



Curriculum Vitae of

Sheikh Mahatabuddin, Ph. D.

Senior Scientific Officer

Bangladesh Atomic Energy Regulatory Authority (BAERA)

Ministry of Science and Technology (MoST)

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Summary

An accomplished academician and nuclear regulatory specialist with extensive expertise in molecular biology and protein engineering. Skilled in protein expression, purification, and characterization, with a research focus on developing next-generation antibody-based cancer therapeutics. Proficient in cell culture and a broad array of molecular biology techniques, including cDNA cloning (using both traditional primer-based and duplexed DNA methods), sequencing, qPCR, and western blotting. Also experienced in chemical synthesis and in evaluating the efficacy of nanoformulated therapeutics in cancer cell lines and mouse models.

Molecular Biology | Data Analyses/Management/Illustration | Regulatory Activities | Report Generation | Protein purification and Crystallography
| Cancer Biology | PCR | Academic Writing | Chemistry | Mentoring | Teaching | Online Teaching | Curriculum Development | Academic

Educational Background

March, 2017	Ph. D. in Life Science [Specialization: Structural Biology], Hokkaido University, Japan (MEXT Scholar)
July, 2009	M. S. in Chemistry, University of Dhaka, Bangladesh
April, 2008	B. Sc. in Chemistry, University of Dhaka, Bangladesh
October, 2003	H. S. C. (Science), Govt. Abdul Jabber College, Barisal Board, Bangladesh
July, 2001	S. S. C. (Science), Burhanuddin Govt. High School, Barisal Board, Bangladesh

Professional Experiences

August 2022– To date	Senior Scientific Officer , Bangladesh Atomic Energy Regulatory Authority (BAERA), Ministry of Science and Technology (MoST), Dhaka, Bangladesh
June 2022 – July 2022	Senior Research Officer , Bangladesh Forest Research Institute (BFRI), Ministry of Forest, Environment and Climate Change (MoEFCC), Chattogram, Bangladesh (1 st class gazetted job recommended by BPSC)
Oct. 2018 – May 2022	Associate Professor , Department of Nutrition and Food Engineering, Daffodil International University, Dhaka, Bangladesh
Dec. 2020 – March 2022	Adjunct Associate Professor , Department of Food Science and Nutrition, Bangladesh Open University, Dhaka, Bangladesh
Oct. 2019 – Nov. 2020	Adjunct Associate Professor , Department of Computer Science and Textile Engineering, International Standard University, Dhaka, Bangladesh
Oct. 2017 – Oct. 2018	Postdoctoral Research Fellow , Neurology research, Henry Ford Hospital, Detroit, Michigan, USA [Nanoformulation of cancer drugs to ensure bioavailability through enhancing its water solubility]
May 2017 – Oct. 2017	Postdoctoral Scholar , Department of Biological Engineering, Tufts University, Medford, Massachusetts, USA [Protein Engineering and Metzincin Inhibitor Development]
Dec. 2016 – March 2017	AIST-RA , Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan [Structure-function relationship of Type III AFPs]
Oct. 2016 – Nov. 2016	Research Assistant , Laboratory of Biomolecular Adaptation Science, Graduate School of Life Science, Hokkaido University, Sapporo, Japan [Structure-function relationship of Type III AFPs]

Professional Experiences

- Oct. 2013 – Sept. 2016 **AIST Trainee**, Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan [Structure-function relationship of Type I AFPs]
- May 2010 – April 2013 **Lecturer Chemistry**, St. Joseph Higher Secondary School, Mohammadpur, Dhaka

Administrative Experiences

- July 2023 – June 2024 **P I**, Pre-and Post-Treatment Symptom-based Quality of Life of the Head and Neck Cancer Patients of Bangladesh: A piloted Short-time Cohort Study for Regulatory Observation Project, MoST, Bangladesh
- Feb. 2021 – Jan. 2022 **Head**, Department of Nutrition and Food Engineering (NFE), DIU, Dhaka, Bangladesh
- Feb. 2021 – Jan. 2022 **Member**, Academic Council, Daffodil International University, Dhaka, Bangladesh
- Jan. 2020 – May 2022 **Convener**, Quality Assurance Cell of FAHS, IQAC, DIU Bangladesh
- Sept. 2021 – May 2022 **Member**, 4th Industrial Revolution Research Cell, DIU, Dhaka, Bangladesh
- Jan. 2021 – May 2022 **Deputy Director**, Division of Research, DIU, Dhaka, Bangladesh
- 20, Oct. – 20, Nov. 2020 **Convener**, OBE syllabus reformations committee of the Dept. of NFE, DIU, Dhaka Bangladesh
- 10, July – 17, July 2019 **Head (in charge)**, Department of NFE, DIU, Dhaka, Bangladesh
- Oct. 2018 – To date **Group Leader**, Functional Protein Research Group, Bangladesh (FPRG,BD), Mohammadpur, Dhaka

National and Other Expert Committee Membership

- Nov. 2025 – To date Expert member, Syllabus Committee, Department of Mathematics, Kishoregonj University, Kishoregonj-2300, Bangladesh
- 28 Dec 2023– To date Expert Committee for Food Fortification Regulation, Bangladesh Food Safety Authority, Dhaka, Bangladesh
- 29 Nov 2021– To date Expert Committee for Safe Technology for Fruits Ripening, Bangladesh Food Safety Authority, Dhaka, Bangladesh
- 10 Oct 2022– To date Expert Committee on Nutrition for Harmonization of the Food Standards, Bangladesh Food Safety Authority, Dhaka, Bangladesh
- August 2022– To date Research Proposal and Progress Evaluator, Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN), Narayanganj, Dhaka, Bangladesh.

