

# MD. Hasanur Rahman

## Research Assistant

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## ACADEMIC CREDENTIALS

Faculty of Life Sciences, Bangabandhu Sheikh Mujibur Rahman Science and Technology University,  
Gopalganj-8100, Bangladesh.

Bachelor of Science (Hons.), Biotechnology and Genetic Engineering

Academic Year: Jan 2017 - Dec 2020

Result: 3.02/4.00

**Major Courses:** Biotechnology, Microbiology, Oncology and Virology, Molecular Biology, Biochemistry, Immunology, Cell Signaling, Genetic Engineering, Human Physiology, Biostatistics, Bioinformatics, etc.

## NOTABLE PUBLICATIONS

Under Processing: 5, Published: 20

### Under Processing (5 papers)

1. **Rahman, MD. H.**, Biswas, P., Dey, D., M. A., Hannan, Sahabuddin, M., Araf, Y., Kwon, Y., Ali, M. S., Emran, T. B., Uddin, M. J. (2022). An In-Silico Identification of Potential Flavonoids Against Kidney Fibrosis Targeting TGF $\beta$ R-1. *Molecular Diversity*. [JCR IF: 2.943] **[Status: Under Review]**
2. Akter, S., Akhter, H., **Rahman, MD. H.**, Mohammad, H., Rahman, M., Nguyen, M. N., Choi, T. G. K., Sung, S. and Chaudhury, H. S. (2022). Dietary Carbohydrates: Pathogenesis and Potential Therapeutic Targets to Obesity-associated Metabolic Syndrome. *Obesity Review* [JCR IF: 8.483] **[Status: Revised]**
3. Shahriar, S., Rafa, Z. T., Mahmood, M. S., Mahasin, D., Ullah, M. A., **Rahman, MD. H.**, Ali, M. A., Araf, Y. and Hosen, M. J. (2022). Insights into the Role of RUNX1 Gene in Female-related Cancers. *Molecular Biology Reports*. [JCR IF: 2.316] **[Status: Under Review]**
4. Rahman, Md.A., Ahmed, K.R., **Rahman, MD.H.**, Parvez, M. A. K. P., Lee, I.S. and Kim, B. (2022). Molecular Targets of Autophagy to Control Pancreatic Cancer Managements: Therapeutic Aspects and Pharmacological. *Frontiers in Oncology*. [JCR IF: 6.244] **[Status: Under Revision]**
5. Zahan, M. S., Hasan, A., **Rahman, MD. H.**, Meem, K. N., Moni, A., Hannan, M. A., Uddin, M. J. (2022). Protective Effects of Fucoidan Against Kidney Diseases: Pharmacological Insights and Future Perspectives. *International Journal of Biological Macromolecules*. [JCR IF: 6.953] **[Status: Under Revision]**

### Published (20 papers)

1. Sohag, A.A.M., Hossain, Md.T., Rahaman, Md.A., Rahman, P., Hasan, M.S., Das, R.C., Khan, M.K., Sikder, M.H., Alam, M., Uddin, M.J., **Rahman, MD. H.**, Tahjib-Ul-Arif, Md., Islam, T., Moon, I.S. and Hannan, Md.A. (2022). Molecular pharmacology and therapeutic advances of the pentacyclic triterpene lupeol. *Phytomedicine*, 99, p.154012. DOI: [10.1016/j.phymed.2022.154012](https://doi.org/10.1016/j.phymed.2022.154012) [JCR IF: 5.340]

