

## Dr. Md. Mahbubur Rahman

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Dhaka, Bangladesh  
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[mahbub869@yahoo.com](mailto:mahbub869@yahoo.com)

### Career Summary

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A teaching professional with progressive experience in research and technology. Demonstrated high level of ingenuity in student counseling and supervisory ability with achievements in research in the field of Neuropharmacology.

### Current Position

Assistant Professor, Department of Pharmaceutical Sciences, North South University, Bangladesh

### Academic Track Record

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- Doctor of Natural Science (**PhD, German Equivalent Dr. rer. nat**) , Neuropharmacology, University of Heidelberg, Germany, 17<sup>th</sup> September, 2013
- MS in Pharmaceutical Sciences, Department of Pharmacy, Jahangirnagar University, Dhaka, Bangladesh (2005, held in 2008), **1st Class and 1st Position.**
- Bachelor of Pharmacy (Hons.), Department of Pharmacy, Jahangirnagar University, Dhaka, Bangladesh (2004, held in 2006), **1st Class and 1st Position.**
- Higher Secondary Certificate (H.S.C. equivalent to 12th grade), Dhaka College, Dhaka Board, Bangladesh (1999), **First division\* (75.2%)**
- Secondary School Certificate (S.S.C. equivalent to 10th grade), Naogaon K.D Govt. High School, Rajshahi Board, Bangladesh (1997), **First division\* (85.9%)**

### Research Experience

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#### Experience gained during doctoral study:

- Expert in an animal model of Stroke (cerebral ischemia). Surgical procedures involve occlusion of the distal middle cerebral artery to induce cerebral ischemia with the aid of an electrical coagulator.
- Expert in various brain staining techniques specially 'Immunohistochemistry' and 'Silver staining'.
- Expert in microscopic techniques (Certified course in confocal and fluorescence microscopy)
- Conversant with Real time RT-PCR and Fluorescent activated cell sorting analysis (FACS) techniques (Certified course).
- Gained adequate experience in bone marrow transplantation and enzyme linked immune assays (EIA).

- Able to perform basic cell culture based experiments.
- Adequate experience in Adeno-associated viral techniques (Certified course).
- Expert in mice and rat handling techniques (Certified course).
- Expert in mouse breeding and colony management.
- Introduced with EAE technique, an animal model of 'multiple sclerosis'.
- Expert in isolating various cell types from brain tissue.

#### **Experience gained during master's study:**

- Carried out a one year research in partial fulfillment of the requirement for the degree of MS in Pharmaceutical Sciences, Department of Pharmacy, Jahangirnagar University, Bangladesh and submitted a dissertation entitled ' Phytochemical and Biological Investigation on Three Medicinal Plants of Bangladesh.'
- Participated in various Neurological, Toxicological and Analgesic studies of several Ayurvedic Drugs on Laboratory Rodents (mice) at the Ethno pharmacology Laboratory, Department of Pharmacy, Jahangirnagar University, Savar, Dhaka.
- Participated the research work carried out at the Gonoshasthaya Vaccine Research and Diagnostic Laboratory (GVRL) about the Sensitivity study of drugs (antibiotics) used in Respiratory tract and Urinary tract infection.
- Carried out research work entitled" Invitro Protein binding nature of Escitalopram (SSRI) and Drug- Drug Interaction in presence of Arsenic and Fatty Acid.
- Supervised/ supervising various research projects of the students approaching toward the degrees of Bachelor of Pharmacy, Northern University Bangladesh with especial emphasis on screening of the medicinal plants of Bangladesh, for antioxidant, anti-inflammatory, antimicrobial, and cytotoxic activity.

#### **Teaching Experience**

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##### **University of Lübeck, Germany:**

Conducted lectures on pharmacology and toxicology to the international students of the University of Lübeck, Germany.

##### **At Pharmacy department, Northern University, Bangladesh:**

Conducted lectures on various subjects of pharmacy : 15<sup>th</sup> July 2007 – July 2009

## Professional Experience

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**Pharmacist Registration Number** : A-2829 (Bangladesh Pharmacy Council)

**Organization** : Eskayef (Former SK + F) Bangladesh Limited

**Period** : 13<sup>th</sup> July 2006 to 13<sup>th</sup> July 2007

**Position held** : Production Pharmacist

### Attended Responsibilities :

- Responsible for monitoring and supervising various aspect of tablet coating.
- Responsible for internal production planning.
- Supervise the operational flow of Antibiotic section .
- Have conducted dispensing operation..
- Responsible for training up of the new officers and the Trainees.
- Conversant with various types of Granulators and Blister Machine.

