

RESUME OF

MD NANNUR RAHMAN

PhD research fellow

Dept. of Microbiology, Faculty of Medicine,
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&

Associate Professor

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Professional Objective

Being a high deserved person, I would like to serve my nation doing my deeds responsibly & transparently in my professional sector especially in University and research centers where I could conduct research on contemporary issues and challenges that will help me to make the best use of my knowledge and experience in social welfare.

Research Interest

Gut microbiota and metabolic disorders, Interplay between antibiotic resistant bacteria and gut microbiota, diabetes and resistant bacterial infection in relation to food supplements.

Academic Qualifications

PhD candidate in Microbiology, Faculty of Medicine

University : The Chinese University of Hong Kong

Master's in nutrition and Rural Development - Main Subject 'Human Nutrition'

University : Ghent University, Belgium

Grade & Grade Point : **Distinction** (71.8%)

Passing year : 2016

M.Sc. in "Applied Nutrition & Food Technology"

University : Islamic University, Bangladesh.

Grade & Grade Point : **A- (Very good)** & 3.70 (out of 4.0)

Position in Merit : **1st** (First)

B.Sc. (4 years Hon's) in "Applied Nutrition & Food Technology"

University : Islamic University, Bangladesh.

Class & Marks (%) : **First Class 1st (Best grade)** & 69.04%

Position in Merit : **1st** (First)

Research Interest:

- Ø Interplay between Nutrition and gut microbiota
- Ø Antibiotic resistance and its impact on public health
- Ø Dietary supplements and diseases outcomes
- Ø Food safety and quality in relation to microbiology

Professional Experience:

- **Hong Kong PhD fellowship Scheme (HKPFS) research fellow** (August, 2019 to Continue), Dept. of Microbiology, The Chinese University of Hong Kong, Hong Kong.
- **Associate Professor (13 April, 2018 to continue, Study leave)** and **Assistant Professor** (24 March, 2012 to 12 April, 2018), department of Food Technology and Nutritional Science, Mawlana Bhashani Science and Technology University, Bangladesh.
- **Research fellow (September, 2015 to August, 2016)**, Applied Mycology Laboratory, Ghent University, Belgium.

- **Deputy Area Coordinator (Nutrition and Health) (February, 2011 to March, 2012)**, Plan International Bangladesh.
- **Technical Officer (Nutrition) (June, 2010 to January, 2011)**, National Development Program (NDP), Sirajgonj, Bangladesh.
- **Field Training Officer (October, 2009 to May, 2010)** in Disaster preparedness through adolescent's initiative project funded by JIKA, implemented by Shapla Neer, Dhaka.
- **Project member in Higher Education Quality Enhancement Project**, Mawlana Bhashani Science and Technology University, Santosh, Tangail-1902, Bangladesh.
- **Assistant Provost (June, 2013 to August, 2014)**, Shahid Ziaur Rahman Hall, Mawlana Bhashani Science and Technology University, Bangladesh.
- **Student Advisor (June, 2017 to May, 2019)**, Department of Food Technology and Nutritional Science, Mawlana Bhashani Science and Technology University, Bangladesh.

Recent Research & Publications

Title of recent Master's thesis: **"Source tracking and characterization of the moulds associated with the spoilage of gingerbread"**, Ghent University, Belgium, 2016.

Rahman, M.N., Barua, N., Tin, M.C., Dharmaratne, P., Wong, S.H. and Ip, M., 2024. The use of probiotics and prebiotics in decolonizing pathogenic bacteria from the gut; a systematic review and meta-analysis of clinical outcomes. *Gut Microbes*, 16(1), p.2356279.

Yang, L., Dharmaratne, P., Zhu, C., Sapugahawatte, D.N., Rahman, N., Barua, N., Li, C., Kwok, K.O., Luo, M., Liyanapathirana, V. and Ip, M., 2024. Global epidemiology of asymptomatic colonisation of methicillin-resistant *Staphylococcus aureus* in the upper respiratory tract of young children: a systematic review and meta-analysis. *Archives of Disease in Childhood*, 109(4), pp.267-274.

