

Curriculum Vitae of Dr. Md. Zahidul Islam



Current position:

Professor,

Department of Biotechnology and Genetic Engineering
Jahangirnagar University, Savar, Dhaka-1342, Bangladesh.

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Visiting Associate Professor, 01.04.2023 to 30.07.2023, Research Institute of Electronics, Shizuoka University, Shizuoka, Japan.

Current Research:

- Study of the mechanism and mode of action of antimicrobial peptides (Magainin 2, Lactoferricin B, LfcinB [4-9] and PGLa) on cell membrane by single Bacteria method.
- The mechanism and mode of action of cell penetrating peptides (Transportan10 and Poly-arginine) on cell membrane by single GUV method.
- Study of the bio-system engineering process for the production of various commercial products using enzyme immobilization.

Educational Qualification:

Name of Education	Name and location of Institute	Discipline	Degree awarded	Year of Passing	Class/Division
Ph.D.	Shizuoka University, Japan	Graduate School of Science and Technology	Doctor of Science	2015	Passed (with excellent Grade)
Master of Science	Khulna University, Bangladesh	Biotechnology & Genetic Engineering	Master of Science in Biotechnology	2003	First Class (CGPA 3.29 out of 4.00)
B.Sc. in Biotechnology	Khulna University, Bangladesh	Biotechnology & Genetic Engineering	Bachelor of Science in Biotechnology	2000	First Class (CGPA 3.73 Out of 4.00)
Higher Secondary	Noapara College, Abhoynagar, Jessore	Science	Higher Secondary Certificate (H.S.C)	1995	First division (69% marks)
Secondary	Rajghat Jafarpur Secondary School, Jessore	Science	Secondary School Certificate (S.S.C)	1993	First division (74.3% marks)

Research Publications:

I. Journal Papers:

1. Sabrina Sharmin, **Md. Zahidul Islam**, Masahito Yamazaki, (2024) Relationship between oligoarginine-induced membrane damage of single *Escherichia coli* cells and entry of the peptide into the cytoplasm, **Biochemistry and Biophysics Reports** 39 (2024) 101777.
2. Md. Masum Billah, Marzuk Ahmed, **Md. Zahidul Islam**, Masahito Yamazaki, (2024) Processes and mechanisms underlying burst of giant unilamellar vesicles induced by antimicrobial peptides and compounds, **BBA - Biomembranes** 1866 (2024) 184330.
3. Marzuk Ahmed, **Md. Zahidul Islam**, Md. Masum Billah, and Masahito Yamazaki, (2024) Effect of Phosphatidylethanolamine on Pore Formation Induced by the Antimicrobial Peptide PGLa, **Journal of Physical Chemistry B**, 2024, 128, 11, 2684–2696.
4. Sabbir Janee, Shatabdy Saha, Sabrina Sharmin, A.Q. Fuad Hasan, Umme Salma Zohora, Ripa Moni, **Md. Zahidul Islam**, and Mohammad Shahedur Rahman, (2024) Construction and Investigation of Multi-enzyme Immobilized Matrix for the Production of HFCS, **PLOS ONE**,19(2):e0292931 (**Corresponding author**).
5. Marzuk Ahmed, **Md Zahidul Islam**, Md Masum Billah, Masahito Yamazaki (2023), Effect of membrane tension on antimicrobial peptide PGLa-induced pore formation in lipid bilayers, **Biochemical and Biophysical Research Communications** 695 (2024) 149452.
6. **Md. Zahidul Islam**, Farzana Hossain, Md. Hazrat Ali and Masahito Yamazaki (2023), Relationship between antimicrobial peptides-induced cell membrane damage and bactericidal activity, **Biophysical Journal**, 122, 4645–4655.
7. Mst. Nusrat Jahan Arbi, Naima Thahsin, Azmery Nurjahan, Sabrina Sharmin, **Md. Zahidul Islam**, Umme Salma Zohora, Mastura Khatun Ruma, Ripa Moni and Mohammad Shahedur Rahman, (2022), Homology Modelling and Docking Studies of Arsenate Reductase of *Bacillus megaterium*, **Journal of Applied Biotechnology Reports**; 9(3):707-718 (**Corresponding author**).
8. Ripa Moni, Md. Abdullah Al Noman Khan, **Md. Zahidul Islam**, Umme Salma Zohora, and Mohammad Shahedur Rahman (2022), Biofilm Fermentation: A Propitious Method for the Production of Protease Enzyme by *Bacillus subtilis* RB14, **Industrial Biotechnology**, 18(1): 48-59.
9. Md. Mizanur Rahman Moghal, Madhabi Lata Shuma, **Md. Zahidul Islam**, and Masahito Yamazaki (2022) A Single GUV Method for Revealing the Action of Cell-Penetrating Peptides in Biomembranes. In: Langel Ü. (eds) Cell Penetrating Peptides. **Methods in Molecular Biology**, vol 2383. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-1752-6_11
10. Syed Sajidul Islam, Sayka Alam, Tiluttoma Khan Rajib, Nasrin Akhter, **Md. Zahidul Islam** (2021), A Generalized Overview of the Possible Pharmacotherapy and Treatments against SARS-CoV-2, **Journal of Contemporary Studies in Epidemiology and Public Health**, 2(1), ep21001
11. **Md. Zahidul Islam**, Mst. Nusrat Jahan Arbi, Ripa Moni, Umme Salma Zohora, Farzana Zafor Nishat, Roksana Khanam and Mohammad Shahedur Rahman, (2019) Reduction of Arsenate in a new isolate of *Bacillus megaterium*, **Jahangirnagar University Journal of Biological Sciences**, 8(2): 47-59 [**Published on: 23-11-2020**].

