# **CURRICULUM VITAE**

# Professor Hasan Mahmud Reza, PhD

# **CURRENT POSITION**

#### Dean

School of Health and Life Sciences

#### **Professor**

Department of Pharmaceutical Sciences

North South University

Bangladesh

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reza.html

Google scholar link: <a href="https://scholar.google.com/citations?user=RCvg1LUAAAAJ&hl=en">https://scholar.google.com/citations?user=RCvg1LUAAAAJ&hl=en</a>

# **APPOINTMENT HISTORY**

Position	Institution	Duration
Dean	North South University	June '21 to date
School of Health and Life Sciences		
Acting Dean	North South University	May '20 to June '21
School of Health and Life Sciences		
Professor Department of Pharmaceuticals Sciences	North South University	Jul '18 to May '2020
<b>Professor and Chairman,</b> Department of Pharmaceuticals Sciences	North South University	Mar '15 to Jun '18
Acting Dean, School of Health & Life Sciences	North South University	18 Jul to 16 Sep, 2016
Associate Professor and Chairman Department of Pharmacy	North South University	Jan '13 to Mar '15
Associate Professor	North South University	Dec'11 to Jan'13

Assistant Professor	North South University	June'10 to Dec'11
Department of Pharmacy		
Research Scientist	Singapore Eye Research Institute, <b>Singapore</b>	Feb '09 to June'10
Research Fellow	Singapore Eye Research Institute (SERI), Singapore	Jul '08 to Jan '09
Assistant Professor Department of Pharmacy	North South University	Jan '07 to Jul '08
Assistant Professor Laboratory of Molecular and Developmental Biology, Dept. of Molecular Biology, Graduate School of Biological Sciences	Nara Institute of Science & Technology, <b>Japan</b>	Apr '04 to Dec '06
Post-Doctoral Research Fellow (COE) Laboratory of Molecular and Developmental Biology	Nara Institute of Science & Technology, <b>Japan</b>	Nov '02 – Mar '04
Graduate School of Biological Sciences Post-Doctoral Research Fellow (NAIST Foundation) Laboratory of Molecular and Developmental Biology,	Nara Institute of Science & Technology, <b>Japan</b>	Jul '02 – Oct '02
Lecturer, Discipline of Pharmacy	University of Khulna, Khulna	Oct'97 – Mar'98
<b>Product Officer</b> in the Central Product Management Department	Beximco Pharmaceuticals Ltd., Dhaka	Jun '96 – Sep '97

### SPECIAL APPOINTMENT

Member, National Research Ethics Committee, Bangladesh Medical Research Council (2019-)

# ACADEMIC QUALIFICATION

**PhD in Molecular & Developmental Biology,** Nara Institute of Science & Technology (NAIST), Laboratory of Molecular and Developmental Biology, Graduate School of Biological Sciences, Japan.

**Thesis Title:** The role of Pax6 and L-Maf in lens development.

Major Contribution: Proposed a gene cascade involved in chick lens development program.

- **MPharm,** Dept. of Pharmacy, Faculty of Biological Sciences, University of Dhaka, Dhaka, Bangladesh, 1<sup>st</sup> class (positioned 3<sup>rd</sup>)
- **BPharm,** Dept. of Pharmacy, Faculty of Biological Sciences, University of Dhaka, Dhaka, Bangladesh, 1<sup>st</sup> class (positioned 6<sup>th</sup>)

- **H.S.C** (Science), Secured 1<sup>st</sup> Division and stood 5th in the combined merit list from Jhenidah Cadet College.
- **1988** S.S.C (Science), Secured 1<sup>st</sup> Division and stood 7th in the combined merit list from Jhenidah Cadet College.

