

RESUME OF MD. REZAUL KARIM

Contact Address

Dr. Md. Rezaul Karim
Ph.D. from Kyung Hee University, South Korea,
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Assistant Professor,
Dept. of Biotechnology & Genetic Engineering
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Objective

Want to pursue my career as a researcher to contribute my knowledge, creative insight and leadership starting at a stage commensurate with academic background.

Educational Qualifications

Degree Name	Major	Institute	University/ School/ College	Passing Year	Result
Ph.D.	Biopharmaceutical Biotechnology	Kyung Hee University, South Korea	Kyung Hee University, South Korea	2024 (2024-1)	4.254 (out of 4.3)
M.Sc.	Biotechnology & Genetic Engineering	Islamic University	Islamic University	2008 (Held in 2010)	3.89 (Out of 4.00)
B.Sc. (Hon's)	Biotechnology & Genetic Engineering	Islamic University	Islamic University	2007 (Held in 2009)	First Class Position: 1 st Faculty First UGC Gold Medal Holder

Job Experiences

- **PhD research scholar**, College of Life Science, Kyung Hee University, Suwon-si, Seoul, South Korea. (Completed at 2024-1)
- In Islamic University, Kushtia as an **Assistant Professor (Dept. of Biotechnology & Genetic Engineering)**. (From 1st March, 2020 to **still now**).
- In Islamic University, Kushtia as a **Lecturer (Dept. of Biotechnology & Genetic Engineering)**. (From 30th September, 2013 to 29th February, 2020).
- In PepsiCo Group as a **Microbiologist (QA department)**. (From 30th March, 2013 to 25th August, 2013).
- In PRAN-RFL Group as a **Microbiologist (QA department)**. (From 30th March, 2011 to 25th March, 2013).

Technical Skills

- Bioinformatics (network pharmacology, gut microbiome metabolites, and interaction with diseases).
- Drug design, protein structure prediction, simulation, and *in vitro-in vivo* validation.
- Cell Culture: (293HEK), 293T-cell line, A486, Raw 264.7, HT-29, Cacao Cell, HaCaT cell line.
- Transgenic animal establishment.
- Chromatography technique (HPLC, GLC, TLC) etc.
- DNA isolation, PCR technique, qPCR, q-RT PCR, Immunoassay etc.
- Cloning, and gene expression analysis.
- Western blot, and southern blot analysis.
- Genomics, Proteomics.
- RNA-seq data analysis.
- ChIP assay.
- Whole mount *In situ* hybridization.
- Cell transfection and gene expression observation in cell line after transfection.
- Microinjection into *Xenopus* embryo.
- Transcription Factor binding sites (TFBSs) prediction.
- Electrophoresis, Plasmid isolation, plasmid transformation, gene cloning, etc.
- Different microbiological assays, and Isolation, Identification, and characterization of bacteria
- Competent cell (TG1) preparation, and Bacterial growth curve study.
- Different biochemical analyses and other microbiological & biochemical tests.
- *Agrobacterium* mediated gene transfer.
- In-vitro fertilization of goat.

- Fungi culture in both solid and liquid medium.
- Microbial count in product. (Bacteria, yeast, coliform, mould, etc.)