12. Md. Tanvir Kabir, Md. Shahinur Kabir, Md Kamruzzaman Pramanik, **Md. Zahidul Islam** and Effat Jahan Tamanna (2020), Production of Chitosan from Oyster Mushroom for α -amylase Immobilization, **Bangladesh Journal of Botany**, 49(3): 593-599.
13. Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Farzana Hossain, Samiron Kumar Saha, and Masahito Yamazaki (2020), Role of Membrane Potential on Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles, **Biophysical Journal**, Biophysical Journal 118, 57–69.
14. Shatabdy Saha, **Md. Zahidul Islam**, Umme Salma Zohora, Mohammed Salahuddin, Sabbir Janee, and Mohammad Shahedur Rahman (2019), Establishment of a Functional and Sustainable Bio-system Engineering Process for the Saccharification of Starch with Industrial Focus, **Jahangirnagar University Journal of Biological Sciences**, 8(1): 45–55 (**Corresponding author**).
15. Roksana Khanam, Ripa Moni, **Md. Zahidul Islam**, Md. Morsaline Billah, Umme Salma Zohora, Farah Sabrin, Mohammad Shahedur Rahman (2019), Study of an Arsenic Metabolizing Bacteria from Arsenic Contaminated Soil of Chandpur District Bangladesh, **Jahangirnagar University Journal of Biological Sciences**, 8(1): 57–65.
16. Farzana Hossain, Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Md. Moniruzzaman, and Masahito Yamazaki (2019), Membrane potential is vital for rapid permeabilization of plasma membranes and lipid bilayers by the antimicrobial peptide lactoferricin B, **The Journal of Biological Chemistry**, 294(27) 10449–10462.
17. **Md. Zahidul Islam**, Sabrina Sharmin, Md. Moniruzzaman, and Masahito Yamazaki (2018), Elementary Processes for the Entry of Cell-Penetrating Peptides into Lipid Bilayer Vesicles and Bacterial Cells, **Applied Microbiology and Biotechnology**, 102:3879–3892.
18. Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Md. Moniruzzaman, Masahito Yamazaki (2018), Continuous Detection of Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles, **Chemistry and Physics of Lipids**, 212, 120–129.
19. **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Sayed Ul Alam Shibly, and Masahito Yamazaki (2017), Effects of Mechanical Properties of Lipid Bilayers on the Entry of Cell-Penetrating Peptides into Single Vesicles, **Langmuir**, 33, 2433–2443.
20. Md. Moniruzzaman, **Md. Zahidul Islam**, Sabrina Sharmin, Hideo Dohra, and Masahito Yamazaki (2017) Entry of a Six-Residue Antimicrobial Peptide Derived from Lactoferricin B into Single Vesicles and *Escherichia coli* Cells without Damaging their Membranes, **Biochemistry**, 56, 4419–4431
21. Toshihiko Oka, Moynul Hasan, **Md. Zahidul Islam**, Md. Moniruzzaman, and Masahito Yamazaki (2017), Low-pH-Induced Lamellar to Bicontinuous Primitive Cubic Phase Transition in Dioleoylphosphatidylserine/Monoolein Membranes, **Langmuir**, 33, 12487–12496.
22. Sabrina Sharmin, **Md. Zahidul Islam**, Mohammad Abu Sayem Karal, Sayed Ul Alam Shibly, Hideo Dohra and Masahito Yamazaki (2016), Effects of Lipid Composition on the Entry of Cell-Penetrating Peptide Oligoarginine into Single Vesicles, **Biochemistry**, 55 (30) 4154–4165.
23. Sabrina Sharmin, **Md. Zahidul Islam**, Md. Abdul Jabber (2016) Investigations of medicinal properties of *Kalanchoe pinnata* under Crassulaceae family, **Bioscience and Bioengineering Communication**; 2 (3): 130-136.