## Awards & Honors

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- Obtained ERASMUS scholarship in 2009 to pursue PhD
- 2005, University Grant Commission Bangladesh Scholarship, through the Jahangirnagar University (highest scorer in faculty of Biological sciences).
- 2004, 'Shahid Mohammad Hakim Foundation Scholarship' (highest scorer in faculty of Biological sciences). .
- 1998-1999, National Merit Scholarship, Peoples' Government of Bangladesh, Dhaka Board of Intermediate and Secondary Education, Bangladesh.

## Training Experience

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Successfully completed in plant training in **Essential Drugs Company Ltd.** from April 02, 2006 to April 30, 2006, on various aspects of pharmaceutical manufacturing, product development, quality control, storage, packaging and management.

## Language Proficiency

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- Good oral and written command in English
- A1 certificate course in German Language

## Proficiency in Micro-computers

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### Application Package:

- Ms-Office
- Advanced statistical analysis software (Sigma plot, Sigma Stat, Graph Pad Prism),
- Microscopic picture analyzing software (Imaje J, Lyca picture analyzing tools),
- FACS analysis software (Flowjo)
- Photo editing tools (Adobe Illustrator, GIMP), and
- EndNote Reference Manager.

**Online tools:** Primer design by various online utility tools (NCBI Gene, ENSEMBLE, Oligo Calculator)

**Networking :** Internet, Intranet, Advanced Web Browsing

### Extracurricular activities/Community services

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- 2003, As a voluntary member of 'ORS & Flood Relief Committee' of Department of Pharmacy, Jahangirnagar University prepared oral saline and distributed saline, food and clothes to flood victims.

### Personal query:

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- **Name:** Md. Mahbubur Rahman
- **Father's Name:** Md. Mozibar Rahman
- **Mother's Name:** Mahmuda Begum
- **Permanent Address:** Sheba Asram Road, Bangabaria, Naogaon-6500, Bangladesh
- **Date of Birth:** 15<sup>th</sup> February, 1983
- **Nationality:** Bangladeshi (by birth)
- **Religion:** Islam (sunni)
- **Marital Status:** Married
- **Blood group:** "O" Positive

### List of Publications:

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Please see enclosed

## References

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### 1. Prof. Markus Schwaninger

Director, Institute of Experimental and Clinical  
Pharmacology and Toxicology, University of Lübeck,  
Ratzeburger Allee 160, 23562 Lübeck, Germany

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### 2. Prof. Walter Raasch

Deputy Director, Institute of Experimental and Clinical  
Pharmacology and Toxicology, University of Lübeck  
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### Signature