2. Akter, S., Rahman, Md.A., Hasan, M.N., Akhter, H., Noor, P., Islam, R., Shin, Y., **Rahman, MD. H.**, Gazi, Md.S., Huda, M.N., Nam, N.M., Chung, J., Han, S., Kim, B., Kang, I., Ha, J., Choe, W., Choi, T.G. and Kim, S.S. (2022). Recent Advances in Ovarian Cancer: Therapeutic Strategies, Potential Biomarkers, and Technological Improvements. *Cells*, 11(4), p.650. DOI: [10.3390/cells11040650](https://doi.org/10.3390/cells11040650) [JCR IF: 6.6]
3. Rahman, M.A., Park, M.N., **Rahman, MD. H.**, Rashid, M.M., Islam, R., Uddin, M.J., Hannan, M.A. and Kim, B. (2022). p53 Modulation of Autophagy Signaling in Cancer Therapies: Perspectives Mechanism and Therapeutic Targets. *Frontiers in Cell and Developmental Biology*, 10. DOI: [10.3389/fcell.2022.761080](https://doi.org/10.3389/fcell.2022.761080) [JCR IF: 6.684]
4. Al Saber, Md., Biswas, P., Dey, D., Kaium, Md.A., Islam, Md.A., Tripty, M.I.A., **Rahman, MD. H.**, Rahaman, T.I., Biswas, Md.Y., Paul, P., Rahman, Md.A., Hasan, Md.N. and Kim, B. (2021). A Comprehensive Review of Recent Advancements in Cancer Immunotherapy and Generation of CAR T Cell by CRISPR-Cas9. *Processes*, 10(1), p.16. DOI: [10.3390/pr10010016](https://doi.org/10.3390/pr10010016) [JCR IF: 6.684]
5. Rahman, Md.A., Ahmed, K.R., **Rahman, MD. H.**, Park, M.N. and Kim, B. (2022). Potential Therapeutic Action of Autophagy in Gastric Cancer Managements: Novel Treatment Strategies and Pharmacological Interventions. *Frontiers in Pharmacology*, 12. DOI: [10.3389/fphar.2021.813703](https://doi.org/10.3389/fphar.2021.813703) [JCR IF: 5.810]
6. Cho, M., Bu, Y., Park, J.W., **Rahman, MD. H.** & Ko, S.J. (2021). Efficacy of Complementary Medicine for Nonsteroidal Anti-inflammatory Drug-induced Small Intestinal Injuries: A narrative review. *Medicine*, 100, e28005. DOI: [10.1097/MD.00000000000028005](https://doi.org/10.1097/MD.00000000000028005) [JCR IF: 1.889]
7. Islam, M. A., Zilani, M. N. H., Biswas, P., Khan, D. A., **Rahman, MD. H.**, Nahid, R., Nahar, N., Samad, A., Ahammad, F. & Hasan, M. N. (2022). Evaluation of In Vitro and In Silico Anti-inflammatory Potential of Some Selected Medicinal Plants of Bangladesh Against Cyclooxygenase-II Enzyme. *Journal of Ethnopharmacology*, 285, 114900. DOI: [10.1016/j.jep.2021.114900](https://doi.org/10.1016/j.jep.2021.114900) [JCR IF: 4.360]
8. Biswas, P., Hasan, M. M., Dey, D., Dos Santos Costa, A. C., Polash, S. A., Bibi, S., Ferdous, N., Kaium, M. A., **Rahman, MD. H.**, Jeet, F. K., Papakados, S., Islam, K. & Uddin, M. S. (2021). Candidate Antiviral Drugs for COVID-19 and Their Environmental Implications: A Comprehensive Analysis. *Environmental Science and Pollution Research*, 28, 59570-59593. DOI: [10.1016/j.jep.2021.114900](https://doi.org/10.1016/j.jep.2021.114900) [JCR IF: 4.223]
9. Kang, S. Y., Hwang, D., Shin, S., Park, J., Kim, M., **Rahman, MD. H.**, Rahman, M. A., Ko, S.G. & Kim, B. (2021). Potential of Bioactive Food Components Against Gastric Cancer: Insights into Molecular Mechanism and Therapeutic Targets. *Cancers*, 13, 4502. DOI: [10.3390/cancers13184502](https://doi.org/10.3390/cancers13184502) [JCR IF: 6.639]
10. Biswas, P., Dey, D., Rahman, A., Islam, M. A., Susmi, T. F., Kaium, M. A., Hasan, M. N., **Rahman, MD. H.**, Mahmud, S., Saleh, M. A., Paul, P., Rahman, M. R., Al Saber, M., Song, H., Rahman, M. A. & Kim, B. (2021). 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. *Journal of Personalized Medicine*, 11, 888. DOI: [10.3390/jpm11090888](https://doi.org/10.3390/jpm11090888) [JCR IF: 4.945]
11. Rahman, M. A., Hannan, M. A., Dash, R., **Rahman, MD. H.**, Islam, R., Uddin, M. J., Sohag, A. A. M., Rahman, M. H. & Rhim, H. (2021). Phytochemicals as a Complement to Cancer Chemotherapy: Pharmacological Modulation of the Autophagy-Apoptosis Pathway. *Frontiers in Pharmacology*, 12. DOI: [10.3389/fphar.2021.639628](https://doi.org/10.3389/fphar.2021.639628) [JCR IF: 5.810]
12. Rahman, M. A., **Rahman, MD. H.**, Biswas, P., Hossain, M. S., Islam, R., Hannan, M. A., Uddin, M. J. & Rhim, H. (2021). Potential Therapeutic Role of Phytochemicals to Mitigate Mitochondrial Dysfunctions in Alzheimer's Disease. *Antioxidants*, 10, 23. DOI: [10.3390/antiox10010023](https://doi.org/10.3390/antiox10010023) [JCR IF: 6.313]
13. Rahman, M.A., Rahman, M.S., **Rahman, MD. H.**, Rasheduzzaman, M., Mamun-Or-Rashid, A., Uddin, M.J., Rahman, M.R., Hwang, H., Pang, M.-G., Rhim, H. (2021). Modulatory Effects of Autophagy on APP Processing as a