24. Sabrina Sharmin, **Md. Zahidul Islam**, Md. Abdul Jabber (2016) Isolation and identification of medicinal compounds from *Kalanchoe pinnata* of Crassulaceae family by ^1H NMR. **Bioscience and Bioengineering Communication**; 2 (2): 123-129.
25. **Md. Zahidul Islam**, Jahangir Md. Alam, Yukihiro Tamba, Mohammad Abu Sayem Karal and Masahito Yamazaki, (2014) The single GUV method for revealing the functions of antimicrobial, pore-forming toxin, and cell-penetrating peptides or proteins, **Phys. Chem. Chem. Phys.**, 16, 15752-15767.
26. **Md. Zahidul Islam**, Hirotaka Ariyama, Jahangir Md. Alam, and Masahito Yamazaki (2014) Entry of cell-penetrating peptide transportan 10 into a single vesicle by translocating across lipid membrane and its induced pores, **Biochemistry**, 53, 386-396.
27. **Md. Zahidul Islam**, Md. Hasibur Rahman, Fauzia Hafiz. (2009), Cultivation of Oyster Mushroom (*Pleurotus flabellatus*) on different substrates, **International Journal of Sustainable Crop Production**, 4(1), 45-48.
28. **Md. Zahidul Islam**, Dilara Islam Sharif and Md. Aktar Hossain (2008), A Comparative Study of *Azotobacter spp.* from Different Soil Samples, **Journal of Soil Nature**, 2(3), 16-19.

II. Proceeding Papers:

1. Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Sabrina Sharmin, and Masahito Yamazaki, "Continuous Detection of Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles," Proceedings of the 20th Takayanagi Kenjiro Memorial Symposium (November 27-29, 2018, Hamamatsu, Japan).
2. Md. Moniruzzaman; **Md. Zahidul Islam**, Sabrina Sharmin, Hideo Dohra and Masahito Yamazaki, "Entry of Antimicrobial Peptide Lactoferricin B (4-9) into single vesicles and *E. coli* cells", Proceedings of the 19th Takayanagi Kenjiro Memorial Symposium (November 21-22, 2017, Hamamatsu, Japan).
3. Sabrina Sharmin, **Md. Zahidul Islam**, Mohammad Abu Sayem Karal, Shibly Sayed Ul Alam, Hideo Dohra and Masahito Yamazaki, "Effects of mechanical property of lipid membranes on the entry of cell-penetrating peptide oligoarginine into a single vesicle", Proceedings of the 18th Takayanagi Kenjiro Memorial Symposium (November 15-16, 2016, Hamamatsu, Japan).
4. **Md. Zahidul Islam**, Sabrina Sharmin, and Masahito Yamazaki, "Effect of cholesterol on the entry of cell-penetrating peptide Transportan 10 (TP10) into a single vesicle", Proceedings of the 17th Takayanagi Kenjiro Memorial Symposium (November 17-18, 2015, Hamamatsu, Japan), 29~33.
5. **Md. Zahidul Islam**, Hirotaka Ariyama, Jahangir Md. Alam, and Masahito Yamazaki, "Visualization of entry of cell-penetrating peptide transportan 10 into a single vesicle by translocating across lipid membranes and its induced pores", Proceedings of the 16th Takayanagi Kenjiro Memorial Symposium (November 11-12, 2014, Hamamatsu, Japan), PS1-3-1~5.
6. J. Md. Alam, **Md. Z. Islam**, T. Tsuboi, Md. A. S. Karal, and M. Yamazaki, The Single GUV Method for Probing Elementary Processes of Peptide/Proteins-Induced Pore Formation in Biomembranes. Proceedings of the 15th Takayanagi Kenjiro Memorial Symposium (November 12-13, 2013, Hamamatsu, Japan), S7-4-1~5.