Additional Responsibilities

July 2025– To date	Focal point, Sustainable Development Goal (SDG), and Least Developed Country (LDC), BAERA, MoST, Bangladesh.
Nov 2025– To date	Focal point, National Single Window (NSW), Bangladesh Single Window Implementation Support Unit, BAERA and NBR, Bangladesh.

Invited/Keynote Lectures

9. Invited lecture on “Antifreeze Proteins: Mechanisms and Future Prospects in Agriculture, Medicine, and Industry”, 13 December 2025, The 4th International Conference on Japan-Bangladesh Research and Practice (JBRP2025) of the Network of Bangladeshi Researchers in Japan (NBRJ), Kawasaki, Kanagawa 210-0821, Japan
8. Panel Speaker in the Seminar on ‘Safe Food: Human-induced contamination and adulteration’ 1 February 2025, HORTEX Foundation Conference Room, Sech Bhaban, Manik Mia Avenue, Dhaka.
7. Invited Lecture in the “Primary discussion on ongoing researches in BIRTAN”, 5 May 2024, BIRTAN, Narayanganj, Dhaka, Bangladesh.
6. Keynote speech on “Role of Scientists in the Process of the Development of a Sustainable Environmental Policy” National Conference on Law and Policy, Green University, Dhaka, Bangladesh
5. Invited lecture entitled, “Galley Maintenance and Cabin Safety” Bangladesh Airlines Training Center (BATC), Biman Bangladesh Airlines, Dhaka, Bangladesh. 24 January 2021
4. Invited lecture entitled, “General Hygiene: Food and Health” Bangladesh Airlines Training Center (BATC), Biman Bangladesh Airlines, Dhaka, Bangladesh. 24 January 2021.
3. Invited lecture entitled, “Food Safety and Toxicology” Bangladesh Airlines Training Center (BATC), Biman Bangladesh Airlines, Dhaka, Bangladesh. 24 January 2021.
2. Invited lecture entitled, “COVID-19 Facts and Myths: awareness building workshop for Gono Bhaban SPBN-2” Gono Bhaban SPBN2, Dhaka, Bangladesh. 20 August 2020.
1. Popular talk on Biotechnology entitled “Food adulteration, DNA mutation and Cancer” in the National Biotechnology Fair organized by National Institute of Biotechnology (NIB) and the Ministry of Science and Technology, BSMNT auditorium, Dhaka, 18-19 October 2019

Publications (Book/Book Chapters)

Mahatabuddin S and Tsuda S (2018) Applications of Antifreeze Proteins: Practical Use of the Quality Products from Japanese Fishes: Adaptation Mechanisms and Their Applications (Chapter 17), Survival Strategies in Extreme Cold and Desiccation: Adaptation Mechanisms and their Application, Iwaya-Inoue M., Sakurai M. and Uemura M. (Eds), 321-337, DOI: 10.1007/978-981-13-1244-1_17

Publications

12. Shormi A S, Mamun A A, **Mahatabuddin S**, Muid K A (2024) Toxicological aspects of Chlorpyrifos among different model organisms, *Fundamental and Applied Agriculture*. (Accepted on 21/11/2024)
11. Ishmam S M, **Mahatabuddin S**, Jabber M A (2023) Harnessing the VQE to simulate quantum chemistry in an undergraduate project: Properties of Hydrogen, Oxygen and Water Molecules, *023 IEEE International Conference on Quantum Computing & Engineering (QCE)* [DOI: 10.1109/QCE57702.2023.20329]
10. Lima A, **Mahatabuddin S**, Akter S, Gouri M, Islam M R, Islam M M, Khan M S (2024) Fine-tuning differential expression of osmoregulatory genes enables anadromous migration of Hilsa (*Tenualosa ilisha*) submitted to *Comparative Biochemistry and Physiology, Part B*