#### Awarded merit scholarship at all levels of education

#### RESPONSIBILITIES

#### As Dean, School of Health and Life Sciences

Reporting directly to the Pro Vice-Chancellor or Vice-Chancellor, the position has the following major responsibilities:

- provide strong academic leadership to meet the university's vision and mission
- develop and sustain appropriate strategies for smooth management of the concerned departments under the school
- create strategies to conduct cutting-edge research in line with school's vision
- create and exploit new opportunities for knowledge transfer activity in order to enter new areas of teaching and research
- promote and represent the school and university both internally and externally
- contribute to university-wide initiatives in order to improve ranking of the university

#### As Professor and Chairman, Department of Pharmaceuticals Sciences

Reporting directly to the Dean, School of Health and Life Sciences, the position had the following major responsibilities:

- provide strong academic leadership
- develop and sustain appropriate structures for management, consultation, and communication with faculty and students
- ensure the best possible student experience through the fulfillment of students needs
- create a dynamic and up-to-date research environment for both faculty and students
- promote and represent the department both internally and externally
- contribute to university-wide initiatives in order to improve ranking of the university

#### AREAS OF EXPERTISE

- Molecular biology and biochemistry: DNA recombination, gene cloning, plasmid construction, transformation, DNA amplification, prokaryotic protein expression and purification, primer designing, Real-time PCR, DNA/RNA gel electrophoresis, SDS-PAGE, DNA and RNA extraction, northern blot, western blot, DNA sequencing, gel-shift assay, RNAi experiment, polyclonal antibody production, cell-culture, reporter assay, RNA probe preparation, in-situ hybridization, immunostaining etc.
- **Cell culture:** Umbilical cord stem cell culture, primary human limbal and conjunctival epithelial culture, primary rabbit conjunctival culture, culture of different cell lines from human and animals (3T3, Hela, HCE etc.), targeted differentiation of stem cell, FACS etc.

- Tissue-engineering and transplantation: Engineering of primary eye cells or umbilical cord stem
  cells into cell sheet. Transplantation of tissue construct on rabbit eye. Cell sheet grafting in SCID
  mouse etc.
- **Epithelial culture for transplantation:** Limbal epithelial culture, conjunctival epithelial culture, buccal mucosa epithelial culture for grafting in patient eye
- **Embryology:** Staging chick embryo, embryo isolation, in-ovo electrooration
- **Histology:** Microscopy, slide preparation, paraffin and cryosectioning, HE staining. Pharmaceutical Technology and Pharmacology research
- Pharmaceutical dosage form development (QbD-based and Nanotechnology)
- Pharmacological studies with natural products and available molecules on animal disease models (oxidative stress, cardiovascular disease and neurodisorder)
- **Software:** MS word, Gene works, Genetyx, Adobe Illustrator, Adobe Photoshop, etc.