Alam, M., Hasan, M.M., Debnath, M.K., Alam, A., Zahid, M.A., Alim, M.A., Rahman, M.N., Molla, M.M., Khan, M.R. and Biswas, M., 2024. Characterization and evaluation of flour's physico-chemical, functional, and nutritional quality attributes from edible and non-edible parts of papaya. *Journal of Agriculture and Food Research*, 15, p.100961.

Alim, M.A., Mumu, T.J., Tamanna, U.S., Khan, M.M., Miah, M.I., Islam, M.S., Jesmin, Z.A., Khan, T., Hasan, M.R., Alam, M.J. and Linkon, K.M.M.R., M. Nannur Rahman, 2024. Hypolipidemic effect and modulation of hepatic enzymes by different edible oils in obese Wistar rats. *Heliyon*, 10(4).

Begum, R., Hasan, M., Akter, S. and Rahman, M.N., 2024. Fortified edible oils in Bangladesh: A study on vitamin A fortification and physicochemical properties. *Heliyon*, 10(3).

Hasan, R., Begum, R., Huq, A.O., Rahman, N., Akter, S., Khan, S.H. and Islam, F., 2023. Development of normal phase HPLC based method for the determination of retinyl palmitate in fortified edible oils. *International Journal of Food Properties*, 26(1), pp.24-37.

Tamanna, S.A., Alim, M.A., Islam, M.F., Hasan, M.R., Esrafil, M., Rahman, M.N., Akther, F., Haque, M.A. and Begum, R., 2023. Effect of drying methods on physicochemical quality of dehydrated jackfruit bulbs. *Food and Humanity*, 1, pp.723-730.

Alim, M.A., Karim, A., Shohan, M.A.R., Sarker, S.C., Khan, T., Mondal, S., Esrafil, M., Linkon, K.M.M.R., Rahman, M.N., Akther, F. and Begum, R., 2023. Study on stability of antioxidant activity of fresh, pasteurized, and commercial fruit juice during refrigerated storage. *Food and Humanity*, 1, pp.1117-1124.

Yang, J., Barua, N., Rahman, M.N., Lo, N., Tsang, T.F., Yang, X., Chan, P.K., Zhang, L. and Ip, M., 2021. Chimeric crRNA improves CRISPR–Cas12a specificity in the N501Y mutation detection of Alpha, Beta, Gamma, and Mu variants of SARS-CoV-2. *PLoS One*, 16(12), p.e0261778.

Alim, M.A., Mondal, S., Khan, M.F., Mamia, M.M., Shohan, M.A.R., Miah, M.P., Khan, T., Kabir, M.H., Rahman, M.N. and Akther, F., 2023. Comparative analyses of proximate composition, bioactive compound and antioxidant activity in different parts of green and ripe passion fruit. *Carpathian Journal of Food Science & Technology*, 15(2).

Yang, J., Barua, N., Rahman, M.N., Li, C., Lo, N., Yeong, K.Y., Tsang, T.F., Yang, X., Cheung, Y.Y., Tsang, A.K. and Chan, R.C., 2022. Rapid SARS-CoV-2 variants enzymatic detection (SAVED) by CRISPR-Cas12a. *Microbiology Spectrum*, 10(6), pp.e03260-22.

Dharmaratne, P., Rahman, N., Leung, A. and Ip, M., 2021. Is there a role of faecal microbiota transplantation in reducing antibiotic resistance burden in gut? A systematic review and Meta-analysis. *Annals of Medicine*, 53(1), pp.662-681.

Khan, A.G., Kamruzzaman, M., **Rahman, M.N.**, Mahmood, M. and Uddin, M.A., 2021. Quality of life in the COVID-19 outbreak influence of psychological distress, government strategies, social distancing, and emotional recovery. *Heliyon*, 7(3).