Publications

9. Islam M J, Khan S, Chowdhury A B M A, **Mahatabuddin S*** (2024) Pre-and Post-Treatment Symptom-based Quality of Life of the Head and Neck Cancer Patients of Bangladesh: A piloted Short-time Cohort Study submitted to *BMC*.
8. Al-Balushi J, **Mahatabuddin S**, Rahman M M, Uddin M J (2022) Convective heat transport for copper oxide-water nanofluid in an isosceles triangular cavity with a rippled base wall in the presence of magnetic field, *International Journal of Thermofluids*, 16 (100195) (Impact Factor: 9.47) [<https://doi.org/10.1016/j.ijft.2022.100195>]
7. Hossain M M, Chowdhury M A, Hossain J, Rashid M H A, Acter T, Khan M N, **Mahatabuddin S**, Uddin N, (2021) Heavy Metal Pollution in the Soil-Vegetable System of Tannery Estate, *Environmental Nanotechnology, Monitoring and Management*, 100557 [<https://doi.org/10.1016/j.enmm.2021.100557>] (Impact Factor: 5.95)
6. Tsuda S, Yamauchi Y, Khan NMU, Arai T, **Mahatabuddin S**, Miura A, Konodo H (2020), Fish Derived Antifreeze proteins and glycoprotein exhibit different ice-binding property with increasing concentration. *Biomolecules*, 10 (3), 423. DOI: 10.3390/biom10030423 (Impact Factor: 6.06)
5. **Mahatabuddin S**, Fukami D, Arai T, Nishimiya Y, Shimizu R, Shibazaki C, Kondo H, Adachi M, Tsuda S (2018) Polypentagonal ice-like water networks emerge solely in an activity improved variant of ice-binding protein. *Proc. Natl. Acad. Sci. U. S. A.* 201800635 (<https://doi.org/10.1073/pnas.1800635115>). (Impact Factor: 12.78)
4. Ghann W, Kang H, Uddin J, Gonawala SJ, **Mahatabuddin S**, Ali MM (2018) Dendrimer-based nanoparticle for dye sensitized solar cells with improved efficiency. *Journal of Nanomedicine and Nanotechnology*, 9(2), DOI:10.4172/2157-7439.1000496. (Impact Factor: 14.59)
3. **Mahatabuddin S**, Hanada Y, Nishimiya Y, Miura A, Kondo H, Davies PL, Tsuda S (2017) Concentration-dependent oligomerization of an α -helical polypeptide makes it hyperactive. *Scientific Reports* 7, 42501. DOI: 10.1038/srep42501. (Impact Factor: 4.5)
2. **Mahatabuddin S**, Nishimiya Y, Miura A, Kondo H and Tsuda S (2016) Critical ice shaping concentration: A new parameter to evaluate the activity of antifreeze proteins. *Cryobiology and Cryotechnology*, 62 (02), 95-103.
1. Arai T, J. Cheng, **Mahatabuddin S**, Kondo H and Tsuda S (2015), Observation of inhibitory effect of antifreeze protein on progressive freeze-concentration, *Cryobiology and Cryotechnology*, 61 (02), 121-124.

Research Interests

Heat Transfer and Nuclear Reactor Chemistry, Radiotherapy, Food development and preservation, Functional protein isolation, recombinant preparation to industrial applications, Full length peptide or chemical inhibitors of the metzincin, Public Health Related problems, Drug discovery, Innovative foods using natural ice shaping agents, cancer statistics, malnutrition, structural biology, and Computational approaches.

News Coverage of the Research Outcomes

Discovery of high function BpAFP; Discovery of high function BpAFP; How antifreeze proteins inhibit ice crystal growth; A water molecule network similar to ice has been discovered on the molecular surface of AFP, Other News Paper Articles.

Reviewer

1. Journal of Cryobiology and Cryotechnology, Japanese Society for Cyrobiology and Cryotechnology
2. (a) DIU Journal of Science and Technology; (b) DIU Journal of Allied Health Sciences, DIU, Bangladesh
3. Microbial Bioactives, Eman Research, Australia
4. ICMEAS, MIST, Dhaka, Bangladesh

Honors and Awards

- Oct 2016 – Monbukagakusho (MEXT) Honors Scholarship offered by JASSO (Japan Student Services Organization)
March 2017
Oct 2013 – Monbukagakusho (MEXT) scholarship from the government of Japan to pursue
Sept 2016 doctoral degree
July 2001 – Scholarship from Board of Intermediate and Secondary Education for excellent
Sept 2003 result in Secondary School Certificate Examination

Skill Development Trainings (Long-term)

14. Training Course on **the IAEA Safety Standards** Overview 17-21 March 2025, Organizer: IAEA, Tokai University, Japan.
13. Training on **Public Procurement Management** (Goods, Works & Services). 13 July – 30 July 2024, Organizer: Bangladesh Public Procurement Authority (BPPA), ESCB, Ramna, Dhaka, Bangladesh.
12. Training Programme to Familiarize with the Russian Experience of **Regulation on Nuclear and Radiation Safety**. 27 May-7 June 2024, Organizer: Rostekhnadzor, Russian Federation.
11. International Training Course on the **IAEA Safety Standards**. 11-14 March 2024, Organizer: IAEA, Tokai University, Japan.
10. **Strategic Management** Course. 25 November – 13 December 2023 Organizer: SEIP, Bangladesh Institute of Governance and Management (BIGM), MoPA, Government of Bangladesh.
09. IAEA School on **Nuclear and Radiological Leadership for Safety**. 20 February – 03 March 2023 Organizer: IAEA, Tokai University, Japan and European Union.
08. Training Course on **Nuclear Regulatory Oversight aspects of nuclear facilities** under the NuRID Project. 8-12 January 2023, Bangladesh Atomic Energy Regulatory Authority (BAERA), Dhaka, Bangladesh.
07. **Forestry Research and Development** in Bangladesh, 16 June – 02 July 2022, Organizer: COMPASS program of USAID, USFS and BFRI.
06. Workshop on **Bangladesh National Qualifications Framework (BNQF)** and Accreditation Standards & Criteria, 16-17 June 2021, Organizer: Bangladesh Accreditation Council (BAC)
05. Engaging University Faculties for **Capacity Building in Achieving SDGs** on Sustainable Food and Agriculture. 13-17 October 2019. Organizer: FAO, Swedish University of Agricultural Sciences, BARD.
04. **Teaching Research and Professional Development**. 18 July to 3 August 2019, Organizer: Daffodil International University and Purdue University, USA.
03. **Workshop on Preparing Future Faculty (PFF)**: An introduction to teaching and writing for graduate students. March 16-20, 2015, Organized by: University of California Berkeley and Hokkaido University, Sapporo, Japan.
02. Advanced certification to conduct **recombinant DNA experiments**. 10-30 October 2013, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan.
01. Advanced training on **NMR and Circular Dichroism Spectroscopy**. 10-20 May 2016, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan.