### **RESEARCH & JOURNAL PUBLICATIONS**

- Abaluck J, Kwong LH, Styczynski A, Haque A, Kabir MA, Bates-Jefferys E, Crawford E, Benjamin-Chung J, Raihan S, Rahman S, Benhachmi S, Bintee NZ, Winch PJ, Hossain M, Reza HM, Jaber AA, Momen SG, Rahman A, Banti FL, Huq TS, Luby SP, Mobarak AM. Impact of community masking on COVID-19: A cluster-randomized trial in Bangladesh. Science. 2021 Dec 2;eabi9069. Online ahead of print.
- Jain P, Bepari AK, Sen PK, Rafe T, Imtiaz R, Hossain M, **Reza HM**. High prevalence of multiple antibiotic resistance in clinical E. coli isolates from Bangladesh and prediction of molecular resistance determinants using WGS of an XDR isolate. *Scientific Reports*. 2021 Nov 24;11(1):1-3.
- Mostaid MS, Mumu SB, Haque MA, Sharmin S, Jamiruddin MR, Sayedur Rahman GM, Reza HM. Elevated serum expression of p53 and association of TP53 codon 72 polymorphisms with risk of cervical cancer in Bangladeshi women. *Plos One*. 2021 Dec 28;16(12):e0261984.
- Ahmed R, **Reza HM**, Shinohara K, Nakahata Y. Cellular senescence and its impact on the circadian clock. *The Journal of Biochemistry*. 2021 Oct 20.
- Emran T, Chowdhury NI, Sarker M, Bepari AK, Hossain M, Rahman GS, **Reza HM**. L-carnitine protects cardiac damage by reducing oxidative stress and inflammatory response via inhibition of tumor necrosis factor-alpha and interleukin-1beta against isoproterenol-induced myocardial infarction. Biomedicine & Pharmacotherapy. 2021 Nov 1;143:112139.
- Rahman MA, Shanjana Y, Tushar MI, Mahmud T, Rahman GM, Milan ZH, Sultana T, Chowdhury AM, Bhuiyan MA, Islam MR, **Reza HM**. Hematological abnormalities and comorbidities are associated with COVID-19 severity among hospitalized patients: Experience from Bangladesh. Plos One. 2021 Jul 27;16(7):e0255379.
- Jain P, Hossain KR, Islam T, Gias ZT, Hossain M, **Reza HM**. Antioxidant and antibacterial activities of different solvent extracts of Citrus acida leaf and correlation with phenolic content. MEDICINAL PLANTS. 2021;13(2):302-12.
- Bari R, Bepari AK, Reza HM. Building confidence in COVID-19 vaccine rollout: the importance of responsible presentation and follow-on investigation of Adverse Events Following Immunization (AEFI) reports for elderly patients. GJMEDPH. 2021, Vol. 10, No. 1.
- Bari R, Bepari AK, **Reza HM**. COVID-19: Lessons from Norway tragedy must be considered in vaccine rollout planning in least developed/developing countries. Open Medicine. 2021 Jan 1;16(1):1168-9.
- Akash SZ, Lucky FY, Hossain M, Bepari AK, Rahman GM, **Reza HM**, Sharker SM. Remote Temperature-Responsive Parafilm Dermal Patch for On-Demand Topical Drug Delivery. Micromachines. 2021 Aug;12(8):975.
- Ahmed F, Islam MA, Kumar M, Hossain M, Bhattacharya P, Islam MT, Hossen F, Hossain MS, Islam MS, Uddin MM, Islam MN, Bahadur NM, Didar-Ul-Alam M, Reza HM, Jakariya