14. Sarwar, S., Khondokar, F., Islam, H., Ullah, M., Araf, Y., Sarkar, B. and **Rahman, MD. H.** (2021). Assessing Drug Repurposing Option for Emerging Viral Diseases: Concerns, Solutions, and Challenges for Forthcoming Viral Battles. *Journal of Advanced Biotechnology and Experimental Therapeutics*, 4(1), p.74. DOI: [10.5455/jabet.2021.d109](https://doi.org/10.5455/jabet.2021.d109) [Scopus Indexed]
15. Rahman, M. A., **Rahman, MD. H.**, Hossain, M. S., Biswas, P., Islam, R., Uddin, M. J., Rahman, M. H. & Rhim, H. (2020). Molecular Insights into the Multifunctional Role of Natural Compounds: Autophagy Modulation and Cancer Prevention. *Biomedicines*, 8, 517. DOI: [10.3390/biomedicines8110517](https://doi.org/10.3390/biomedicines8110517) [JCR IF: 6.081]
16. Ullah, M. A., Araf, Y., Sarkar, B., Moin, A. T., Reshad, R. A. I., and **Rahman, MD. H.** (2020). Pathogenesis, Diagnosis and Possible Therapeutic Options for COVID-19. *Journal of Clinical and Experimental Investigations*, 11(4), em00755. DOI: [10.29333/jcei/8564](https://doi.org/10.29333/jcei/8564) [DOAJ Indexed]
17. Sarkar, B., Ullah, M. A., Islam, S. S., **Rahman, MD. H.** & Araf, Y. (2021). Analysis of Plant-derived Phytochemicals as Anti-cancer Agents Targeting Cyclin Dependent Kinase-2, Human Topoisomerase IIa and Vascular Endothelial Growth Factor Receptor-2. *Journal of Receptors and Signal Transduction*, 41, 217-233. DOI: [10.1080/10799893.2020.1805628](https://doi.org/10.1080/10799893.2020.1805628) [JCR IF: 2.092]
18. Sarkar, B., Ullah, M. A., Araf, Y., Das, S., **Rahman, MD. H.** and Moin, A. T. (2020). Designing Novel Epitope-based Polyvalent Vaccines Against Herpes Simplex Virus-1 and 2 Exploiting the Immunoinformatics Approach. *Journal of Biomolecular Structure and Dynamics*, pp.1–21. DOI: [10.1080/07391102.2020.1803969](https://doi.org/10.1080/07391102.2020.1803969) [JCR IF: 3.549]
19. **Rahman, MD. H.**, Zahan, M. S., Hasib, A. H., Ahmed, K.A., Khanam, M., Omit, MD. S., Moni, A. and Uddin, M. J. (2020). Current Knowledge on Mechanisms Involved in SARS-CoV-2 Infection and Kidney Diseases. *Journal of Advanced Biotechnology and Experimental Therapeutics*, 3(4), p.30. DOI: [10.5455/jabet.2020.d153](https://doi.org/10.5455/jabet.2020.d153) [Scopus Indexed]
20. Ullah, M. A., Johora, F. T., Sarkar, B., Araf, Y. & **Rahman, MD. H.** (2020). Curcumin Analogs as the Inhibitors of TLR4 Pathway in Inflammation and their Drug Like Potentialities: A Computer-Based Study. *Journal of Receptors and Signal Transduction*, 40, 324-338. DOI: [10.1080/10799893.2020.1742741](https://doi.org/10.1080/10799893.2020.1742741) [JCR IF: 2.092]