Trainings (Short-term)/workshops arranged/delivered/attended

25. Introduction to the International Legal Framework for Nuclear Security. September 2025, Organizer: IAEA (online platform)
24. Guidance for Consultants and Invited Experts on Drafting IAEA Safety Standards. March 2024, Organizer: IAEA (online platform)
23. Communication with the Public in a Nuclear or Radiological Emergency. [Participant] July 2023, Organizer: IAEA Nucleus, online platform
22. Motivational Workshop on Quality Assurance and Accreditation in Higher Education, [Attendee] 26 October, 2021, Organizer: Bangladesh Accreditation Council (BAC)
21. Training on Predatory Publications and Publishers: 1. Research and Data Collection Ethics & 2. How to save your intellectual properties **[Organizer and Resource person]** 31 March 2021, Organizer: Faculty of Allied Health Sciences, Daffodil International University.
20. Workshop on Designing Syllabi to Guide the First Day of Class and Craft an Inclusive Classroom of Biophysics, Organized by: The Biophysicist USA. 28 July 2021 (Participant)
29. *Workshop on Sustainable Development Goals (SDGs): The role of academicians to achieve SDGs by 2029*; Organized by: Daffodil International University, Dhaka, Bangladesh, 27, November 2019, 2015. (Organizer and Speaker)
18. Training Session on the Techniques to write an impactful and scientifically sound abstract **[Organizer and Resource person]** 16 July 2019, Organizer: Faculty of Allied Health Sciences, Daffodil International University.
17. Henry Ford Cancer Institute Multi-Disciplinary Breast Oncology Training [Attendee] 29 September 2018, Organizer: Henry Ford Cancer Institute, Detroit, MI, USA.
16. RCRA Hazardous Waste Awareness Training for radioactive chemicals [Attendee] 17 April 2018, Organizer: Henry Ford Hospital, Detroit, MI, USA.
15. Advanced training by Institutional Animal Care [Attendee] 20 December 2017, Organizer: Institutional Animal Care and Use Committee and Use Committee (IACUC), Henry Ford Hospital, Detroit, MI, USA.
14. Training on Human Resources Management in HFHS [Attendee] 6 November 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
13. Training on clinical general safety [Attendee] 29 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
12. Training on Clinical Hazard Safety [Attendee] 28 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
11. Training on Patient Safety [Attendee] 26 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
10. Training on diversity [Attendee] 25 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
09. Training on basic safety for a hospital employee [Attendee] 24 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
08. Training on online privacy & security course [Attendee] 24 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
07. Training on Clinical Personal Safety [Attendee] 20 October 2017, Organizer: Henry Ford Hospital, Detroit, MI, USA.
06. Biosafety in Research Laboratories (BRL) Training [Attendee] 21 June 2017, Organizer: Tufts University, MA, USA.
05. Bloodborne Pathogens Training [Attendee] 9 May 2017, Organizer: Tufts University, MA, USA.
04. General Lab Safety and Hazard Communication Training [Attendee] 8 May 2017, Organizer: Tufts University, MA, USA.
03. Handling Pressurized Gases [Attendee] 10 May 2016, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan.
02. Bio-Safety training for BSL-3 Lab [Attendee] 02 January 2014, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan.
01. Bio-Safety training for BSL-2 Lab [Attendee] 19 November 2013, National Institute of Advanced Industrial Science and Technology (AIST), Sapporo, Japan.