- M. First detection of SARS-CoV-2 genetic material in the vicinity of COVID-19 isolation Centre in Bangladesh: Variation along the sewer network. *Sci Total Environ.* 2021 Jul 1;776:145724. doi: 10.1016/j.scitotenv.2021.145724. Epub 2021 Feb 9.PMID: 33652314
- Bepari AK, **Reza HM.** Identification of a novel inhibitor of SARS-CoV-2 3CL-PRO through virtual screening and molecular dynamics simulation. *PeerJ.* 2021 Apr 13;9:e11261. doi: 10.7717/peerj.11261. eCollection 2021.PMID: 33954055
- Abedin M, Islam MA, Rahman FN, **Reza HM**, Hossain MZ, Hossain MA, Arefin A, Hossain A. Willingness to vaccinate against COVID-19 among Bangladeshi adults: Understanding the strategies to optimize vaccination coverage. *PLoS One.* 2021 Apr 27;16(4):e0250495. doi: 10.1371/journal.pone.0250495. eCollection 2021.PMID: 33905442
- Shill MC, Bepari AK, Khan M, Tasneem Z, Ahmed T, Hasan MA, Alam MJ, Hossain M, Rahman MA, Sharker SM, Shahriar M, Rahman GMS, **Reza HM.** Therapeutic Potentials of *Colocasia affinis* Leaf Extract for the Alleviation of Streptozotocin-Induced Diabetes and Diabetic Complications: In vivo and in silico-Based Studies. *J Inflamm Res.* 2021 Feb 19;14:443-459. doi: 10.2147/JIR.S297348. eCollection 2021.PMID: 33642871
- Lamia SS, Emran T, Rikta JK, Chowdhury NI, Sarker M, Jain P, Islam T, Gias ZT, Shill MC, Reza HM. Coenzyme Q10 and Silymarin Reduce CCl<sub>4</sub>-Induced Oxidative Stress and Liver and Kidney Injury in Ovariectomized Rats—Implications for Protective Therapy in Chronic Liver and Kidney Diseases. *Pathophysiology* 2021, 28(1), 50 63; https://doi.org/10.3390/pathophysiology28010005.
- Saha M, Saha DR, Ulhosna T, Sharker MS, Shohag MH, Islam MS, Ray SK, Rahman GMS, **Reza HM**. QbD based development of resveratrol-loaded mucoadhesive lecithin/chitosan nanoparticles for prolonged ocular drug delivery. *J Drug Deliv Sci Technol*. 2021; 63, 2021, https://doi.org/10.1016/j.jddst.2021.102480.
- Johra FT, Bepari AK, Bristy AT, **Reza HM**. A Mechanistic Review of β-Carotene, Lutein, and Zeaxanthin in Eye Health and Disease. *Antioxidants* (Basel). 2020 Oct 26;9(11): E1046. doi: 10.3390/antiox9111046.
- Sultana F, Reza HM. Are SAARC countries prepared to combat COVID-19 to save young, working-age population? AIMS Public Health, 2020, 7(3): 440-449. DOI: 10.3934/publichealth.2020036.
- **Reza HM**, Sultana F, Khan IO. Disruption of Healthcare Amid COVID-19 Pandemic in Bangladesh. *TOPHJ*, 2020; 13: 438-440. DOI: 10.2174/1874944502013010438.
- Rashid MM, Ahmed I, Islam MA, Tasnim T, Nahid NA, Apu MNH, AlMamun MMA, Islam MR, Ahmed MU, Karim M, Islam MN, Yokota K, Shabnaz S, **Reza HM**, Islam MS, Hasnat A. Influence of TPMT polymorphisms on azathioprine-induced myelosuppression in Bangladeshi patients with systemic lupus erythematosus. *Drugs Ther Perspect*. 2020; 36: 202–207. https://doi.org/10.1007/s40267-020-00716-y.
- Gias ZT, Afsana F, Debnath P, Alam MS, Ena TN, Hossain MH, Jain P, **Reza HM**. A mechanistic approach to HPLC analysis, antinociceptive, anti-inflammatory and postoperative analgesic activities of panch phoron in mice. *BMC Complement Med Ther*. 2020 Mar 30;20(1):102. doi: 10.1186/s12906-020-02891-x.
- **Reza HM**, Saleh R, Jain P, Rahman GMS, Bepari AK. C-MAF Expression in Adult Human Ocular Surface and its Implication in Pterygium Pathogenesis. *Rep Biochem Mol Biol*. 2020 Jan;8(4):419-423. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7275840/pdf/rbmb-8-419.pdf
- ISLAM T, HOSSAIN N, RAHMAN M, SHABNAM S, CHOWDHURY E, NAHAR ST, GIAS ZT, **REZA HM**. STUDY OF RELEASE-RETARDANT POLYMERS IN FORMULATION DEVELOPMENT OF CINNARIZINE-HCL SUSTAINED-RELEASE ORAL SUSPENSION USING RAFT TECHNOLOGY. DUJPS, EPUB: MARCH 4, 2020, 19(1):14-24. HTTPS://DOI.ORG/10.3329/DUJPS.v1911.47814
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- Jain P, Haque A, Islam T, Alam MA, **Reza HM**. Comparative evaluation of *Ziziphus mauritiana* leaf extracts for phenolic content, antioxidant and antibacterial activities, *Journal of Herbs*, *Spices & Medicinal Plants*. 2019, DOI:10.1080/10496475.2019.1600627
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- Prianka TR, Subhan N, **Reza HM**, Hosain MK, Rahman MA, Lee H, Sharker SM. Recent exploration of bio-mimetic nanomaterial for potential biomedical applications. *Mater Sci Eng C Mater Biol Appl.* 2018 Dec 1;93:1104-1115. DOI: 10.1016/j.msec.2018.09.012
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- Machado KDC, Islam MT, Ali ES, Rouf R, Uddin SJ, Dev S, Shilpi JA, Shill MC, Reza HM, Das AK, Shaw S, Mubarak MS, Mishra SK, Melo-Cavalcante AAC. A systematic review on the neuroprotective perspectives of beta-caryophyllene. *Phytother Res.* 2018 Dec;32(12):2376-2388. DOI: 10.1002/ptr.6199
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- Saleh R, **Reza HM**. Short review on human umbilical cord lining epithelial cells and their potential clinical applications. *Stem Cell Res Ther*. 2017 Oct 10;8(1):222.
- Sharker SM, Alam MA, Shill MC, Rahman GMS, **Reza HM.** Functionalized hBN as targeted photothermal chemotherapy for complete eradication of cancer cells. International Journal of Pharmaceutics, 2017:13;534(1-2):206-212.
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- Md Abu Taher Sagor, Hasan Mahmud Reza, Nabila Tabassum, Md. Moshfequr Rahman and Md. Ashraful Alam. Fresh bitter melon fruit (*Momordica charantia*) attenuated oxidative stress, fibrosis and renal injury in carbon tetra-chloride treated rats. *Dhaka University Journal of Pharmaceutical Sciences*, 2017:16(2):205-214.
- Rahman MM, Alam MN, Ulla A, Sumi FA, Subhan N, Khan T, Sikder B, Hossain H, Reza
   HM, Alam MA. Cardamom powder supplementation prevents obesity, improves glucose