Publications

1. **Md. Rezaul Karim**, Safia Iqbal, Shahnawaz Mohammad, Jong-Hoon Kim, Li Ling, Changbao Chen, Abdus Samad, Md. Anwarul Haque, Jong Chan Ahn, Deok-Chun Yang, Yeon Ju Kim, and Dong Uk Yang. Upgrading Isoquercitrin Concentration via Submerge Fermentation of Mulberry Fruit Extract with Edible Probiotics to Suppress Gene Targets for Controlling Kidney Cancer and Inflammation. *J Microbiol.* <https://doi.org/10.1007/s12275-024-00163-8>; **2024.**
2. Safia Iqbal, **Md. Rezaul Karim**, Shahnawaz Mohammad, Ramya Mathiyalagan, Md. Niaj Morshed, De-ok-Chun Yang, Hyocheol bae, Esrat Jahan Rupa, and Dong Uk Yang. Multiomics analysis of the PHLDA gene family in different cancers and their clinical prognostic values. *Curr. Issues Mol. Biol.* 1467-3045; **2024. (Equal)**
3. Shahnawaz Mohammad, **Md. Rezaul Karim**, Safia Iqbal, Abdus Samad, Muhammad Awais, Ramya Mathiyalagan, Deok Chun Yang, Yeon Ju Kim, Joong Hyun Song, Dong Uk Yang, Network pharmacology and molecular docking approach to predict the oral and topical therapeutic mechanisms of Panax ginseng's active compounds on atopic dermatitis. Accepted, Taylor & Francis, **2024.**
4. Safia Iqbal, **Md. Rezaul Karim**, Shahnawaz Mohammad, Jong Chan Ahn, Anjali Kariyarath Valappil, Ramya Mathiyalagan, Deok-Chun Yang, Dae-Hyo Jung, Hyocheol Bae, and Dong Uk Yang. In Silico and In Vitro Study of Isoquercitrin against Kidney Cancer and Inflammation by Triggering Potential Gene Targets. *Curr. Issues Mol. Biol.* 46, 3328–3341; **2024. (equal).**
5. **Md. Rezaul Karim**, Safia Iqbal, Shahnawaz Mohammad, Md. Niaj Morshed, Md. Anwarul Haque, Ramya Mathiyalagan, Deok Chun Yang, Yeon Ju Kim, Joong Hyun Song & Dong Uk Yang. Butyrate's (a short-chain fatty acid) microbial synthesis, absorption, and preventive roles against colorectal and lung cancer. *Achives of Microbiology.* 206, 137; **2024.**
6. Md. Niaj Morshed, Reshmi Akter, **Md. Rezaul Karim**, Safia Iqbal, Se Chan Kang and Deok Chun Yang. Bioconversion, Pharmacokinetics, and Therapeutic Mechanisms of Ginsenoside Compound K and Its Analogues for Treating Metabolic Diseases. *Curr. Issues Mol. Biol.* 46, 2320–2342; **2024.**
7. Shahnawaz Mohammad, **Md. Rezaul Karim**, Safia Iqbal, Jung Hyeok Lee, Ramya Mathiyalagan, Yeon Ju Kim, Dong Uk Yang, Deok Chun Yang. Atopic dermatitis: Pathophysiology, microbiota, and metabolome – A comprehensive review. *Microbiological Research.* 281, 127595; **2024. (equal).**
8. Md. Niaj Morshed, **Md. Rezaul Karim**, Reshmi Akter, Safia Iqbal, Ramya Mathiyalagan, Jong Chan Ahn, Deok Chun Yang, Joong Hyun Song, Se Chan Kang, and Dong Uk Yang. Potential of Gut Microbial Metabolites in Treating Osteoporosis and Obesity: A Network Pharmacology and Bioinformatics Approach. *Med Sci Monit.* 30: e942899-1–e942899-24; **2024. (equal)**
9. Safia Iqbal, **Md. Rezaul Karim**, Deok-Chun Yang, Ramya Mathiyalagan, Se Chan Kang. Tuft cells - the immunological interface and role in disease regulation. *International Immunopharmacology.* 118, 110018; **2023. (equal).**
10. **Md. Rezaul Karim**, Md. Niaj Morshed, Safia Iqbal, Shahnawaz Mohammad, Ramya Mathiyalagan, Deok Chun Yang, Yeon Ju Kim, Joon Hyun Song, and Dong Uk Yang. A Network Pharmacology and Molecular-Docking-Based Approach to Identify the Probable Targets of Short-Chain Fatty-Acid-Producing Microbial Metabolites against Kidney Cancer and Inflammation. *Biomolecules.* 13, 1678; **2023.**