Begum, R., Rahman, N., Hasan, R., Jamil, Y., Tamanna, S.A. and Islam, R., 2021. Vitamin A Fortified Edible Oils and Rice: The Knowledge Level and Consumption Rate among Different Place of Residences in Tangail District, Bangladesh. *Journal of Nutritional Science and Vitaminology*, 67(1), pp.13-20.

Hossain, M.Z., Easmin, F., Bhuiyan, S.I., Alim, M.A., Akter, S. and Alam, M.J., Md Nannur Rahman, 2023. Study on Tea Consumption Behavior during the Covid-19 Pandemic and the Analysis of the Antioxidant Activity and Bioactive Compounds of Flavoring Ingredients of Tea. *Current Research in Nutrition and Food Science Journal*, 11(1), pp.434-444.

Akter, D., Begum, R., **Rahman, M.N.**, Talukder, N. and Alam, M.J., 2020. Optimization of extraction process parameter for rice bran protein concentrate and its utilization in high protein biscuit formulation. *Current Research in Nutrition and Food Science Journal*, 8(2), pp.596-608.

Begum, R., Rahman, M.N., Islam, R., Hasan, M.R., Jamil, M.Y. and Tamanna, S.A., 2021. Vitamin A knowledge and household consumption frequency of vitamin A--rich foods in Tangail, Bangladesh. *Malaysian Journal of Nutrition*, 27(1).

Sultana, R., Begum, R., Rahman, M.N., Hasan, M.R. and Haque, M.A., 2020. Development of aloe vera jelly for diabetic patients and analysis of its physicochemical properties. *International Journal of Food Science and Biotechnology*, 5(1), p.1.

Akter, N., Hye, M.A. and Rahman, M.N., 2020. Antifungal Activity of Centella asiatica on radial growth of aspergillus species. *Letters in Applied NanoBioScience*, 9(4), pp.1467-1473.

Haque, M.M., Rahman, M.N., Alam, M.J. and Akter, S., 2016. A possible approach for maintaining effective omega-6/omega-3 fatty acid ratio from mixed vegetable oils. *Journal of Environmental Science and Natural Resources*, 9(2), pp.65-69.

Al-Reza, S., Karmaker, S., Hasan, M., Roy, S., Hoque, R. and **Rahman, N.**, 2015. Effect of traditional fish processing methods on the proximate and microbiological characteristics of Laubuka dadiburjori during storage at room temperature. *Journal of Fisheries and Aquatic Science*, 10(4), p.232.

Miah, M.S., **Rahman, N.**, Prodhan, U., Linkon, M. and Rahman, S., 2014. Prevalence of iron deficiency anemia among adolescent girls and its risk factors in tangail region of Bangladesh. *International Journal of Research in Engineering and Technology*, 3(06), pp.613-619.

Rahman, M.N., Reza, S.A., Islam, M.A., Rahman, A. and Nath, A.K., 2014. Prevalence of obesity and overweight among English medium school children of Dhaka City in Bangladesh. *Journal of Environmental Science and Natural Resources*, 7(1), pp.63-67.

Alam, J., Talukder, M.U., **Rahman, M.N.**, Prodhan, U.K. and Huq, A.O., 2013. Evaluation of the nutritional and sensory quality of functional breads prepared from whole wheat and soybean flour. *Annals Food Sci Technol*, 14(2), pp.171-175.

Rahman, M.N., ObidulHuq, A.K., GolamMoktadir, S.M. and Akter, M.M., 2012. Quality Assessment of Sweet Curds (MistiDahi) from Two Selected Areas of Bangladesh. *Research & Review: Journal of Dairy Science and Technology*, 1(1), pp.32-38.