- intolerance, inflammation and oxidative stress in liver of high carbohydrate high fat diet induced obese rats. *Lipids Health Dis*. 2017 Aug 14;16(1):151.
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- Anayet Ulla, Mustafe Khalid Mohamed, Biswajit Sikder, AFM Towheedur Rahman, Farzana Akther Sumi, Murad Hossain, Hasan Mahmud Reza, G. M. Sayedur Rahman, Md Ashraful Alam. Coenzyme Q10 prevents oxidative stress and fibrosis in isoprenaline induced cardiac remodeling in aged rats. BMC Pharmacol Toxicol. 2017 Apr 20;18(1):29. doi: 10.1186/s40360-017-0136-7.
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- Marina Mostafizar, Pritha Puloma Haque, Md. Abdul Mazid, Mohammad Shohel, Gamal shazly, Mohsin Kazi and Hasan Mahmud Reza. Characterization of binding sites of clopidogrel and interference of linoleic acid at the binding site on bovine serum albumin. *Acta Poloniae Pharmaceutica- Drug Research*, Vol. 74 No. 1 pp. 119-125, 2017.
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- Md Mizanur Rahman, Awale Yousuf Muse, D.M. Isha Olive Khan, Ismaile Hussein Ahmed, Nusrat Subhan, Hasan Mahmud Reza, Md Ashraful Alam, Lutfun Nahar, Satyajit Dey Sarker. Apocynin prevented inflammation and oxidative stress in carbon tetra chloride induced hepatic dysfunction in rats. *Biomed Pharmacother*. 2017 Aug; 92: 421-428. doi: 10.1016/j.biopha.2017.05.101. Epub 2017 May 27.
- Saleh R, Zahid ZI, Rahman MA, Jain P, Alam A, Kawaichi M, **Reza HM**. (2016). Prevalence of PPAR-γ2 (rs1801282), RETN (rs3745367) and ADIPOQ (rs2241766) SNP markers in the Bangladeshi type 2 diabetic population. *Meta Gene10: 100-107*, 2016.
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- Md Abu Taher Sagor, Md Mohabbulla Mohib, Nabila Tabassum, Ishfaq Ahmed, Hasan Mahmud Reza and Md Ashraful Alam. Fresh Seed Supplementation of Syzygium Cumini Attenuated Oxidative Stress, Inflammation, Fibrosis, Iron Overload, Hepatic Dysfunction and Renal Injury in Acetaminophen Induced Rats. *J Drug Metab Toxicol*, 7:2. 2016.
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#### CONFERENCE PROCEEDINGS