## CURRENT RESEARCH PROJECTS

Name of Research Program (s)/Project	Status
1. Phytochemical Screening of <i>Ficus Hippida</i> as a Therapeutic Option against Breast Cancer Using Pharmacoinformatics and Molecular Dynamic Simulation.	Ongoing
2. An In-Silico Identification of Potential Anti-Aging Targets of Resveratrol.	Ongoing
3. Identifying the Inhibitory Pharmacophore Properties of Allicin that can Inhibit Topoisomerase II By Killing <i>Salmonella</i> .	Drafting
4. The Effect of <i>Laminaria Japonica</i> (LJP) Against Metabolic Syndrome Such as Atherosclerosis, Diabetes, Obesity, Hyperlipidemia.	Completed
5. An Incomprehensive Review of LncRNA Contribution on Cancer.	Drafting

Name of Research Program (s)/Project	Status
6. In Silico Molecular Characterization of Protein Arginine Methyltransferase-2 and potent inhibitor prediction	Completed
7. In Silico Study and Bioinformatics Screening of <i>Euphoria nerifolia</i> Compounds as a Potent Inhibitor of SARS-Cov-2, ACE-2 & RAD1 Receptor Complex	Completed
8. Developing World First Plant CRISPR Database, A Project of Bangabandhu Sheikh Mujibur Rahman Agricultural University, Dhaka, Bangladesh.	Final Deploying
9. Developing Genetic Disease Database for Bangladesh, A Project of Shahjalal University of Science and Technology, Sylhet and Ministry of Information and Communication Technology Division, Bangladesh Government.	Ongoing

## CONFERENCE PAPERS/POSTERS

General Laboratory Safety and Development of SOP, Conference: <a href="#">Hands-on Training in Laboratory Biosafety and Biosecurity 2020</a> at Jahangirnagar University, Bangladesh.	Conference Paper
Designing Novel Epitope Based Vaccine Against Human Respiratory Syncytial Virus, Presented in <a href="#">"4th Latin American Student Council Symposium (LA-SCS) 2020"</a>	Poster
Computational Exploration of Curcumin Analogs to Identify Natural Anti-inflammatory Drugs, Presented in <a href="#">"European Student Council Symposium 2020"</a>	Poster
In-Silico Approach to the Analysis of Plant-derived Phytochemicals as Anticancer Agents, Presented in <a href="#">"International Poster Presentation Competition 2020"</a>	Poster

## RESEARCH EXPERIENCES

<b>Research Assistant</b> at <a href="#">ABEx Bio-Research Center</a> , East Azampur, Dhaka-1230, Bangladesh.	Aug 2019 - Present
Focus: Reviewing Emerging Research Findings, Molecular Pharmacology Strategies and Drug Designing Using In-Silico Techniques.	
<b>Research Assistant (Virtual)</b> at <a href="#">Department of Pathology, College of Korean Medicine</a> , Kyung Hee University, Seoul, 02447, Republic of Korea.	Feb 2022 - Mar 2022
Focus: Molecular Signaling Pathways Design, Reviewing Cancer Immunotherapies.	
<b>Bioinformatician and Designer</b> at <a href="#">Swift Integrity Computational Lab</a> , Savar, Dhaka, Bangladesh.	Nov 2019 - Dec 2021
Focus: Anticancer Phytochemicals Analysis, Designing and Developing Molecular Biology Pathways.	
<b>Research Fellow</b> under a Ministry of Education Research Project Titled: Effects of Insulin on Breast Cancer Growth and Proliferation Among Diabetic Patients in Bangladesh, <a href="#">Bangladesh University of Health Science (BUHS)</a> , Dhaka, Bangladesh.	Mar 2021 - Jun 2021

## REVIEWING EXPERIENCES

Prevalence and Population Biology of Mastitis-causing <i>Streptococcus Uberis</i> Using an MLST Based Approach. <i>Journal of Advanced Biotechnology and Experimental Therapeutics</i> . DOI: <a href="https://doi.org/10.5455/jabet.2021.d132">10.5455/jabet.2021.d132</a> [ <a href="#">Reviewing Verifcaiton</a> ] [ <a href="#">Credential</a> ]	Mar 2021
Few Substitutions are Targets of Evolution: Correspondence Analysis of SARS-CoV-2 Spike Glycoprotein. <i>Briefings in Bioinformatics</i> . [ <a href="#">Reviewer Letter</a> ]	Feb 2021
Immunoinformatics Approach to Design Novel Subunit Vaccine against the Epstein-Barr Virus. <i>Briefings in Bioinformatics</i> . [ <a href="#">Reviewer Letter</a> ]	Jan 2021
Prediction of B-cell and T-cell epitopes in the Spike Glycoprotein of SARS-CoV-2 in Bangladesh: An In-Silico Approach. <i>Journal of Advanced Biotechnology and Experimental Therapeutics</i> . DOI: <a href="https://doi.org/10.5455/jabet.2020.d156">10.5455/jabet.2020.d156</a> [ <a href="#">Reviewing Verifcaiton</a> ] [ <a href="#">Credential</a> ]	Aug 2020