Md. Mahbubur Rahman

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**List of publications:**

Manuscript published

1. **Mahbubur Rahman**, Sajjad Muhammad, Hui Chen, Dirk A. Ridder, Barbora Pokorná, Tillman Vollbrandt, Jürgen G. Okun, Stefan Offermanns and Markus Schwaninger. The  $\beta$ -hydroxybutyrate receptor HCA<sub>2</sub> induces a neuroprotective phenotype of macrophages. **Nature Communications**
2. Ann-Marie Heinonen, **Mahbubur Rahman**, Godwin Dogbevia, Stefan Wöfl, Rolf Sprengel, Markus Schwaninger. Neuroprotection by the viral expression of bone morphogenic protein 7. **BMC Neuroscience** , 2014 Mar 11;15:38. doi: 10.1186/1471-2202-15-38.
3. Hui Chen, Antje Krenz, **Mahbubur Rahman**, Myriam Grimm, Christian M. Karsten, Stefan Offermanns, Nina Wettschureck, and Markus Schwaninger. HCA<sub>2</sub> mediates the protective effect of dimethyl fumarate in experimental autoimmune encephalomyelitis. **Journal of Clinical Investigations**
4. Mc Guire C, **Rahman M**, Schwaninger M, Beyaert R, van Loo G (2013) The ubiquitin editing enzyme A20 (TNFAIP3) is upregulated during permanent middle cerebral artery occlusion but does not influence disease outcome. **Cell death & disease 4: e531**
5. Bargiotas P, Muhammad S, **Rahman M**, Jakob N, Trabold R, Fuchs E, Schilling L, Plesnila N, Monyer H, Schwaninger M (2012) Connexin 36 promotes cortical spreading depolarization and ischemic brain damage. **Brain research** 1479: 80-85
6. Rosell A, Agin V, **Rahman M**, Morancho A, Ali C, Koistinaho J, Wang X, Vivien D, Schwaninger M, Montaner J (2013) Distal Occlusion of the Middle Cerebral Artery in Mice: Are We Ready to Assess Long-Term Functional Outcome? **Transl Stroke Res** Volume 4, Issue 3 (2013), Page 297-307
7. A cross laboratory preclinical study on the effectiveness of interleukin-1 receptor antagonist in stroke. Samaneh Maysami, Raymond Wong, Jesus M Pradillo, Adam Denes, Hiramani Dhungana, Tarja Malm, Jari Koistinaho, Cyrille Orset, **Mahbubur Rahman**, Marina Rubio, Markus Schwninger, denis Vevien, Philip M Bath, Nancy J Rothwell and Stuart Allan. **J Cereb Blood Flow Metab.** 2015 Sep 30. pii: 0271678X15606714.
8. Astaxanthin improves behavioral disorder and oxidative stress in prenatal valproic acid-induced mice model of autism. Al-Amin MM, **Rahman MM**, Khan FR, Zaman F, Mahmud Reza H. Behav Brain Res. 2015 Jun 1;286:112-21. doi: 10.1016/j.bbr.2015.02.041. Epub 2015 Feb 28
9. Tadalafil enhances working memory, and reduces hippocampal oxidative stress in both young and aged mice. Al-Amin MM, Hasan SM, Alam T, Hasan AT, Hossain I, Didar RR, Alam MA, **Rahman MM**. Eur J Pharmacol. 2014 Dec 15;745:84-90. doi: 10.1016/j.ejphar.2014.10.026. Epub 2014 Oct 23
10. Induction of a neuroprotective phenotype of macrophages by the  $\beta$ -hydroxybutyrate receptor HCA2. Md. **Mahbubur Rahman**, Publisher: Universität Heidelberg, Record ID: oai:archiv.ub.uni-heidelberg.de:15516
11. Md. Mamun Al-Amin, Mir Muhammad Nasir Uddin, Md. Mahbubur Rahman, Hasan Mahmud Reza, Md. Sohel Rana. Effect of diclofenac and antidepressants on the inflammatory response in astrocyte cell culture. *Inflammopharmacology*, July 2013, ISSN: 0925-4692 (Print) 1568-5608 (Online)
12. Md. Ashraful Alam, Nusrat Subhan, **Md Mahbubur Rahman**, Shaikh J Uddin, Hasan M Reza and Satyajit D Sarker (2014) Effect of citrus flavonoids, naringin and naringenin, on metabolic syndrome and their mechanisms of action, *Advances in Nutrition* 5: 1–14.

