Name	**Dr. Aminur Rahman**			
Specialization	Biochemistry and Molecular Biology			
Current Position	Assistant Professor			
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Academic Qualifications	**Degree/year/university/country**	Ph.D. in Biology 2017, Örebro University, Sweden
	Degree/year/university/country	M.Sc. in Molecular Biology, 2010, University of Skövde, Sweden
Teaching Experience	ASSISTANT PROFESSOR: May 2022 to Present, King Faisal University. I deliver lectures on diverse subjects, including biochemistry, metabolism, food and nutrition, to undergraduate students. I am actively involved in various academic committees with valuable insights into educational environments' administrative and collaborative aspects.	
Courses Taught and Teaching in KFU	Biochemistry-2, Clinical Biochemistry and Nutrition	
Research Interests	My research interest encompasses a diverse range of topics within biotechnology and microbiology, with a particular emphasis on innovative solutions for healthcare, agriculture, pharmaceutical development, and environmental biotechnology, specifically in the areas of wastewater treatment, bioremediation of heavy metals, pesticide, and development of novel bio-based materials for adsorption and removal of contaminants.	
Research Grants Received	1. Promising and Environmentally Friendly Removal of Copper, Zinc, Cadmium, and Lead from Wastewater Using Modified Shrimp-Based Chitosan. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia.GRANT 4264. 2. Molecular Cloning, In Silico Analysis, and Characterization of a Novel Cellulose Microfibril Swelling Gene Isolated from Bacillus sp. Strain AY8. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. GRANT 5034. 3. Application of Three Compounds Extracted from Cynodon dactylon against Streptococcus mutans Biofilm Formation to Prevent Oral Diseases. Grant:	

	Deanship of Scientific Research, King Faisal University, Saudi Arabia.GRANT 3236. 4. Characterization of Growth-Promoting Activities of Consortia of Chlorpyrifos Mineralizing Endophytic Bacteria Naturally Harboring in Rice Plants—A Potential Bio-Stimulant to Develop a Safe and Sustainable Agriculture. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. GRANT 3636. 5. A Multivariate Machine Learning Model of Adsorptive Lindane Removal from Contaminated Water. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia.GRANT 3415. 6. Smart Eco-Friendly Mathematically Manipulated UV Spectroscopic Methods to Resolve Severely Overlapped Spectra of a Binary Mixture of Dapagliflozin with Sitagliptin and Vildagliptin. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. INST166. 7. Investigation of Efficient Adsorption of Toxic Heavy Metals (Chromium, Lead, Cadmium) from Aquatic Environment Using Orange Peel Cellulose as Adsorbent. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. GRANT 2898. 8. Pharmacological Features of 18β-Glycyrrhetinic Acid: A Pentacyclic Triterpenoid of Therapeutic Potential. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. GRANT 2442. 9. Modified Shrimp-Based Chitosan as an Emerging Adsorbent Removing Heavy Metals (Chromium, Nickel, Arsenic, and Cobalt) from Polluted Water. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. INST 162. Analysis of climate change impacts on food system security of Saudi 10. Arabia. Grant: Deanship of Scientific Research, King Faisal University, Saudi Arabia. GRANT1455.
Publications	1. **Rahman, A.** Promising and Environmentally Friendly Removal of Copper, Zinc, Cadmium, and Lead from Wastewater Using Modified Shrimp-Based Chitosan. Water. **2024**, 16, 184. https://doi.org/10.3390/w16010184 2. Haque, M.A.; Barman, D.N.; **Rahman, A**.; Hossain, M.S.; Ghosh, S.; Nahar, M.A.; Nahar, M.N.-E.-N.; Saha, J.K.; Cho, K.M.; Yun, H.D. Molecular Cloning, In Silico Analysis, and Characterization of a Novel Cellulose Microfibril Swelling Gene Isolated from Bacillus sp. Strain AY8. Microorganisms. **2023**, 11, 2857. https://doi.org/10.3390/microorganisms11122857 3. Sharker, B.; Islam, A.; Hossain, A.; Ahmad, I.; Mamun, A. Al; Ghosh, S.; **Rahman, A**.; Hossain, S.; Ashik, A.; Hoque, R.; et al. Characterization of Lignin and Hemicellulose Degrading Bacteria Isolated from Cow Rumen and Forest Soil: Unveiling Novel Enzymatic Model for Rice Straw Deconstruction. Sci. Total Environ. **2023**, 166704, doi:10.1016/j.scitotenv.2023.166704. 4. Habib, T.; **Rahman, A**.; Nair, A.B.; Islam, S.M.S. Application of Three Compounds Extracted from Cynodon dactylon against Streptococcus mutans Biofilm Formation to Prevent Oral Diseases. Biomolecules **2023**, 13, 1292. https://doi.org/10.3390/biom13091292