III. International Conference:

1. Mst. Nusrat Jahan Arbi, Naima Thahsin, Sabrina Sharmin, Ripa Moni, Umme Salma Zohora, Mohammad Shahedur Rahman, and **Md. Zahidul Islam**, “In silico study of arsenate reductase enzyme of *Bacillus megaterium*”, International Conference on Materials Science & Computation (ICMSC-21), 20-21 August 2021, Jahangirnagar University, Dhaka, Bangladesh.
2. Farzana Hossain, Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Md. Moniruzzaman, Masahito Yamazaki, “Membrane potential is vital for rapid permeabilization of plasma membranes and lipid bilayers by the antimicrobial peptide lactoferricin B,” 64th Annual Meeting of the Biophysical Society, February 15-19, 2020, **San Diego, California, USA**.
3. Farzana Hossain, Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Md. Moniruzzaman, Masahito Yamazaki, “Membrane potential is vital for rapid permeabilization of plasma membranes and lipid bilayers by the antimicrobial peptide lactoferricin B,” 6th International Symposium toward the future of advance researches in Shizuoka University (ISFAR-SU2020), March 5, 2020, **Shizuoka University, Hamamatsu Campus, Shizuoka, Japan**.
4. Farzana Hossain, Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Sabrina Sharmin, and Masahito Yamazaki, “Continuous Detection of Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles” 4th International Symposium on Biomedical Engineering, by Ministry of Education, Culture, Sports, Science and Technology (MEXT), November 14-15, 2019, Act City Hamamatsu congress center, **Hamamatsu, Shizuoka, Japan**.
5. Farzana Hossain, Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Md. Moniruzzaman, and Masahito Yamazaki, “Membrane potential is vital for rapid permeabilization of plasma membranes and lipid bilayers by the antimicrobial peptide lactoferricin B” 3rd International Symposium on Biomedical Engineering, by Ministry of Education, Culture, Sports, Science and Technology (MEXT), November 8-9, 2018, Hiroshima University, **Hiroshima, Japan**.
6. Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Sabrina Sharmin, and Masahito Yamazaki, “Continuous Detection of Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles,” The 4th International symposium toward the future of advance researches in Shizuoka University 2018”, March 6, 2018, Shizuoka University, Hamamatsu Campus, **Shizuoka, Japan**.
7. **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Sayed Ul Alam Shibly, and Masahito Yamazaki “Effects of mechanical property membrane on entry of cell-penetrating peptide into single vesicles” 19th International Union for Pure and Applied Biophysics Congress”, July 16-20, 2017, **Edinburgh, United Kingdom (UK)**.
8. Md. Moniruzzaman; **Md. Zahidul Islam**, Sabrina Sharmin, Hideo Dohra, and Masahito Yamazaki “Entry of Lactoferricin B (4-9) into single vesicles and *E. coli* without damaging their membrane” 19th International Union for Pure and Applied Biophysics Congress”, July 16-20, 2017, **Edinburgh, United Kingdom (UK)**.
9. **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Sayed Ul Alam Shibly, and Masahito Yamazaki “The effect of tension on entry of CF-TP10 into single vesicle”. The 2017 international symposium toward the future of advance researches in Shizuoka University”, March 08, 2017, Shizuoka University, Hamamatsu, **Shizuoka, Japan**.
10. Md. Moniruzzaman; **Md. Zahidul Islam**, Hideo Dohra, and Masahito Yamazaki, “A mechanism of antimicrobial activity of a short peptide derived from Lactoferricin B” The 2017 international symposium toward the future of advance researches in Shizuoka University”, March 08, 2017, Shizuoka University, **Hamamatsu, Shizuoka, Japan**.

11. Sabrina Sharmin, **Md. Zahidul Islam**, Mohammad Abu Sayem Karal, Sayed Ul Alam Shibly, and Masahito Yamazaki, “Effect of lipid composition on the entry of cell-penetrating peptide oligoarginine (Rn) into single vesicles” The 2017 international symposium toward the future of advance researches in Shizuoka University”, February 27, 2017, Shizuoka University, **Shizuoka, Japan**.
12. Sabrina Sharmin, **Md. Zahidul Islam**, Masahito Yamazaki and Hideo Dohra “Effects of lipid composition on the entry of cell-penetrating peptide oligoarginine into single vesicles” The 61th Annual Meeting of the Biophysical Society, February 11–15, 2017, New Orleans, Louisiana, **United States of America (USA)**.
13. Sabrina Sharmin, **Md. Zahidul Islam**, Mohammad Abu Sayem Karal, Shibly Sayed Ul Alam, Hideo Dohra, and Masahito Yamazaki “Effects of lipid composition on the entry of cell-penetrating peptide oligoarginine (Rn) into single vesicles” 6th Shizuoka University International Symposium 2016, December 08, 2016, Shizuoka University, **Hamamatsu, Shizuoka, Japan**.
14. **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Sayed Ul Alam Shibly, and Masahito Yamazaki “Effects of membrane tension on entry of cell-penetrating peptide transportan 10 into single vesicles of lipid membranes” 1st International Symposium on Biomedical Engineering, by Ministry of Education, Culture, Sports, Science and Technology (MEXT), November 10-11, 2016, Tokyo Medical and Dental University, **Tokyo, Japan**.
15. Sabrina Sharmin, **Md. Zahidul Islam**, Mohammad Abu Sayem Karal, Shibly Sayed Ul Alam, Hideo Dohra, and Masahito Yamazaki “Effects of lipid composition on the entry of cell-penetrating peptide oligoarginine (Rn) into single vesicles” 1st International Symposium on Biomedical Engineering, by Ministry of Education, Culture, Sports, Science and Technology (MEXT), November 10-11, 2016, Tokyo Medical and Dental University, **Tokyo, Japan**.
16. **Md. Zahidul Islam**, H. Ariyama, M. Jahangir Alam and M. Yamazaki “Entry of cell-penetrating peptide transportan 10 into a single vesicle by translocating across lipid membranes before pore formation”. The 2015 international symposium toward the future of advance researches in Shizuoka University”, Jan. 27-28, 2015, Shizuoka University, **Hamamatsu, Shizuoka, Japan**.
17. **Md. Zahidul Islam**, Hirotaka Ariyama, Md. Jahangir Alam and Masahito Yamazaki “Entry of cell-penetrating peptide transportan 10 into a single vesicle by translocating across lipid membranes and its induce pore”. The 2014 International Biophysics Congress”, August 3-7, 2014, **Brisbane, Australia**.