Conferences, Symposia and Workshops

14. **Mahatabuddin S**: “Bridging technological skill gaps through the generation of technically sound graduates: the role of academia” *BCSIR Congress-2022*, BCSIR, Dhaka; 01-03 December 2022 (Poster presentation)
13. **Mahatabuddin S** and Tsuda S: “Crystal structure substantiate the anchor clathrate water (ACW) mechanism for the moderate active antifreeze proteins” *The 5th Conference of Bangladesh Crystallographic Association*, Dhaka University, Dhaka Bangladesh; 25-26 January 2019 (Oral presentation)
12. **Mahatabuddin S** and Tsuda S: “Introduction of a new parameter critical ice shaping concentration (CISC) for evaluation of the activity of antifreeze proteins” *The 4th International Life Science Symposium*, Conference Hall of Hokkaido University, Sapporo, Japan; 18 November/2016. (Oral presentation)
11. Rahman AT, **Mahatabuddin S**, Ohyama Y, Kondo H and Tsuda S: “Quantitative Methods to Evaluate Ice Recrystallization Kinetics of AFP Solutions” *The 5th International Life Science Symposium*, Conference hall of Hokkaido University, Sapporo, Japan; 28 October/2017. (Oral presentation)
10. Rahman AT, **Mahatabuddin S**, Ohyama Y, Kondo H and Tsuda S: “Quantitative Method to Evaluate Ice Recrystallization Kinetics of AFP Solutions” *26th Chemical Engineering Conference*, Hokkaido University, Sapporo, Japan; 27 January/2017. (Oral presentation)
9. Fukami D, **Mahatabuddin S**, Kondo H, Miura A and Tsuda S: “Activity modification by mixing of antifreeze proteins” *The 4th International Life Science Symposium*, Conference Hall of Hokkaido University, Sapporo, Japan; 18 November/2016. (Oral presentation)
8. Rahman AT, **Mahatabuddin S**, Ohyama Y, Kondo H and Tsuda S: “Quantitative methods to evaluate ice recrystallization inhibition rate using Ferret’s diameter” *The 4th International Life Science Symposium*, Conference Hall of Hokkaido University, Sapporo, Japan; 18 November/2016. (Poster presentation)
7. Takeyama M, **Mahatabuddin S**, Miura A, Kondo H and Tsuda S: “Cell preservation mechanism of fish type III antifreeze protein using artificial lipid bilayer” *The 89th Annual Meeting of the Japanese Biochemical Society*, Sendai International Center, Tohoku University, Japan; 25-27 September/2016 (Oral and poster presentation)
6. **Mahatabuddin S**, Hanada Y, Miura A, Kondo H, and Tsuda S: Ice-accumulation ability of an alpha-helical peptide shows a significant concentration dependence. *The 3rd International Life Science Symposium*, Conference Hall of Hokkaido University, Sapporo, Japan; 26 November/2015. (Oral presentation)
5. **Mahatabuddin S**, Ishihara K, Hanada Y, Miura A, Kondo H and Tsuda S: Expression and Characterization of a New Type I Antifreeze protein from a Japanese Fish. *The 2nd International Life Science Symposium*, Conference Hall of Hokkaido University, Sapporo, Japan; 23 October/2014. (Oral presentation)
4. **Mahatabuddin S**, Ishihara K, Hanada Y, Miura A, Kondo H and Tsuda S: Functional Analysis of a New Type I Antifreeze Protein from Barfin plaice, *Liposetta pinnifasciata*. *The 52nd Annual Meeting of Biophysical Society Japan (BSJ)*, Sapporo Convention center, Sapporo, Japan; 25-27 September/2014. (Poster presentation)

Conferences, Symposia and Workshops

3. **Mahatabuddin S**, Ishihara K, Hanada Y, Miura A, Kondo H and Tsuda S: A 40-residue Type I Antifreeze Protein exhibited an extremely high thermal hysteresis activity. *2nd International Ice-Binding Protein Conference*, Conference Hall of Hokkaido University, Sapporo, Japan; 04-08 August/2014. (Poster and Oral presentation)
2. Cell Press LabLinks meeting Small Molecule Metabolites as Signaling Molecules, Pfizer, 1 Portland Street, Cambridge, MA, USA; 11 September/2017. (Participant)
1. The 1st International Life-Science Symposium (ILSS); Sapporo, Japan, March 6, 2013. (Participant)

Conferences attended by Research Students

10. Ishmam S M, **Mahatabuddin S**, Jabber M A (2024) Harnessing the VQE to simulate quantum chemistry in an undergraduate project: Properties of Hydrogen, Oxygen and Water Molecules, *5th Commonwealth Chemistry Poster* (<https://epostersonline.com/cwcp2024/poster/p54>)
9. Islam M., Islam J. M., and **Mahatabudin S.**: Understanding the effect of dietary habit on symptom severity in patient with irritable bowel syndrome treated at Dhaka medical college and hospital. The International Public Health Conference 2024, Organized by Public Health Association Bangladesh, Dhaka Bangladesh, IEDCR June 08, 2024
8. Ashik S. H. M. and **Mahatabuddin S.**: Development of antioxidant rich tea from mangrove apple leaves. *International Conference on Recent Advances in Chemistry*, Organized by the Department of Chemistry, Jagannath University, Dhaka, Bangladesh, 07-08 February 2020
7. Al-Mamun M. S. and **Mahatabuddin S.**: Nutritious ready to drink powder from pumpkin seeds. *International Conference on Recent Advances in Chemistry*, Organized by the Department of Chemistry, Jagannath University, Dhaka, Bangladesh, 07-08 February 2020
6. Hussain S., Hossain M. B., and **Mahatabuddin S.**: Antioxidant rich snack from Beetroot to neutralize free radicles. *International Conference on Recent Advances in Chemistry*, Organized by the Department of Chemistry, Jagannath University, Dhaka, Bangladesh, 07-08 February 2020
5. Hasan M. R., Khandakar A. M. and **Mahatabuddin S.**: Organic mosquito repellent as protectant from mosquito-borne diseases. *International Conference on Recent Advances in Chemistry*, Organized by the Department of Chemistry, Jagannath University, Dhaka, Bangladesh, 07-08 February 2020
4. Rahman M. A. and **Mahatabuddin S.**: Ready to drink tamarind leaves powder: source of antioxidants and antidiabetic agents. *International Conference on Recent Advances in Chemistry*, Organized by the Department of Chemistry, Jagannath University, Dhaka, Bangladesh, 07-08 February 2020
3. Ansary H. M. and **Mahatabuddin S.**: Development of natural laxative from tamarind. *International Conference on Recent Advances in Chemistry*, Organized by the Department of Chemistry, Jagannath University, Dhaka, Bangladesh, 07-08 February 2020
2. Fardush Z., Hossain M. B., Rahim M A and **Mahatabuddin S.**: Physico-chemical properties of new colored antioxidant rich varieties of potatoes. *National Conference on DNA and Genome Research for Sustainable Development in Agriculture and Health*, Rajshahi University (RU) Campus, Rajshahi, Bangladesh; 02-03 May /2019. (Poster)
1. Anhi J. A., Hossain M. B., Rahim M A and **Mahatabuddin S.**: Analysis of physico-chemical properties of new source of Antioxidant rich potatoes. *National Conference on DNA and Genome Research for Sustainable Development in Agriculture and Health*, Rajshahi University (RU) Campus, Rajshahi, Bangladesh; 02-03 May /2019. (Poster)