	5. Prodhan, M.Y.; Rahman, M.B.; **Rahman, A**.; Akbor, M.A.; Ghosh, S.; Nahar, M.N.E.N.; Simo; Shamsuzzoha, M.; Cho, K.M.; Haque, M.A. Characterization of Growth-Promoting Activities of Consortia of Chlorpyrifos Mineralizing Endophytic Bacteria Naturally Harboring in Rice Plants—A Potential Bio-Stimulant to Develop a Safe and Sustainable Agriculture. Microorganisms **2023**, 11, doi:10.3390/microorganisms11071821. 6. Akinpelu, A.A.; Nazal, M.K.; Shafiullah, M.; Islam, M.K.; Islam, M.M.; **Rahman, A**.; Rahman, S.M.; Rahman, M.M. A Multivariate Machine Learning Model of Adsorptive Lindane Removal from Contaminated Water. Appl. Sci. **2023**, 13, 7086, doi:10.3390/app13127086. 7. Haque, A.; Yeasin, S.; Sibdas, P.; Shohorab, G.; **Rahman, A.**. Enhanced Rice Plant (BRRI - 28) Growth at Lower Doses of Urea Caused by Diazinon Mineralizing Endophytic Bacterial Consortia and Explorations of Relevant Regulatory Genes in a Klebsiella Sp . Strain HSTU - F2D4R; Archives of Microbiology, **2023**; 205:231. 8. Attimarad, M.; Monirul, M.; Shafi, S.; David, M.; **Rahman, A..** Smart Eco-Friendly Mathematically Manipulated UV Spectroscopic Methods to Resolve Severely Overlapped Spectra of a Binary Mixture of Dapagliflozin with Sitagliptin and Vildagliptin. Microchem. J. **2023**, 190, 108700. 9. **Rahman, A.;** Yoshida, K.; Islam, M.M.; Kobayashi, G. Investigation of Efficient Adsorption of Toxic Heavy Metals (Chromium, Lead, Cadmium) from Aquatic Environment Using Orange Peel Cellulose as Adsorbent. Sustainability **2023**, 15, 4470. 10. Shinu, P.; Gupta, G.L.; Sharma, M.; Khan, S.; Goyal, M.; Nair, A.B.; Kumar, M.; Soliman,W.E.; **Rahman, A**.; Attimarad, M.; et al. Pharmacological Features of 18β-Glycyrrhetinic Acid: A Pentacyclic Triterpenoid of Therapeutic Potential. Plants **2023**, 12, 1086. 11. **Rahman, A**.; Haque, M.A.; Ghosh, S.; Shinu, P.; Attimarad, M.; Kobayashi, G. Modified Shrimp-Based Chitosan as an Emerging Adsorbent Removing Heavy Metals (Chromium, Nickel, Arsenic, and Cobalt) from Polluted Water. Sustainability **2023**, 15, 2431. 12. Haque MA., Hossain MS., Ahmad I., Akbor MA., **Rahman A**., Manir MS., Patel H., and Cho KM. Unveiling chlorpyrifos mineralizing and tomato plant-growth activities of Enterobacter sp. strain HSTU-ASh6 using biochemical tests, field experiments, genomics, and insilico analyses. Front. Microbiol. **2022**, 13:1060554. 13. Rahman MA, Akter R, Bari JBA, Hasan MA, Rahman MS, Shoaib SA, Shatnawi ZN, Al-shayeb A, Shalabi FI, **Rahman A**, Alsanad MA, Rahman SM. Analysis of climate change impacts on food system security of Saudi Arabia. Sustainability **2022**, 14, 14482. 14. Yitayew B., Woldeamanuel Y., Asrat D., **Rahman A**., Mihret A., Aseffa A., Olsson P-E., Jass J. Antibiotic resistance genes in microbiota associated with water and sediment from the Akaki rivers in Ethiopia. Environmental Science and Pollution Research, **2022**. doi.org/10.1007/s11356-022-20684-2