IV. National Conference:

1. **Md. Zahidul Islam**, Farzana Hossain, Md. Hazrat Ali, Masahito Yamazaki, The 61th Annual Meeting of the Biophysical Society of Japan (BSJ2023), November 14-16, 2023, Nagoya Congress Center, Nagoya, Japan.
2. Marzuk Ahmed, **Md. Zahidul Islam**, Masahito Yamazaki, “Effect of membrane tension and monolayer spontaneous curvature on antimicrobial peptide PGLa-induced pore formation”, The 61st Annual Meeting of the Biophysical Society of Japan, November 14-16, 2023, Nagoya Congress Center, Nagoya, Japan.
3. Farzana Hossain, Masahito Yamazaki, **Md. Zahidul Islam**, “Single-cell analysis of the antimicrobial and bactericidal activities of the antimicrobial peptides” Progress meeting Cooperative Research Project of Biomedical Engineering, March 03, 2023, Tokyo Institute of Technology, Suzukakedai Campus, Tokyo, Japan.
4. Mst. Nusrat Jahan Arbi, Naima Thahsin, Sabrina Sharmin, Ripa Moni, Umme Salma Zohora, Mohammad Shahedur Rahman, and **Md. Zahidul Islam**, “In silico study of arsenate reductase enzyme of *Bacillus megaterium*,” International Conference on Materials Science and Computation-ICMSC-21, August 20-21, 2021, Jahangirnagar University, Dhaka, Bangladesh.

5. Farzana Hossain, Md. Mizanur Rahman Moghal, Md. Moniruzzaman, Masahito Yamazaki, **Md. Zahidul Islam**, “Membrane potential is vital for rapid permeabilization of plasma membranes and lipid bilayers by the antimicrobial peptide lactoferricin B,” 2 conference of cooperative research for biomedical engineering, March 13, 2020, Tokyo, Japan.
6. Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Samiron Kumar Saha, Masahito Yamazaki, “Effect of membrane potential on the entry of cell-penetrating peptide transportan10 into the lumen of single vesicles and its mechanism,” The 57th Annual Meeting of the Biophysical Society of Japan (BSJ2019), September 24-26, 2019, Seagaia Convention Center, Miyazaki, Japan.
7. Farzana Hossain, Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Md. Moniruzzaman, Masahito Yamazaki, “Membrane potential is vital for rapid permeabilization of plasma membranes and lipid bilayers by the antimicrobial peptide lactoferricin B,” The 57th Annual Meeting of the Biophysical Society of Japan (BSJ2019), September 24-26, 2019, Seagaia Convention Center, Miyazaki, Japan.
8. Md. Mizanur Rahman Moghal, Samiron Kumar Saha, Masahito Yamazaki, and **Md. Zahidul Islam**, “Effect of membrane potential on interaction of Cell-Penetrating Peptide Transportan 10 with Single Vesicles,” 30 conference of cooperative research for biomedical engineering, March 8, 2019, Tokyo, Japan.
9. Md. Mizanur Rahman Moghal, **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Md. Moniruzzaman, Masahito Yamazaki, “Continuous Detection of Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles,” The 56th Annual Meeting of the Biophysical Society of Japan (BSJ2018), September 15-17, 2018, Okayama University, Okayama, Japan.
10. Md. Mizanur Rahman Moghal, Sabrina Sharmin, Masahito Yamazaki, and **Md. Zahidul Islam**, “Continuous Detection of Entry of Cell-Penetrating Peptide Transportan 10 into Single Vesicles,” H29 conference of cooperative research for biomedical engineering, March 9, 2018, Tokyo Institute of Technology, Tokyo, Japan.
11. **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Sayed Ul Alam Shibly, and Masahito Yamazaki “Thermal fluctuation of lipid bilayers affect the entry of cell-penetrating peptide Transportan 10 (TP10) into single vesicles” The 55th Annual Meeting of the Biophysical Society of Japan (BSJ2017), September 19-21, 2017, Kumamoto, Japan.
12. Md Mizanur Rahman Moghal, **Md. Zahidul Islam**, Sharmin Sabrina and Masahito Yamazaki “Effect of Membrane Potential on the Translocation of Cell-Penetrating Peptide Transportan 10 (TP10) across Lipid Bilayers” The 55th Annual Meeting of the Biophysical Society of Japan (BSJ2017), September 19-21, 2017, Kumamoto, Japan.
13. Rajib Ahmed, Sayed Ul Alam Shibly, **Md. Zahidul Islam**, and Masahito Yamazaki “Lateral Tension increases membrane permeability of water in lipid membranes” The 55th Annual Meeting of the Biophysical Society of Japan (BSJ2017), September 19-21, 2017, Kumamoto, Japan.
14. Md. Moniruzzaman; **Md. Zahidul Islam**, Sabrina Sharmin, Hideo Dohra, and Masahito Yamazaki “Entry of antimicrobial hexapeptide derived from Lactoferricin B into single cells of *E. coli* without damaging their membrane” The 55th Annual Meeting of the Biophysical Society of Japan (BSJ2017), September 19-21, 2017, Kumamoto, Japan.
15. **Md. Zahidul Islam**, Sabrina Sharmin, Victor Levadnyy, Sayed Ul Alam Shibly, and Masahito Yamazaki “The mechanisms of translocation of cell-penetrating peptide transportan 10 into a single vesicle of lipid membranes.” BABG 1st National Congress 2017, April 28, 2017, Jahangirnagar University, Savar, Dhaka, Bangladesh.
16. **Md. Zahidul Islam**, Sabrina Sharmin, and Masahito Yamazaki, “Mechanical properties of lipid bilayers affect the entry of cell-penetrating peptide transportan 10 into Single vesicles.” The 54th Annual Meeting of the Biophysical Society of Japan (BSJ2016), November 25-27, 2016, Tsukuba, Japan.