## CONFERENCE ORGANIZING EXPERIENCES

Executive Member of <a href="#">1st BSMIAB-COB International Conference on COVID-19 Pandemic</a>	Nov 2020
Managing Team Leader of <a href="#">International Biotech Symposium 2021</a>	Feb 2021
Executive Member of <a href="#">2nd BSMIAB-COB International Conference On COVID-19 Pandemic</a>	Nov 2021

## TECHNICAL SKILLS

Molecular Docking, Dynamic Simulation, Scientific Figure Illustrations, Biological-Data Visualization, Computer-aided Drug & Vaccine Design, Cancer Informatics, Protein Modeling, Alignment & Analysis, DNA Sequencing Algorithms, Tools for Genomic Data Science, etc.	Dry- Lab Expertise
Cell Culture, Student's T-test, Biochemical Assays, Column & Thin Layer Chromatography, Standard Daviation, Pearson's Correlation, etc.	Wet-Lab Expertise
Microsoft Office, Endnote, Mendeley, Adobe illustrator, Adobe Indesign, Adobe Photoshop, Adobe Premiere Pro, Adobe After Effect, SketchUp, Autodesk 3ds, Linux, Python3, Biopython, Pymol, Schrödinger Suite, HTML, CSS, Javascript, PHP, Django, etc.	Tools & Softwares

## PERSONAL SKILL DEVELOPMENT

<b>Programming for Everybody (Getting Started with Python) (19 hrs)</b> Instructed by: Charles Russell, University of Michigan	<a href="#">Credential</a>	Jul 2020
<b>Python Data Structures (19 hrs)</b> Instructed by: Charles Russell, University of Michigan	<a href="#">Credential</a>	Jul 2020
<b>Genomic Data Science with Galaxy (16 hrs)</b> Instructed by: James Taylor, PhD, Johns Hopkins University	<a href="#">Credential</a>	May 2020
<b>Introduction to Genomic Technologies (6 hrs)</b> Instructed by: James Taylor, PhD & Jeff Leek, PhD, Johns Hopkins University	<a href="#">Credential</a>	Apr 2020

## AWARDS

1. 4<sup>th</sup> Position out of Top 15 Researchers List 2021, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Published by Scopus. Jan 2022
2. Best Performing Research Assistant Award of 2020, ABEx Bio-Research Center, East Azampur, Dhaka-1230, Bangladesh. Dec 2021
3. 6<sup>th</sup> Position out of 14<sup>th</sup> Team in Bangladesh, International Hult Prize on campus 2019. Jul 2019

## PROFESSIONAL EXPERIENCES

Founder and CEO, <a href="#">ExomeIT</a>	Dec 2020 - Present
Chief Creative & Branding Officer, <a href="#">Communiy of Biotechnology (COB)</a>	Sep 2020 - Present
Technical Assistant, <a href="#">Journal of Advanced Biotechnology and Experimental Therapeutics</a>	Jun 2020 - Present
Founding Licensee & Organizer, <a href="#">TEDx BSMRSTU</a> , <a href="#">TEDx BSMRSTU-Women</a>	Nov 2020 - Feb 2022
Chief of Visual Arts, <a href="#">TEDx Juniv</a> & <a href="#">TEDx SUST</a>	Aug 2020 - Mar 2021
Steering Committee Core Member, <a href="#">ISCB RSG-Bangladesh</a>	May 2020 - Dec 2021
Campus Ambassador, <a href="#">Biotech Club, Jahangirnagar University</a>	Oct 2019 - Dec 2019

## LANGUAGE PROFICIENCY

International English Language Testing System (IELTS)

Overall	Listening	Reading	Writing	Speaking
Preparing	-	-	-	-

\* Expected Minimum Band: 7.00

## REFERENCES

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