15. Das S.R., Haque M.A., Akbor M.A., Al-Mamun M.A., Debnath G.C., Hossain M.S., Hasan Z., **Rahman A**., Islam M.A., Hossain M.A., Yesmin S., Nahar M.N., Cho K.M. Organophosphorus insecticides mineralizing endophytic and rhizospheric soil bacterial consortium influence eggplant growth-promotion. Archives of Microbiology, 204:199, **2022**.
16. Al-Mamun MA., Hossain MS, Debnath GC., Sultana S., **Rahman A**., Hasan Z., Das SR., Ashik MA., Prodhan MY., Aktar S., Cho KM., Haque MA. Unveiling lignocellulolytic trait of a goat omasum inhabitant Klebsiella variicola strain HSTU-AAM51 in light of biochemical and genome analyses. Braz J Microbiol. doi: 10.1007/s42770-021-00660-7., **2022**.
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18. Paul, S.K., Islam, M.S., Hasibuzzaman, M.M., Hossain, F., Anjum, A., Saud, Z.A., Haque, M.M., Sultana, P., Haque, A., Andric, K.B., **Rahman, A**., Karim, M.R., Siddique, A.E., Karim, Y., Rahman, M., Miyataka, H., Xin, L., Himeno, S., Hossain, K. "Higher Risk of Hyperglycemia with Greater Susceptibility in Females in Chronic Arsenic-Exposed Individuals in Bangladesh", Science of the total environment, (668), **2019**.
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20. **Rahman, A.**, Olsson, B., Jass, J., Nawani, N. N., Ghosh, S., & Mandal, A., "Genome sequencing revealed chromium and other heavy metal resistance genes in *Enterobacter Cloacae* B2-DHA," *J. Microb Biochem. Technol.*, (9), **2017**.
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25. Nawani, N., **Rahman, A.**, Nahar, N., Saha, A., Kapadnis, B., & Mandal, A., "Status of metal pollution in rivers flowing through urban settlements at Pune and its effect on resident microflora," *Biologia*, 71(5), **2016**.
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	27. **Rahman, A.**, Nahar, N., Jass, J., Olsson, B., & Mandal, A., "Complete genome sequence of *Lysinibacillus sphaericus* B1-CDA, a bacterium that accumulates arsenic," *Genome Announce*, 4(1), **2016**. 28. **Rahman, A.**, Nahar, N., Nawani, N. N., Jass, J., Ghosh, S., Olsson, B., & Mandal, A., "Comparative genome analysis of *Lysinibacillus* B1-CDA, a bacterium that accumulates arsenics," *Genomics*, 106, **2015**. 29. Islam, M. S., Mohanto, N. C., Karim, M. R., Aktar, S., Hoque, M. M., Rahman, A., Jahan, M., Khatun, R., Aziz, A., Salam, K. A., Saud, Z. A., Hossain, M., **Rahman, A.,** Mandal, A., Haque, A., Miyataka, H., Himeno, S., & Hossain, K., "Elevated concentrations of serum matrix metalloproteinase-2 and -9 and their associations with circulating markers of cardiovascular diseases in chronic arsenic-exposed individuals," *Environmental Health*, 14, **2015**. 30. **Rahman, A.**, Nahar, N., Nawani, N. N., Jass, J., Ghosh, S., Olsson, B., & Mandal, A., "Data in support of the comparative genome analysis of Lysinibacillus B1-CDA, a bacterium that accumulates arsenics, *Data in Brief*, 5, **2015**. 31. **Rahman, A.**, Nahar, N., Nawani, N. N., Jass, J., Hossain, K., Alam, Z. A., Saha, A. K., Ghosh, S., Olsson, B., & Mandal, A., "Bioremediation of hexavalent chromium (VI) by a soil-borne bacterium, *Enterobacter cloacae* B2-DHA, *J. Environ. Sci. and Health, Part A*, 50:11, **2015**. 32. **Rahman, A.**, Nahar, N., Nawani, N. N., Jass, J., Desale, P., Kapadnis, B. P., Hossain, K., Saha, A. K., Ghosh, S., Olsson, B., & Mandal, A., "Isolation and characterization of a *Lysinibacillus* strain B1-CDA showing potentials for arsenic bioremediation, *J. Environ. Sci. and Health, Part A*, 49, **2014**. 33. Desale, P., Kashyap, D., Nawani, N., Nahar, N., **Rahman, A.**, Kapadnis, B., & Mandal, A., "Biosorption of Nickel by Lysinibacillus sp. BA2 native to bauxite mine, *Ecotoxicology and Environmental Safety*, 107, **2014**. 34. Nahar, N., **Rahman, A.**, Moś, M., Warzecha, T., Ghosh, S., Hossain, K., Nawani, N. N., & Mandal, A., "*In silico* and *in vivo* studies of molecular structures and mechanisms of AtPCS1 protein involved in binding arsenite and/or cadmium in plant cells," *J Mol. Model*, 20, **2014**. 35. Nahar, N., **Rahman, A.**, Moś, M., Warzecha, T., Algerin, M., Ghosh, S., Johnson-Brousseau, S., & Mandal, A., "*In silico* and *in vivo* studies of an *Arabidopsis thaliana* gene *ACR2* putatively involved in arsenic accumulation in plants," *J. Mol. Model*, 18, **2012**. 36. Ali, N., Haque, A., Salam, K. A., Karim, R., **Rahman, A.**, Saud, Z. A., Akhand, A. A., Hossain, M., Mandal, A., Miyataka, H., Himeno, S., Hossain, K., "Association between arsenic exposure and plasma cholinesterase activity: a population based study in Bangladesh," *Environmental Health*, **9, 2010.**
Presentations And abstracts	1. John J., **Rahman A**., Jass J. (2021) Absolute quantification and diversity of antibiotic resistance genes in aquatic sediments impacted by treated wastewater in Sweden. FEMS World Microbe Forum, Online Worldwide. June 20 - 24, 2021. 2. Yitayew B., Woldeamanuel Y., Asrat D., **Rahman A**., Mihret A., Olsson P-E., Jass J. (2021) The River Water Rather Than Sediments Are Potential Conduits for the Spread of Antibiotic Resistance Genes in Urban Aquatic Environments. FEMS World Microbe Forum, Online Worldwide. June 20 - 24, 2021.