11. **Md. Rezaul Karim**, Safia Iqbal, Shahnawaz Mohammad, Jung Hyeok Lee, Daehyo Jung, Ramya Mathiyalagan, Deok-Chun Yang, Dong Uk Yang, Se Chan Kang. Impact of dietary interventions, drugs, and traditional herbal supplements on the gut microbiome. *Microbiological Research*. 271, 127346; **2023**.
12. Md. Nij Morshed, Jong Chan Ahn, Ramya Mathiyalagan, Esrat Jahan Rupa, Reshmi Akter, **Md. Rezaul Karim**, Dae Hyo Jung, Dong Uk Yang, Deok Chun Yang, and Seok Kyu Jung. Antioxidant Activity of Panax ginseng to Regulate ROS in Various Chronic Diseases. *Applied Science*, vol 13, 2893; **2023**.
13. Safia Iqbal, A.K.M. Nazmul Huda, A.N.K. Mamun, Md. Rezaul Islam, Mohammad Abu Hena Mostofa Jamal, and **Md. Rezaul Karim***. Effects of Phytohormone and Regulators on Shoot Tip and Nodal Explants for In Vitro Shoot and Root Clonal Propagation of Vitex negundo L. *American Journal of Pure and Applied Biosciences*, Vol 3(4), 65-78; **2021**.
14. M. A. Milon, M. M. Rahman, M. L. Rana, M. L. Khatun, **M. R. Karim**, M. E. Ali, A. K. M. N. Huda, M. A. Islam, M. M. Rahman. Addressing Sex and Gender Bias in COVID-19 Epidemiology in Bangladesh. *Journal of Agriculture, Food and Environment (JAFE)*, Vol 2(1), 125-129; **2021**.
15. Lin Liu, Zhouwen Xu, Yuyan Jiang, **Md. Rezaul Karim**, Xiao Huang. Cell cycle regulation through primary cilium: A long-forgotten story. *Biocell*, Vol 45(4), 823-833; **2021**.
16. Kun Hou, Hui Jiang, **Md. Rezaul Karim**, Chao Zhong, Zhouwen Xu, Lin Liu, Minxin Guan, Jianzhong Shao and Xiao Huang. A Critical E-box in *Barhl1* 3. Enhancer Is Essential for Auditory Hair Cell Differentiation. *Cells*, Vol (8), 458; **2019**.
17. Pulak Maitra, M. Abu Hena Mostofa Jamal, **Md. Rezaul Karim**, Md. Rezaul Islam, Safia Iqbal, Rashedul Haque. A comparative study on microscopy, RDT and RT-PCR for detection of malaria parasites. *International Journal of Biosciences*, Vol (5), 366-371; **2014**.
18. **Md. Rezaul Karim**, Zinat Mahal, Safia Iqbal, Harun or Rashid, M. Abu Hena Mostofa Jamal, Md. Azizul Islam, Md. Mafizur Rahman, “ **Solid state fermentation of *Lathyrus sativus* and sugarcane bagasse by *Pleurotus sajor-caju***”, *International Journal of Agronomy and Agriculture Research*, Vol (4), 1:9; **2014**.
19. M. Abu Hena Mostofa Jamal, Shahedur Rahman, Md. Azizul Islam, **Md. Rezaul Karim**, Md. Samsul Alam , Md. Ziaur Rahman, “ **Minimum Inhibitory Concentration Analysis of *Nerium oleander* against Bacterial Pathogen**”, *Asian Pacific Journal of Tropical Biomedicine*, S 1664:S1666; **2012**.
20. Md. Azizul Islam, Md. Abul Kalam Azad, **Md. Rezaul Karim**, Sudhangsu Kumar Biswas, Md. Mostafizur Rahman, Md. Mafizur Rahman, “ **Antibacterial Effects of *Ocimum sanctum* L Leaves, Flowers and Shoot against *Bacillus spp* from soil**”, *Malaysian Journal of Medical and Biological Research*, Vol (1), 35:41; **2014**.
21. Abstract Publication: **Md. Rezaul Karim**, Harun or Rashid, Zinat Mahal, Safia Iqbal, Md. Rezaul Islam, Md. Shahedur Rahman, M. Abu Hena Mostofa Jamal “**Fungal Conversion of Agrowaste into Nutritionally Enriched Animal Feed through Solid State Fermentation**”, An international conference on Green chemistry for sustainable development, 39:40; **2012**.
22. Abstract Publication: Safia Iqbal, **Md. Rezaul Karim**, A.N.K. Mamun , Md. Rezaul Islam, M. Abu Hena Mostofa Jamal, A.K.M Nazmul Huda “**In vitro Clonal Propagation of *Vitex negundo* L.**”, An Important Native Medicinal Plant An international conference on Green chemistry for sustainable development, 115:116; **2012**.
23. Abstract Publication: Kanchi Afrin, Nilufa Akhter Banu, **Md. Rezaul Karim**, Yong Se Lee, Chi Hyun Song, Md Rezaul Islam, “ **Biological Control Potential of Antibiotic Substances from *Streptomyces arenae* H33 Against Various Plant Pathogenic Fungi**”, Conference on Biotechnology for Better Tomorrow 2014, 37; **2014**.

Strength

- Capable of adapting in any type of environment
- Capable of handling various sports and cultural program
- Dynamic and self-motivated
- Ability to cope with people at every level
- Ambitious and target oriented

Awards and Scholarships

- Awarded President Fellowship, Kyung Hee University, Suwon-si, Seoul, South Korea.
- Best Researcher Award 2022, Korea Ginseng Center (KGCMVP), Hanbangbio lab, Kyung Hee University, Suwon-si, Seoul, South Korea.
- Awarded 'A' Grade scholarship from the Islamic University, Kushtia-7003, Bangladesh, due to Bright Academic Performance in the B.Sc. (Hons.) level.
- "UGC-University Grand Commission" scholarship for faculty first in B.Sc (Applied Science & Technology Faculty).
- Bongobondhu **Gold Medal** for first class first in BSc.
- President Scholarship in the session of 2003-04 (B.Sc.) for faculty first position.
- Awarded Junior Scholarship & Primary Scholarship.

Communication & Language Proficiency

Good command in English and Bengali – both written and spoken.

Hindi: Good in communication

N.B: BSc and MSc both in English medium.

Computer Skills

MS word, MS Excel, PowerPoint, Data Analysis, Internet Browsing, SEO etc.

Personal Details

Full name: Md. Rezaul Karim

Date of Birth: December 15, 1986

Father's name: Md. Abdul Latif

Mother's name: Mrs. Rezia Khatun

Permanent Address: Vill: Gor Amadee, Post: Amadi, P/S: Koyra, Dist: Khulna.

Nationality: Bangladeshi by birth

Marital Status: Married

Height: 5'11" (5 feet 11 inch)

Religion: Islam

Blood Group: A⁺

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