13. Md Ashrafal Alam and **Md Mahbubur Rahman** (2014) Mitochondrial dysfunction in obesity: potential benefit and mechanism of Co-enzyme Q10 supplementation in metabolic syndrome, BMC Journal of Diabetes and Metabolic Disorder 13:60.
14. Md. Mamun Al-Amin, Nageeb Hasan, Tanzir Alam, Ahmed Tasdid Hasan, Imran Hossain, Rohini Rowshan Didar, Md. Ashrafal Alam, **Md. Mahbubur Rahman** (2014) Tadalafil enhances working memory, and reduces hippocampal oxidative stress in both young and aged mice. European Journal of Pharmacology, Available online 23 October 2014.
15. Angiotensin converting enzyme inhibitor prevented oxidative stress, inflammation and fibrosis in liver of carbon tetrachloride (CCl<sub>4</sub>) treated rats  
Hasan Mahmud Reza · Nabila Tabbasum · Md Abu Taher Sagor · **Md Mahbubur Rahman** · Preeti Jain · Md Ashrafal Alam , Toxicology Mechanisms and Methods (Accepted)
16. Relationship between protein-binding and free drug concentrations of a sparingly water-soluble selective serotonin reuptake inhibitor (escitalopram) and its interaction with arsenic. N. Subhan, R. Habibur, A. Ashrafal, I.Rashedul, **R. Mahbubur**. ROMANIAN J. BIOPHYS., Vol. 21, No. 2, P. 139–149, BUCHAREST, 2011
17. In vitro antioxidant activity of different parts of *Triumfetta rhomboidae* Jacq. Mst. Rozina Parul, **Md. Mahbubur Rahman**, Alok Kumar Paul, Md. Taleb Hossain, Pijush Saha and Sukalayan Kumar Kundu (2011). volume 23,number 1, June 2011 , Bangladesh Journal of Life Sciences.
18. In vivo analgesic activity of ethanolic extracts of two medicinal plants - *Scoparia dulcis* L. and *Ficus racemosa* Linn. AHM Zulfiker, **M Mahbubur Rahman**, M Kamal Hossain, K Hamid<sup>1</sup>, MEH Mazumder, M Sohel Rana. *Research Article Biology and Medicine*, 2 (2): 42-48, 2010 . eISSN: 09748369, www.biomedonline.com
19. Antidiabetic and Antioxidant Effect of *Scoparia dulcis* in Alloxan induced Albino Mice. Abu Hasanat Md. Zulfiker, Farhana Alam Ripa, **Md. Mahbubur Rahman**, M.Obayed Ullah, Kaiser Hamid, Md. Mahbubur Rahman Khan, Md. Sohel Rana. Vol.2, No.4, pp 2527-2534, Oct-Dec 2010. International Journal of PharmTech Research. CODEN (USA): IJPRIF ISSN : 0974-4304
20. Alam, Md Ashrafal, Riaz Uddin, Nusrat Subhan, **Md Mahbubur Rahman**, Preeti Jain, and Hasan Mahmud Reza. "Beneficial role of bitter melon supplementation in obesity and related complications in metabolic syndrome." *Journal of lipids* 2015 (2015).

#### Abstracts and Presentation:

21. Michalski, A.-M.; **Rahman, M.**; Groß, A.; Alborzinia, H.; Seeburg, P. H.; Wölfl, S.; Schwaninger, M.; Sprengel, R.: Novel recombinant AAV gene delivery systems for the modulation of BMP signaling in ischemic injury. **Society for Neuroscience , Washington, DC** (2011); Poster
22. Salinin S, Muhammad S, **Rahman M**, Ridder DA, Schröck H, Offewmanns S, Schwaninger M. The crucial role of endothelial G<sub>q/11</sub> in regulation of cerebral blood flow. XXV th International symposium on Cerebral Blood flow, Metabolism, and Function & Xth International Conference on Quantification of Brain Functions with PET. **Barcelona, Spain**, May 25-28, 2011.
23. **M. Rahman**, s. Muhammad, j. G. Okun, s. Offermanns, m. Schwaninger. HCA2-mediated protective effect of nicotinic acid in cerebral ischemia. **Society for Neuroscience , New Orleans, LA** (2012); Poster
24. **M. Rahman**, s. Muhammad, j. G. Okun, s. Offermanns, m. Schwaninger. The hydroxyl-carboxylic acid receptor 2 reduces ischemic brain damage through an immunomodulatory mechanism. Cluster of Excellence in inflammation Research, 'Inflammation at Interfaces' **Hamburg, Germany** (2013), Poster.

25. Hui Chen, Antje Krenz, Myriam Grimm, **Mahbubur Rahman**, Nina Wettschureck and Markus Schwaninger Dimethyl fumarate alleviates experimental autoimmune encephalomyelitis (EAE) via HCA<sub>2</sub> receptors. Cluster of Excellence in inflammation Research, 'Inflammation at Interfaces' **Hamburg, Germany** (2013), Poster

**Manuscript submitted**

26. Dirk A. Ridder, Kristin Müller, Mahtab Khan, Xin-Kang Tong, Stijn Stroobants, , Jan Wenzel, Tobias Weber, Lisanne Fischer, Cristina Niturad, **Mahbubur Rahman**, Beate Lembrich, Hartwig Wolburg, Marilyn Grand'Maison, Eva Korpos, Francois Truchetet, Rudi D'Hooge, Lydia M. Sorokin, Marc Schmidt-Supprian, Barry J. Bedell, Manolis Pasparakis, Detlef Balschun, Edith Hamel, Markus Schwaninger Brain endothelial TAK1 and NEMO safeguard the neurovascular unit. **Nature Neuroscience**