17. Sabrina Sharmin, **Md. Zahidul Islam**, Mohammad Abu Sayem Karal, Sayed Ul Alam Shibly and Masahito Yamazaki, “Effects of lipid compositions on the entry of cell-penetrating peptide oligoarginine into single vesicles” The 54th Annual Meeting of the Biophysical Society of Japan (BSJ2016), November 25-27, 2016, Tsukuba, Japan.
18. Moynul Hasan, Mohammad Abu Sayem Karal, Victor Levadnyy, **Md. Zahidul Islam**, and Masahito Yamazaki, “A mechanism of antimicrobial peptide, Magainin 2-induced pore formation in lipid membranes” The 54th Annual Meeting of the Biophysical Society of Japan (BSJ2016), November 25-27, 2016, Tsukuba, Japan.
19. **Md. Zahidul Islam**, Sabrina Sharmin, and Masahito Yamazaki, “Effects of cholesterol on the entry of cell-penetrating peptide transportan 10 (TP10) into a single vesicle” The 53th Annual Meeting of the Biophysical Society of Japan (BSJ2015), September 13-15, 2015, Kanazawa, Japan.
20. Sabrina Sharmin, **Md. Zahidul Islam**, and Masahito Yamazaki, “Investigation of the Entry of Cell-Penetrating Peptide, Poly-arginine into a Vesicle of Lipid Membrane Using the Single GUV Method” The 53th Annual Meeting of the Biophysical Society of Japan (BSJ2015), September 13-15, 2015, Kanazawa, Japan.
21. **Md. Zahidul Islam**, Hirotaka Ariyama, Jahangir Md. Alam and Masahito Yamazaki “Entry of cell-penetrating peptide transportan 10 into a single vesicle by translocating across lipid membranes and its induced pores”. The 2015 workshop on Green Science and Technology of Global Young Researchers, January 26, 2015, Shizuoka University, Shizuoka, Japan.
22. **Md. Zahidul Islam**, Hirotaka Ariyama, Jahangir Md. Alam and Masahito Yamazaki “Visualization of entry of cell-penetrating peptide transportan 10 into a single vesicle by translocating across lipid membranes and its induced pores”. The 16th Takayanagi Kenjiro Memorial Symposium, November 11-12, 2014, Shizuoka University, Hamamatsu, Shizuoka, Japan.
23. **Md. Zahidul Islam**, Ariyama Hirotaka, Jahangir Md. Alam and Yamazaki Masahito “The single GUV method reveals the translocation of cell-penetrating peptide transportan 10 across lipid membranes and its induced pores”. The 87th Annual Meeting of the Japanese Biochemical Society (JBS2014), October 15-18, 2014, Kyoto, Japan.
24. **Md. Zahidul Islam**, M. A. Sayem Karal, and Masahito Yamazaki “Effects of tension on entry of cell-penetrating peptide transportan 10 into a single vesicles and its pore formation in lipid membranes” The 52th Annual Meeting of the Biophysical Society of Japan (BSJ2014), September 25-27, 2014, Sapporo, Japan.
25. **Md. Zahidul Islam**, Hirotaka Ariyama, Md. Jahangir Alam, Masahito Yamazaki² “Permeation of Cell-Penetrating Peptide Transportan 10 through Lipid Membranes before Pore Formation”. The 51st Annual Meeting of the Biophysical Society of Japan (BSJ51), October 28-30, 2013, Kyoto, Japan.
26. M. A. Sayem Karal, Taka-aki Tsuboi, Md. Jahangir Alam, **Md. Zahidul Islam**, Masahito Yamazaki “Effects of Mechanical Properties of Lipid Membranes on Antimicrobial Peptide Magainin 2-Induced Pore Formation”. The 51st Annual Meeting of the Biophysical Society of Japan (BSJ51), October 28-30, 2013, Kyoto, Japan.

