### Md. Hasanur Rahman

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EDUCATION

# Gopalganj Science and Technology University

Gopalganj, Bangladesh Jan 2017 - Jan 2022

 $\operatorname{B.Sc.}$  (Hons.) in Biotechnology and Genetic Engineering

CGPA: 2.86/4.0 (71.50%)

EXPERIENCE

### Bangladesh Agricultural University

Mymensingh, Bangladesh Apr 2023 - Present

Research Assistant at Dr. Hannan's Lab

Conducting phytochemical-based computational analyses and network pharmacology studies to identify therapeutic targets and bioactive compounds for cancer and alzheimer's diseases, with a focus on drug interactions and delivery.

# **Kyung Hee University**

Seoul, Republic of Korea Feb 2022- Mar 2023

Research Assistant at Bonglee Kim's Lab

Developed novel drug targets and analysed biological assay's to evaluate pro-apoptotic effects of Korean medicinal plant *Caesalpinia sappan's* in pancreatic cancer.

#### **ABEx Bio-Research Center**

Dhaka, Bangladesh Aug 2019- Jan 2022

Research Assistant & Research Associate

Established first non-profit Computational Lab in Dhaka, trained over 30 national students and led molecular docking, dynamic simulations, and genomic analyses to explore phytochemicals therapeutic potential in cancer.

**Publication** 

- M. Jalouli, M.A Rahman, P. Biswas, M.H. Rahman, A.H. Harrath, I.S. Lee, S. Kang, J. Choi, M.N. Park, B. Kim. Targeting natural antioxidant polyphenols to protect neuroinflammation and neurodegenerative diseases: a comprehensive review (2025). Frontires in Pharmacology. DOI: 10.3389/fphar.2025.1492517.
- A.H. Harrath, M.A. Rahman, S.K. Bhajan, A.K. Bishwas, M.H. Rahman, S. Alwasel, M. Jalouli, S. Kang, M.N. Park, B. Kim. Autophagy and Female Fertility: Mechanisms, Clinical Implications, and Emerging Therapies (2024). *Cells*. DOI: 10.3390/cells13161354.
- M.A. Rahman, M.H. Rahman, H. Rhim, B. Kim. Drug Target to Alleviate Mitochondrial Dysfunctions in Alzheimer's Disease: Recent Advances and Therapeutic Implications (2024). Current Neuropharmacology. DOI: 10.2174/1570159x22666240426091311.
- M.H. Rahman, M.A. Rahman, M.S. Zahan, P. Biswas, S. Islam, R.A.I. Reshad, A.A.M. Sohag, B. Gupta, R. Islam, M.A. Hannan, W. Kim, S. Moon, M.J. Uddin, B. Kim. Identification of Therapeutic Leads from Ficus hispida Fruit Phytochemicals against Prostate Cancer Using Pharmacoinformatic and Molecular Dynamics Simulation Approach (2023). DOI: 10.1101/2023.06.04.543596.
- T. Akter, M.S. Zahan, N. Nawal, M.H. Rahman, T.N. Tanjum, K.I. Arafat, A. Moni, M.N. Islam, M.J. Uddin. Potentials of Curcumin against Polycystic Ovary Syndrome: Pharmacological Insights and Therapeutic Promises (2023). *Heliyon*. DOI: 10.1016/j.heliyon.2023.e16957.
- M.H. Rahman, P. Biswas, D. Dey, M.A. Hannan, M. Sahabuddin, Y. Araf, Y. Kwon, T.B. Emran, M.S. Ali, M.J. Uddin. An In-Silico Identification of Potential Flavonoids against Kidney Fibrosis Targeting TGFBR-1 (2022). *Life*. DOI: 10.3390/life12111764.
- M.A. Hannan, A. Sultana, M.H. Rahman, A.A.M. Sohag, R. Dash, M.J. Uddin, M.J. Hossen, I.S. Moon, M.F. Akhtar. Protective Mechanisms of Nootropic Herb Shankhpushpi (Convolvulus pluricaulis) against Dementia: Network Pharmacology and Computational Approach (2022). Evidence-Based Complementary and Alternative Medicine. DOI: 10.1155/2022/1015310.
- M.A. Rahman, K.R. Ahmed, M.H. Rahman, M.A.K. Parvez, I.-S. Lee, B. Kim. Therapeutic Aspects and Molecular Targets of Autophagy to Control Pancreatic Cancer Management (2022). *Biomedicines*. DOI: 10.3390/biomedicines10061459.