Md Nannur Rahman, Nargis Akter, Obaidur Rashid, 2017. Impact of Colostrum and Exclusive Breast-Feeding Practice on Health among under Two Years Children in the Rural Areas of Bangladesh. *Paripex Indian Journal of Research* 7 (3), 80-82

Nannur Rahman, A. K. Obidul Huq, Md. Jahangir Alam, Utpal Kumar Prodhan, 2013. Development of Fiber and Protein Enriched Biscuits by Utilizing Jackfruit Seed Flour: A Preliminary Study on Sensory Evaluation and Chemical Composition, *Research & Reviews: Journal of Food Science & Technology* 2 (2), 11-15

Rahman, M.N., 2022. The exploitation of probiotics; a potential therapy to modulate and eliminate human gut resistome?.

Shafiul Islam Md. Nannur Rahman, Habibur Rahman, Rokeya Begum, Abdur Rahim, 2017. Nutritional quality changes of cooked beef due to refrigeration storage. *IOSR Journal of Environmental Science, Toxicology and Food Technology*

11 (10), 49-56

Surveillance on Use of Synthetic Color in Different Sweetmeats, Confectionaries and Street Foods in Southern Region, Bangladesh. AZ M. Nannur Rahman, S. M. Golam Moktadir, Utpal Kumar Prodhan, A. K. Obidul Huq. *Research & Reviews: Journal of Food Science & Technology* 1 (3), 27

Rahman, M.N., Rokeya Begum, R. and Mamun Sarke, M., 2017. Quality assessment based on physico-chemical properties of fried soybean oils available in Tangail region. *Bangladesh International Journal of Sciences & Applied Research*, 4, pp.01-09.

Rashid, O., Begum, R., Rahman, N., Parvin, S. and Prodhan, U.K., Effect of microcredit on health and nutritional status of rural people in Bangladesh. *Hospital*, 49(10.30a), p.34.

Conference Proceedings

- Md Nannur Rahman^{1,2}, Md Rakibul Hasan¹, Farhana Akther¹, Nilakshi Barua², Carmen Li², Md Esrafil¹, Rita Wai Yin NG², Margaret Ip^{2*}. “Efficacy of currently available antibiotics and alternatives in mrsa infections: a systematic review and meta-analysis”.19th International Symposium on Staphylococci and Staphylococcal infections, 18-22 August 2024, Perth, Australia.
- Nannur Rahman, Chendi ZHU, Margaret Ip, Cramen Li, Zigui Chen, Norman Lo. “Metagenomic changes of the effect of amoxicillin-clavulanate with probiotics in a young adult cohort”. 13th International Meeting on Microbial Epidemiological Marker” (IMMEM XIII), Bath, United Kingdom, 14-17 September, 2022.
- Md Nannur Rahman¹, Carmen Li¹, Nilakshi Barua¹, Jun Yang¹, Anthony Leung KT¹, Kam Tak Wong¹, Norman Lo WS¹, Priyanga Dharmaratne¹, Chendi Zhu¹, Rita Ng^{1,2}, Zigui Chen^{1,2}, Grace Lui³, Margaret Ip^{1,2,*}. “Modulation of archaea and crAssphage in the gut microbiota in subjects on antibiotic, Augmentin with probiotics”. **32nd European Congress of Clinical Microbiology & Infectious Diseases**, ECCMID, 23 - 26 April (2022), Lisbon, Portugal. www.eccmid.org;
- Md Nannur Rahman, Nilakshi Barua, Priyanga Dharmaratne, Margaret Ip*. “Probiotics in establishing alpha-diversity of the gut microbiota by eliminating pathogenic bacteria; systematic review and meta-analysis of clinical outcomes”. *EMBO | EMBL symposium: The Human Microbiome*, Germany, 2023.
- Md Nannur Rahman, Nilakshi Barua, Hu Haitao, Margaret Ip*. “Probiotic-based decolonization of multidrug-resistant *Klebsiella pneumoniae* from the gut of diabetic mice”. **34st European Congress of Clinical Microbiology & Infectious Diseases**, ECCMID, 27 - 30 April (2021), Barcelona, Spain. www.eccmid.org;
- Nannur Rahman, Nilakshi Barua, Jun Yang, Md. & Margaret Ip. “Modulation of gut microbiota in subjects on antibiotics Augmentin, A pilot study.” 6th International conference on clinical metagenomics (ICCMg), Switzerland, October 21—22, 2021.
- Nilakshi Barua, Jun Yang, Md. Nannur Rahman, & Margaret Ip. “A three-dimensional organotypic keratinocyte fibroblast co-culture skin model to study the role of Sortase A and Sortase B in methicillin-resistant *Staphylococcus aureus* infection.” **31st European Congress of Clinical Microbiology & Infectious Diseases**, ECCMID, 9 - 12 July, (2021), Online. www.eccmid.org;
- Carmen Li, David Cleary, Yun Kit Yeoh, Jeffery Ho, Nannur Rahman, Dulmini Nanayakkara, Jun Yang, Norman Lo, Stuart Clarke & Margaret Ip. “Whole genome sequencing and phenotypic characterisation of non-typeable *Haemophilus influenzae* in Hong Kong: 2000-2016.” **30st European Congress of Clinical Microbiology & Infectious Diseases**, (2020). www.eccmid.org;