3. **Rahman A**, Khan FA, Jass J. (2019) Detection of low levels of antibiotic resistance genes in aquatic environments. SETAC Europe 29th Annual Meeting in Helsinki, Finland. Held on 26−30 May 2019.

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8. Mandal A, **Rahman A**, Nahar N, Nawani N, Hossain K, Jass J (2015) An eco-friendly approach for bioremediation of arsenics from contaminated water to protect human health and the environment. 1st International Conference on Pollutant Toxic Ions and Molecules. Caparica - Almada, Portugal. 2nd – 4th November 2015. Abstract # O19B. Page 148.

9. **Rahman A**, Nahar N, Jass J, Mandal A (2014) Isolation of a Lysinibacillus strain B1-CDA showing potentials for arsenic bioremediation. Seventh International Conference on Environmental Science and Technology held on June 9-13, 2014: At Houston, Texas, USA. Abstract # 1048. Environmental Science & Technology 2014. Vol. 1 page 202.

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11. **Rahman A**, Nahar N, Nawani NN, Jass J, Desale P, Kapadnis BP, Hossain K, Saha AK, Ghosh S, Mandal A (2013) Discovery of a novel soil borne bacterium with a potential for arsenic bioremediation from contaminated water. AquaConSoil April 16-19, 2013: Abstract # Ths_D_1405.

12. Nahar N, **Rahman A**, Mos´ M, Warzecha T, Ghosh S, Mandal A (2013) Identification and characterization of genes involved in accumulation and/or sequestration of arsenics in plants. BSBMB January 12-13, 2013: Abstract # SBO-4.

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Workshops / Seminars attended	International Conference on Pollutant Toxic Ions & Molecules | Almada, **PORTUGAL** International Conference on Environmental Science & Technology | Houston, Texas, **USA** International Ufz-Deltares Conference on Groundwater-Soil-Systems & Water Resource Management | Barcelona, **SPAIN**