Selected Thesis and project titles supervised by DSM

Name of the Student	Type	Title of the Thesis/Project/Internship
Lima Akter (NST-Fellow)	M S Thesis	Expression Profiling of Targeted Osmoregulatory Related Genes of Hilsa (<i>Tenuulosa ilisha</i>) [Department of Fisheries, University of Dhaka]
Shah Ishmam Mohtashim	B. Sc. Project	Quantum Chemical Computations for the Properties of Hydrogen, Oxygen and Water Molecules [Department of Chemistry, University of Dhaka]
Md. Jahirul Islam	MPH Thesis	Assessment of the pre- and post-treatment quality of life of the head and neck cancer patients. [Birmingham City University, UK (Passed with distinction)]
	MPH Thesis	Acute Malnutrition and Dietary Diversity among the Children Aged 6-59 Months of Bangladesh. [Department of Public Health, Daffodil International University, BD]
Md. M. Rahman (NST-Fellow)	M Pharm Thesis	Isolation and Characterization of organic insect repellent from <i>Polygonum maculosa</i> . [Department of Pharmacy, Daffodil International University, BD]
Anower Parvez	M Pharm Thesis	Isolation and Characterization of organic insect repellent from <i>Antidesma acidum</i> . [Department of Pharmacy, Daffodil International University, BD]
Hanif Mahmud	M. Sc. Thesis	Eating disorders among pregnant women in Savar, Gaforgan and Dhamrai area of Bangladesh (Department of Food Science and Nutrition, HSTU, Dinajpur)
Galib Anjum	Project	Proximate analysis of newly developed mangrove apple leaf tea
	Intern	Diabetes mellitus, diet chart of diabetic, kidney disease, and heart disease patients in BSHI
Munira Ferdous Nemi	Project	Relationship between feeding practices and the nutritional status of Children Aged 6-59 Months living in urban slums
	Intern	Management of severe acute malnutrition in children aged 6-59 months at BSHI
Sadia Arafin	Project	Association with maternity care and the nutritional status of Children Aged 6-59 Months living in urban slums
	Intern	Management of severe acute malnutrition in children aged six months to five years at BSHI
Sufia Khatun Diya	Project	Comparative Studies on SAM between Pekua Refugee Camp and Mohammadpur Slum
	Intern	Management of severe acute malnutrition in children aged six months to five years at BSHI
Sakib Bin Nazmul Karim	Project	Determination of SAM-MAM among children aged 6-59 months in the Mirpur Slums area of DNCC
	Intern	Management of severe acute malnutrition in children aged six months to five years at BSHI
Md. Atiqur Rahman	Project	Development of ready to drink powder from tamarind leaves
	Intern	Quality control assurance and production of dairy products at Milk Vita
Maimuna Akter Md. Sabet Hossain	Project	A comprehensive study of chromium and lead in natively reared chicken
	Thesis	Development of mangrove apple leaf tea
Md. Rabiul Hasan	Thesis	Development of organic mosquito repellents
	Intern	Quality control assurance and production of dairy product at Milk Vita
Kollol Kumar Barua	Project	Development of cake from mixed flour: wheat, green banana, and sweet potato
	Intern	Internship report on Banoful & Co. Ltd
A B M Rabiul Hasan	Project	Development of green coconut jelly
	Intern	Internship report on production of coconut cream (Thailand)
Hanif Mahmud	Thesis	Comparative study of starch content in the extracted starches from different sources
H. Mahmud Ansary	Intern	Internship report on production of ice-cream at Polar Ice-Cream
	Project	Development of ready-to-drink (RTD) drinks from Tamarind, tamarind seed, ispgula, and milk
Mominul Islam	Project	Development, sensory evaluation and proximate analysis of peanut cup cake
	Intern	"Quality control assurance and production of snacks, bakery items" in Micro-trade Food and Beverage Limited
H. Mahmud Ansary	Project	Development of ready-to-drink (RTD) drinks from Tamarind, tamarind seed, ispgula, and milk
Zannatul Fardous Jerin Afroze Anhi	Project	Physiochemical properties of new-colored potato (Variety: V1, V7, V15, UNK3, Sarpomonia)
	Project	Physiochemical properties of new-colored potato (Variety: V2, UNK, 10125, Ladyrose, UNK7)
Md. Shamim Al Mamun	Project	Development of nutritious ready-to-drink (RTD) drinks powder from pumpkin seed
	Intern	Quality control assurance and production of dairy product at Milk Vita
Shourav Hussain	Project	Quality control assurance and production of dairy product at Milk Vita
	Project	Proximate analysis of ready-to-drink (RTD) powder from Tamarind, tamarind seed, ispgula, & milk
Afsana Ferdousi Bithee	Project	Proximate analysis of ready-to-drink (RTD) powder from Tamarind, tamarind seed, ispgula, & milk
	Intern	Construction of the diet chart for the diabetic, kidney, and heart disease patients
Tanbir Ahmed	Project	Household WASH Practices and Nutritional Status among the Children Aged 6-59 Months Living in Selected Slums of the DSCC
	Intern	Work descriptions and Report about WTP, Sugar plant, CO2 plant, CSD Plant, Cell line, DWP, Aseptic plant, Dairy plant, Snacks plant, PPS plant and ETP plant At Akij Food and Beverage Limited
Mahmuda Akther Moonmoon	Project	Eating disorders among pregnant women in Dhaka city
	Intern	Internship on maternal and neonatal health in Mohammadpur Infertility Center