Recent Project

- Microbial analysis of street food and juices funded by UGC (completed)
- Effect of local strength of yogurt on reducing excessive weight of animal model (mice) Funded by UGC (completed)
- Stability of fortified vitamin A in soybean oil funded by Education ministry Bangladesh (Completed)
- Analysis of protein in rice bran and its application Funded by Science and Technology Ministry Bangladesh (Completed)
- Identification and Isolation of Methicillin-Resistant *Staphylococcus aureus* in farm animals and environment Funded by ANSO, China (running)

Recent training and conference attended

- 19th International Symposium on Staphylococci and Staphylococcal infections, 18-22 August 2024, Perth, Australia.
- EMBO | EMBL symposium: The Human Microbiome, Germany, 2023.
- 13th International Meeting on Microbial Epidemiological Marker” (IMMEM XIII), Bath, United Kingdom, 14-17 September 2022.
- **34th European Congress of Clinical Microbiology & Infectious Diseases, ECCMID**, 27 - 30 April (2021), Barcelona, Spain.
- **32nd European Congress of Clinical Microbiology & Infectious Diseases, ECCMID**, 23 - 26 April (2022), Lisbon, Portugal. www.eccmid.org;
- The Infection 2022 virtual conference, CUHK
- The Infection 2021 virtual conference, CUHK
- 31st European Congress of Clinical Microbiology & Infectious Diseases, **France**, ECCMID (2021)
- International Conference on Advancement of Life Science 2021, MBSTU
- International conference Food Safety, Nutrition and Public Health 2016, MBSTU
- Belgian Nutrition Society congress, 2016
- Belgian Nutrition Society congress, 2015
- 4th regional public health conference, Bangladesh institute of health science (BIHS), 2014
- A comprehensive training for research methodology and professional development organized by Plan Bangladesh
- Training on Anthropometric and Dietary measurement of nutritional status organized by Shiree/DFID
- Training on Food Safety and Analysis
- Workshop on Instrumental analysis of Bioactive Compounds and Food Additives through HPLC, 2018
- International conference on Food Safety, 2017
- Training on Research Methodology, 2016

Recent awards

- Hong Kong PhD Fellowship scheme (**HKPFS**) award
- CUHK Vice-Chancellor HKPFS Scholarship
- **VLIRUOS** scholarship in Belgium
- **Distinction** result in Master of science at Ghent University, Belgium
- **Applied Nutrition and Food Technology merit scholarship**
- **UGC merit scholarship**

References

Professor Margaret IP

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(Md. Nannur Rahman)