

Sayed Huzaifa Mumit

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Education

University of Science and Technology Chittagong (USTC), Bangladesh *Ongoing*
B.S. (Hons.) **Major** in Biochemistry and Biotechnology
Minors: Biophysical Chemistry • Biostatistics • Pharmaceutical Chemistry • Spectroscopy
Supervisor: Dr. Md. Monirul Islam | *Affiliation:* Bangladesh Bioscience Research Group (BBRG)

Profile Summary

Undergraduate researcher in Biochemistry and Biotechnology with active involvement in RNA biology, genomics, immunology, computational biology, and phytochemistry. I have presented research at multiple national and international conferences and have experience publishing interdisciplinary projects in environmental sustainability and renewable energy. Motivated by long-term scientific curiosity and a commitment to connecting knowledge across life-science disciplines.

Research Experience

Bangladesh Bioscience Research Group (BBRG) *October 2024 – Present*
Undergraduate Researcher, Primary Affiliation

- RNA Biology, Genomics & CRISPR
- Immunology and Computational Biology

Independent Research

Astrophysics, Renewable Energy and Environmental Science *2019 – Present*

Peer-Reviewed Publications

1. **In silico Characterization of Bioactive Phytochemicals as Antivirals Targeting the Reovirus σ_1 Protein for Inhibiting σ_1 -Mediated Host Cell Entry** Eitu Dey, Shipon Dey, Leu Nandi, **Sayed Huzaifa Mumit**, Refatul Arfat, Saifur Rahman Saif, Md. Monirul Islam. *PLOS ONE*, 2026. DOI: 10.1371/journal.pone.0350009
2. **Investigation of the Effectiveness of Using *Luffa cylindrica* to Reduce Water Consumption in Agriculture** **Sayed Huzaifa Mumit**, Alman Sikder. *Trends in Ecological and Indoor Environmental Engineering*, 2(4), 18–27, 2024. DOI: 10.62622/TEIEE.024.2.4.18-27

Preprints Working Papers

1. **Methane Production via Sabatier Reaction Using Hydrogen from Rainwater Electrolysis and Captured Carbon Dioxide** **Sayed Huzaifa Mumit**, Sayed Imon Muhit. Version 1 (2023), Version 2 (2025). DOI: 10.33774/coe-2025-lk4r7
2. **Eco-Friendly and Cost-Effective Water Purification for Highly Polluted and Saline Sources Using Solar-Powered Distillation and Activated Carbon** **Sayed Huzaifa Mumit**, Alman Sikder. Working Paper, Cambridge Open Engage, 2024. DOI: 10.33774/coe-2024-ztkpb
3. **Innovating Eco-Friendly and Sustainable Diapers and Pads from Water Hyacinth and Coconut Coir** Md Danesh Rafin, Abrar Galib Ohe, Nuzhat Arpita, **Sayed Huzaifa Mumit**. Version 1 (2024), Version 2 (2025). DOI: 10.21203/rs.3.rs-5453339/v2

Research Proposals

1. **Exploring Dark Matter Interactions with High-Energy Neutrino Beams** **Sayed Huzaifa Mumit**, Alman Sikder, Abrar Galib Ohe. Research Proposal, 2024.

Research Projects

1. The Role of Buoyancy and Thermal Convection in Flame Orientation Under Gravitational Fields (2019–2020)
2. Luffa-Based Depth Filtration for Microplastic Removal Under Controlled Hydraulic Pressure (2024) [*Finalist – Xylem Global Innovation Challenge 2024*]
3. *In silico* Analysis of Phytochemical Compounds from *Abelmoschus* genus plants (2024–2025)

- 4. *In silico* Analysis of Phytochemical Compounds from *Colocasia* genus plants (2025)
- 5. *In silico* Analysis of Phytochemical Compounds from *Samanea* genus plants (2025)

Conference Presentations (Presenting Author)

- 1. **6th International Conference on Biotechnology in Health and Agriculture** – Global Network of Bangladeshi Biotechnologists.
Prevalence of Iron Deficiency Anemia and Evaluation of Corrected Calcium as a Biochemical Parameter Among Young Adults in Chattogram, Bangladesh
- 2. **RURS 1st International Students Conference 2024**
Trends in Microbial Culture and Antibiotic Sensitivity in Pediatrics
- 3. **Xylem Global Water Challenge 2024**, Stockholm, Sweden
Using Sponge Gourd for Purifying Microplastics
- 4. **Stockholm Junior Water Prize 2023**
Methane Gas Production from Rainwater and CO₂

Peer Review

International Peer Reviewer, *International Journal of Plant and Soil Science* 2025
Manuscript: *Optimizing Sponge Gourd Cultivation: Effects of Chemical Hybridizing Agents on Morphological Traits and Flower Development*

Books

- 1. *From Concept to Publication: A Comprehensive Guide to Preparing a High-Quality Research Manuscript for International Journals*
- 2. *Meta Analysis of Skills: An All-Inclusive Manual*

Skills

Soft Skills	Technical Skills	Computational Tools
Leadership	Phytochemical Analysis	Python
Public Speaking	Molecular Docking	Linux/UNIX Shell
Conflict Resolution	Network Pharmacology	L ^A T _E X
Adaptability	Research & Writing	Cytoscape, AutoDock, SwissADME

Languages

English (Intermediate) | Bengali (Native) | Chittagonian (Native) | Arabic (Reading)

Academic Activities & Teaching

- **Panelist**, The Cambridge Panel: Academic, Cambridge University Press Oct 2025 – Present
- **APS Wiki Scientist**, Wikimedia Foundation / Wikipedia 2024 – Present
- **IAU OAO Venture Translator**, International Astronomical Union 2024
- **Academic Olympiad Trainer**, Deviation Scientific Society 2023 – Present

Scholarships, Fellowships & Grants

- APS Diversity Forum Scholarship – American Physical Society (2024)
- Wiki Scientist Summer Program Scholarship – Wikipedia (2024)
- Oxbridge Scholarships – University of Oxford & Cambridge (2022 & 2023)
- Academia Engineering Publication Grant (2024)
- Trends in Ecological & Environmental Engineering Journal Grant (2024)
- AB Memorial Fellowships (2022)

Awards & Recognitions

- Medalist, 16th National Bangladesh Astro-Olympiad (2022)
- Finalist, Stockholm Junior Water Prize (2023)
- Top-Ranked, People’s Choice – Xylem Global Innovation Challenges (2024)
- Jamboree Award, 10th Bangladesh & 3rd South Asian Association of National Scouts Jamboree (2019)

Professional Memberships

- Member, Biophysical Society (2025 – Present)
- Member, Astrophysics Division, American Physical Society (2024 – Present)
- Member, American Society for Microbiology (2024 – 2025)
- Wiki Scientist, Wikimedia Foundation (2024 – Present)
- Graduate Member, BYLC Graduate Network (2021 – Present)
- Singapore Global Network (2025 – Present)

Special Academic Acceptances

- Aspire Leaders Program, Harvard University (2024)
- Wiki Scientist Summer Program, APS (2024)
- Oxbridge Scholars Program, University of Oxford & Cambridge (2022 & 2023)

References

Dr. Md. Monirul Islam

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NSTU

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Dr. Jeffrey M. Keefer

Adjunct Assistant Professor

Project Management & IT Education, NYU
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Advisor at Wikipedia; Mentored during APS Wiki
Scientist Course