Job Experience:

(A) Teaching Experience:

No.	Organization	Designation	Job Description
01	Jahangirnagar University , Savar, Dhaka, Bangladesh.	Professor (Department of Biotechnology and Genetic Engineering) from 03.01.2025 to till now	Teaching: Delivering lectures and lessons, preparing course materials, and evaluating students' performance through exams, assignments, and other assessments. Research: Conducting original research, publishing academic articles and books, and presenting their findings at conferences. Mentoring: Advising students and serving as role models to assist in directing their professional and academic development. Service: Participating in departmental and institutional activities, serving on committees, and mentor new faculty members. Professional Development: Expanding professional development, going to conferences and workshops, and collaborating with peers to advance their research and teaching objectives.
02	Jahangirnagar University , Savar, Dhaka, Bangladesh.	Associate Professor (Department of Biotechnology and Genetic Engineering) from 30.01.2020 to 02.01.2025	Teaching: Delivering lectures and lessons, preparing course materials, and evaluating students' performance through exams, assignments, and other assessments. Research: Conducting original research, publishing academic articles and books, and presenting their findings at conferences.
03	Jahangirnagar University , Savar, Dhaka, Bangladesh.	Assistant Professor (Department of Biotechnology and Genetic Engineering) from 24.12.2018 to 29.01.2020	Teaching: Delivering lectures and lessons, preparing course materials, and evaluating students' performance. Research: Conducting original research, publishing academic articles and books, and presenting their findings at conferences.
04	Jahangirnagar University , Savar, Dhaka, Bangladesh.	Lecturer (Department of Biotechnology and Genetic Engineering) from 12.12.2016 to 23.12.2018	Teaching: Delivering lectures and lessons, preparing course materials, and evaluating students' performance. Research: Conducting original research, publishing academic articles and books, and presenting their findings at conferences.

(B) Research Experience

No.	Organization	Designation	Job Description
01	Research Institute of Electronics, Shizuoka University, Shizuoka, Japan.	Specially Appointed Associate Professor (Biophysics laboratory). from 01.04.2023 to 30.07.2023	To reveal the mechanism and mode of action of antimicrobial peptides (Magainin 2, Lactoferricin B, LfcinB [4-9] and PGLa) on cell membrane by single Bacteria method.
02	Research Institute of Electronics, Shizuoka University, Shizuoka, Japan.	Postdoctoral Research Fellow (Biophysics laboratory). from 01.10.2015 to 09.12.2016, 29.08.2022 to 31.03.2023 and 01.08.2023 to 30.11.2023	To reveal the mechanism and mode of action of antimicrobial peptides (Magainin 2, Lactoferricin B, LfcinB [4-9] and PGLa) on cell membrane by single Bacteria method and cell penetrating peptides (Transportan10 and Poly-arginine) on cell membrane by single GUV method.

(C) Pharmaceuticals Industry working experience:

No.	Organization	Designation	Job Description
01	Incepta Vaccines Limited, 40, Shahid Tajuddin Ahmed Sarani, Tajgaon Industrial Area, Dhaka, Bangladesh.	Executive officer, Quality Control (Chemical and Microbiology Lab). from 17.05.2010 to 24.09.2012.	Preparation of all kinds of document regarding Quality Control and Quality Assurance Department. Biochemical, serological, microbiological and animal level testing of all kinds of vaccine. Review, preparation and update of SOPs, specifications and standard methods. To maintain safety in the laboratory and implement environment, health and safety instructions.
02	Sanofi-Aventis Bangladesh Ltd. (Rhone-poulenc Rorer Bangladesh Ltd., Fisons Bangladesh Ltd, Hoechst Marion Roussel Ltd.) Segun Bagicha, Dhaka, Bangladesh	Head of Microbiology Department, from 15.09.2005 to 16.05.2010.	Supervised and Approved of routine microbiological analysis of raw materials, products (Antibiotic and Non-Antibiotic), and follow-up environmental monitoring, ensure aseptic processing and all microbiological release activities. To run microbiology laboratory effectively and efficiently, maintain GLP. Laboratory and follow up of their implementation. Ensure aseptic manufacturing and timely microbiological support.
03	General Pharmaceuticals Limited, Dhanmondi, Dhaka, Bangladesh	Quality Control Officer (Microbiologist), from 04.08.2004 to 14.09.2005	Microbiological evaluation of raw materials & finished product including routine microbiological evaluation of purified water, total viable count of syrup, suspension and cream also carry out chemical and physical analysis of raw, semi-finished and finished product, new analytical method development preparation of dossier, and also look after the affairs of QC Department.
04	Medimet Pharmaceutical Limited, Segun Bagicha, Dhaka, Bangladesh	Quality Control Officer (Microbiologist), from 02.08.2003 to 03.08.2004	Microbiological assay of antibiotics, sterility test of injectable products, water for injection, routine environment monitoring system of Grade-A, Grade-B, Grade-C production area, microbial limit test of suspension and syrup, routine maintenance of microorganism and instrument of microbiology section. Test and analysis of incoming raw materials, intermediate and finished products.