Courses instructed by Dr. Sheikh Mahatabuddin

Course Code	Name of the Course	Students Major	No. of students	Number of sections and repetition
BPH 214	Biochemistry & Molecular Biology	B. of Pharmacy	45 (DIU)	2 and 4 Semesters
BPH 221	Pharmaceutical Analysis and Quality Control I	B. of Pharmacy	45 (DIU)	2 and 2 Semesters
BPH 414	Advanced Pharmaceutical Analysis and Quality Control	B. of Pharmacy	45 (DIU)	2 and 2 Semesters
BPH 415P	Advanced Pharmaceutical Analysis and Quality Cont. Prac.	B. of Pharmacy	45 (DIU)	2 and 2 Semesters
NFE 211	Biochemistry	B. Sc. in NFE	45 (DIU)	3 and 8 Trimesters
NFE 221	Food Biotechnology	B. Sc. in NFE	45 (DIU)	2 and 8 Trimesters
NFE 427	Instrumental Methods of Food Analyses	B. Sc. in NFE	45 (DIU)	2 and 2 Trimesters
NFE 428	Instrumental Methods of Food Analyses Practical	B. Sc. in NFE	45 (DIU)	2 and 2 Trimesters
NFE 121	Organic Chemistry	B. Sc. in NFE	45 (DIU, BUBT, OPEN U)	2 and 3 Trimesters
NFE 115	Physical, Inorganic and Analytical Chemistry	B. Sc. in NFE	45 (DIU)	2 and 5 Trimesters
NFE 111	Introduction to Food Sciences	B. Sc. in NFE	45 (DIU)	2 and 3 Trimester
CHE 103	Textile Chemistry	B. Sc. in TE	45 (DIU, ISU, BUBT)	1 and 5 Trimesters
CHE 101	General Chemistry	B. Sc. in CSE	45 (ISU, BUBT)	4 and 5 Semester
BIO 102 & BIO 102L	Biology and Society & Lab	B. Sc. in Life Science	40 (IUB)	1 and 1 Semester
BIO 102 & BIO 102L	General Chemistry & Lab	B. Sc. in Life Science	40 (IUB)	1 and 1 Semester

YouTube Links of DSM's Lectures:

Topics	Links
Chemical Calculations	https://www.youtube.com/watch?v=_6kM_CizRW4
Chemical Bonding	https://www.youtube.com/watch?v=YUb-_jqhA7Q
Michaelis-Menten equation	https://www.youtube.com/watch?v=CTbrk7YdB5g
Oxidation-Reduction	https://www.youtube.com/watch?v=GBCumlmt5cg
Glycolysis	https://www.youtube.com/watch?v=1LBqXismCms
Extraction of cDNA	https://youtu.be/-ElwFkZykic?si=eXIPYTUg5LrLE6Hp

Professional Membership

Biophysical Society, USA [Membership no. 108940]

Biophysical Society of Japan [Membership no. 6741]

Bangladesh Chemical Society [Membership no. LM1684]

Dhaka University Alumni Association [Membership No. LM-11699]

Registered graduate Association of Dhaka University [Membership No. LM-49863]

Japanese University Alumni Association of Bangladesh (JUAAB) [Membership No. LM-0655]

Skills (Experimental)

Molecular Biology: RNA and DNA extraction, cDNA cloning, SDS-PAGE, Gel electrophoresis, rtPCR, qPCR, Reverse transcription, Western blotting, Cell survival assay, Gene expression assay, Yeast surface display, mammalian cell preservation, Serial Cloner, Genious.

