotechnology and Experimental therapeutics*, 3(3), pp.268-272.
doi.org/10.5455/jabet.2020.d134

(2) Biswas, B., **Azad, M. K.**, Absar, N., Islam, S., Amin, S. (2020). Isolation and Identification of Pathogenic Bacteria from Fresh Fruits and Vegetables in Chittagong, Bangladesh. *Journal of Microbiology Research*, 10(2), 55-58. [doi:10.5923/j.microbiology.20201002.03](https://doi.org/10.5923/j.microbiology.20201002.03)

(3) The potential of phytochemicals against epidermal growth factor receptor tyrosine kinase (EGFRK): An insight from molecular dynamic simulations (Under review).

(4) MicroRNA-mediated regulation to iron-deficiency stress responses in food crops (under review).

References

Dr. Atikur Rahman

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