Collaborative Research:

To reveal the mechanism of translocation of Cell-penetrating peptides (Transportan10 and Poly-arginine) across the membrane into single GUV and also study of the mechanism and mode of action of Antimicrobial peptides (Magainin 2, Lactoferricin B, LfcinB[4-9], and PGLa) using single bacterial cells. (With Prof. Masahito Yamazaki, Ph.D., Shizuoka University, Shizuoka, Japan)

Postdoctoral Research:

To reveal the mechanism of translocation of Cell-penetrating peptides (Transportan10 and Poly-arginine) across the membrane into single GUV and also study of the mechanism and mode of action of Antimicrobial peptides (Magainin 2, Lactoferricin B, LfcinB[4-9], and PGLa) using single bacterial cells. (Supervisor: Prof. Masahito Yamazaki, Ph.D. Integrated Bioscience Section. Graduate School of Science and Technology, Shizuoka University, Shizuoka, Japan)

Ph.D. Research Work:

Entry of cell-penetrating peptide transportan 10 (TP10) into a single vesicle of lipid membranes and its induced pore formation.

Supervisor: Prof. Masahito Yamazaki, Ph.D.
Integrated Bioscience Section. Graduate School of Science and Technology
Shizuoka University, Shizuoka, Japan.

M.S. Research Work:

A Comparative Study of *Azotobacter spp* from Different Soil Samples.

Supervisor: Dilara Islam Sharif
Asst. Professor, Department of Biotechnology & Genetic Engg., Khulna University.

B.Sc. Research Work:

Cultivation of Oyster Mushroom (*Pleurotus flabellatus*) on Different Agro-Based Substrates

Supervisor: Mrs. Fauzia Hafiz
Principal Scientific Officer, Food Microbiology Research Section, Institute of Food Science & Technology, Bangladesh Council of Scientific & Industrial Research, Dhaka, Bangladesh.

Co- Supervisor: Md. Hasibur Rahman
Asst. Professor, Department of Biotechnology & Genetic Engg., Khulna University.

Training Information:

(a) Training in Abroad

1. Training on Quality Control Techniques of Rabies vaccine for human use by CDBIO analysts from October 13 to October 27, 2011 held at **Liaoning Cheng Da Biotechnology Co. Ltd. (CDBIO), Shenyang, China.**
2. Training on Potency test for Polio and Measles Vaccine, Cell preparation for potency test of Polio and Measles Vaccine, Observation and calculation for Polio and Measles potency test, Opacity test for Pertussis bulk and Flocculation Test for Diphtheria and Tetanus bulk vaccine, December 13 to 22, 2010 held at **Pt Bio Farma, Bandung, Indonesia.**
3. Training on Advance method development of HPLC. (Method development, Column Chemistry, Maintenance of HPLC, Trouble shooting, etc) from 22 September to 24 September 2009 held at **Shimadzu Asia Pacific Pte. Ltd., Singapore.**

Training Information:

(b) Training in Bangladesh

1. Training on **Developing Leadership Skills** on April 13, 2012 organized by Jobs Bangladesh.
2. Training on Preparation of Master data at **QM, R&D module in SAP as a core Team Member** (Power User) from March 13 to May 31, 2011 by Zanser India at Incepta Pharmaceutical Limited, Dhaka, Bangladesh.
3. **WHO-DGDA** Workshop on Regulatory Inspection for Vaccine and Biologicals, 3 to 8 December, 2010, Organized by World Health Organization-South East Asian Region, Cox's Bazar, Bangladesh.
4. Training on **Shimadzu Prominence Automated QG HPLC with LC solution software** and its application on Pharmaceutical Quality Control. From 05.02.06 to 09.02.06 By AQ Chowdhury Science & Synergy (Pvt) Ltd, Dhaka Bangladesh.

Personal Conversant:

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