Biophysics and Proteomics: Expression and purification of recombinant protein in E. coli, yeast, mammalian cell culture methods, Functional protein purification to technological application, Site-specific mutation, Isotopic labelling of proteins, Protein crystallization, Biochemical and biophysical characterization of protein, Affinity chromatography, Ion exchange chromatography, Size exclusion chromatography, PyMOL, HEX, EasyModeller, COOT.

Chemistry: Chemical kinetics, Chemical synthesis, TLC, HPLC, Column chromatography, Rotary vapor evaporator, Schlenk line, Chemical and toxicological analysis.

Instruments: Scanning Electron Microscope (SEM) (JSM 6490 LA, JEOL), E-Graph (ATTA Bio-instrument, Azure C400), CD spectrophotometer (JASCO J-725), BIORAD Biologic Duoflow, Photomicroscopes equipped with temperature controlling unit, UV-visible spectrophotometer with digital data processing facilities, ABLE Jar Fermenter (BMJ-PI), Flow cytometer (Attune NXT), Inverted microscope (Leica DFC420 C), High-performance Liquid Chromatography (HPLC), IVIS Spectrum imager, NMR Spectrophotometer.

Cell lines used in my researches: **Cancer cells:** GBM6, GBM10, GBM12, GBM22, HF2303, HF3253, HF2427, HF2353, HF3016, U-87, U251, MBAMD-231, MBAMD-157, MBAMD-468, SUM149, SUM159, MIA, HN26 and HN48.

Recombinant protein expression and molecular biological experiments: HEK293, BL21(DE3), JM109, NEB stable, DH5 α Z1, RJY100.

Nuclear Science: Regulation of ionizing radiation generating facilities, Radio pharmaceuticals, Radiation Transport, Waste Safety and Radiotherapy.

Course Coordination

- Instrumental Methods of Analysis [Undergraduate Level]
- Advanced Food Analysis [Under Graduate Level]
- Biochemistry and Molecular Biology [Undergraduate Level]
- Food Chemistry [Undergraduate Level]
- Quality Control and Quality Assurance [Undergraduate Level]
- Advanced Pharmaceutical Quality Control [Graduate Level]
- Frozen Food and Cold Chain Management [Graduate Level]
- Organic Chemistry [Undergraduate Level]
- General Chemistry [Undergraduate Level]

Other Experiences/Expertise

- Lead most of the departmental programs and cultural events organized by Department of Chemistry, University of Dhaka (from April 2004-December 2010).
- Volunteer in 2nd Ice Binding Protein (IBP) Conference held in Sapporo, Japan.
- Editor and designer of the Souvenir, Abstracts and Programme of Bangladesh Chemical Congress 2008 and First Humboldt Kollege International Conference in Dhaka, Bangladesh.
- English (academic), Bangla (Native), Hindi (Spoken), Japanese (spoken) & Arabic (reading)
- First Convenor of the convening committee of the BAERA officers' association

Newspaper writings

Related to different issues

World food day and future of food security in Bangladesh
World food day and future of food security in Bangladesh
Foods to enhance immunity against COVID-19
তিন পথিকের গল্প ও বাংলাদেশ
চাকরিতে প্রবেশের বয়স ও কোটা
নৈতিকতার বুনিয়েদি শিক্ষা: পরিবার এবং সামাজিক দায়বদ্ধতা
নিমতলি থেকে চকবাজার হয়ে বৈরুতঃ রাসায়নিক আগুন এবং
আমাদের সাবধানতা
দুর্নীতি মুক্তির পরশ পাথরঃ পুলিশ বাহিনীর সংস্কার নাকি সঠিক
পদায়ন
ভাইরাসঘটিত রোগ প্রতিরোধে খাবারের ভূমিকা
বাবা
স্বপ্ন ও সন্ত্রম, গল্পকার (জানুয়ারি ২০১৬ সংখ্যা)
For the safe and peaceful use of ionizing radiation

Related to educational reformation

বিশ্ববিদ্যালয় থেকে বৈষম্যের অবসান হবে কি?
ব্যবসায় শিক্ষা, ব্যবসায়ীর শিক্ষা এবং শিক্ষার ব্যবসা
শিক্ষা, শিক্ষক ও একটি জাতির গল্প
শিক্ষা, শিক্ষক ও একটি জাতির গল্প—দুই
শিক্ষা, শিক্ষক ও একটি জাতির গল্প-তিন
শিক্ষা, শিক্ষক ও একটি জাতির গল্প-চার
শিক্ষা, শিক্ষক ও একটি জাতির গল্প-শেষ পর্ব
উচ্চশিক্ষা ও একটি দীর্ঘশ্বাস
এইচএসসি-২০২০ পরীক্ষা এবং অতীত অভিজ্ঞতা থেকে একটি প্রস্তাবনা
অনলাইনে শিক্ষাঃ মান, গ্রহণযোগ্যতা এবং উহার নিয়ন্ত্রণ
নতুন শিক্ষানীতি আশীর্বাদ না অভিশাপ
বিকিরণের নিরাপদ ব্যবহারে সুস্থ জীবন