# **Publication** (Continued)

M.A. Islam, M.N.H. Zilani, P. Biswas, D.A. Khan, M.H. Rahman, R. Nahid, N. Nahar, A. Samad, F. Ahammad, M.N. Hasan, Evaluation of in vitro and in silico Anti-inflammatory Potential of Some Selected Medicinal Plants of Bangladesh against Cyclooxygenase-II Enzyme (2022). Journal of Ethnopharmacology. DOI: 10.1016/j.jep.2021.114900.

S. Akter, M.A. Rahman, M.N. Hasan, H. Akhter, P. Noor, R. Islam, Y. Shin, M.H. Rahman, M.S. Gazi, M.N. Huda, N.M. Nam, J. Chung, S. Han, B. Kim, I. Kang, J. Ha, W. Choe, T.G. Choi, S.S. Kim. Recent Advances in Ovarian Cancer: Therapeutic Strategies, Potential Biomarkers, and Technological Improvements (2022). Cells. DOI: 10.3390/cells11040650.

M.A. Rahman, K.R. Ahmed, M.H. Rahman, M.N. Park, B. Kim. Potential Therapeutic Action of Autophagy in Gastric Cancer Managements: Novel Treatment Strategies and Pharmacological Interventions (2022). Frontiers in Pharmacology. DOI: 10.3389/fphar.2021.813703.

M.A. Rahman, M.N. Park, M.H. Rahman, M.M. Rashid, R. Islam, M.J. Uddin, M.A. Hannan, B. Kim. p53 Modulation of Autophagy Signaling in Cancer Therapies: Perspectives Mechanism and Therapeutic Targets (2022). Frontiers in Cell and Developmental Biology. DOI: 10.3389/ fcell.2022.761080.

M. Cho, Y. Bu, J.-W. Park, M.H. Rahman, S.-J. Ko. Efficacy of Complementary Medicine for Nonsteroidal Anti-inflammatory Drug-Induced Small Intestinal Injuries (2021). Medicine. DOI: 10.1097/md.0000000000028005.

P. Biswas, D. Dey, A. Rahman, M.A. Islam, T.F. Susmi, M.A. Kaium, M.N. Hasan, M.H. Rahman, S. Mahmud, M.A. Saleh, P. Paul, M.R. Rahman, M.A.A. Saber, H. Song, M.A. Rahman, B. Kim. Analysis of SYK Gene as a Prognostic Biomarker and Suggested Potential Bioactive Phytochemicals as an Alternative Therapeutic Option for Colorectal Cancer: An In-Silico Pharmaco-Informatics Investigation (2021). Journal of Personalized Medicine. DOI: 10.3390/ jpm11090888.

### Honors and Awards

Full Funded Research Training Fellowship (~\$300), Compbio Bangladesh.	Feb 2023
KRW 23,228,000 Academic Scholarship from Cancer Preventive Material Development, Graduate School, <b>Kyung Hee University, Seoul Campus.</b>	Aug 2022
80k BDT Research Fellow for Breast Cancer with Diabetes Research from <b>Bangladesh Ministry of Education.</b>	Mar 2021
Best Performing Research Assistant Award AREx Rio-Research Center	Feb 2021

## ACTIVITIES

**Community of Biotechnology** - Chief Operating Officer.

TEDx BSMRSTU, TEDx BSMRSTUWomen - Founding Licensee & Organizer.

Best Performing Research Assistant Award, ABEx Bio-Research Center.

**ISCB RSG-Bangladesh** - Steering Committee Core Member.

MIT Media Lab - Global Community Bio Summit 5.0 Participant.

Journal of Advanced Biotechnology and Experimental Therapeutics - Editorial Assistant

**IELTS** Overall: 6.5 | Listening: 7.0 | Reading: 6.0 | Writing: 6.0 | Speaking: 6.5

**SKILLS** Genomic Data Analysis, Western Blotting, Python, R, Pandas, Matplotlib, PyMOL, AI.

Interests Music, Public Speaking, Football, Travelling.