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- Mithun Saha, Nowrin Rahman Srithy, Zannatul Ferdous, Muhammad Saiful Islam, Hasan Mahmud Reza. Development and optimisation of diospyros peregrina pulp powder as a multifunctional excipient in wet granulation process using QbD. ICGNB-2017, Dhaka.
- Najeeba Nawar, Humaira Binte Noor, Tanima Jahan, Shamshad Rahman Lubna, Hasan Mahmud Reza, Mohsin Kazi and Mohammad Hossain Shariare. Liposomal drug delivery of *Corchorus olitorius* leaf extract containing phytol and oleic acid. *ICGNB-2017*, Dhaka. (Awarded Best poster)
- Rafidul Haq, Khadiza Bintey Faruque, Md. Mosharaf Hossain, Anika Tabassum <sup>1</sup>, Sung Young Park, **Hasan Mahmud Reza** and Shazid Md. Sharker. Tumor active photothermal therapy by using polyaniline ionic complexed fluorescence carbon nanoparticles. *ICGNB-2017*, Dhaka.
- Kazi Afnan, Saima Binte Haque, Tanzia Tasnim, Mohsin Kazi, Hasan Mahmud Reza and Mohammad Hossain Shariare. Nano phytosomal drug delivery of epigallocatechin gallate (egcg) using QbD approach. ICGNB-2017, Dhaka.
- Shazid Md. Sharker and **Hasan Mahmud Reza**. Synthesis of magneto fluorescent nanodots towards target drug delivery. *ICGNB-2017*, Dhaka.

- Tahmina Yesmin, Kamrun Nahar, Syeeda Hossain, Tasnim Tabasum, Fariha Kabir, Md. Mizanur Rahman, Hasan Mahmud Reza and Md Ashraful Alam. Metformin prevents obesity, improves glucose intolerance, inflammation and oxidative stress in liver of high carbohydrate high fat diet induced obese rats. ICGNB-2017, Dhaka.
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- Sanjana Binte Mahbub, Pierce Ritchil, Md. Ashraful Alam, Hasan Mahmud Reza and Murad Hossain. Effect of astaxanthin on chronic restrain stress induced depressive mice. *ICGNB-2017*, Dhaka.
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- Eshaba Karim, Tairin Islam, A T M Feroz Tushar, Shafia Akhter, Hasan Mahmud Reza and Preeti Jain. Association of metal tolerance with multiple antibiotic resistance in bacteria isolated from metal contaminated environments. *ICGNB-2017*, Dhaka.
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- Nabila Tazneen, G. M. Sayedur Rahman and **Hasan Mahmud Reza**. In-silico inhibitor designing against gsk3a protein: a new approach in alzheimer dieasese management. *ICGNB-2017*, Dhaka.
- Tasmia Momin, G. M. Sayedur Rahman and Hasan Mahmud Reza. 3D structure determination of the non-structural proteins and endonuclease enzyme of human papilloma virus-16 (hpv16ref) as receptor for the development of new subtype specific anti-papilloma drugs. ICGNB-2017, Dhaka. (Awarded Best poster)
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- Md. Abdullah Al Mamun, Md. Faruk, Md. Mizanur Rahman, Kamrun Nahar, Fariha Kabir, Hasan Mahmud Reza and Md. Ashraful Alam, (2016). Psidium guajava leaf powder supplementation prevents metabolic syndrome and oxidative stress in liver of high carbohydrate high fat diet induced obese rats. Poster presented in National Conference on Biochemistry and Molecular Biology for Life Sciences 2016, Dhaka.
- Fariha Mamun, Usran Ferdous, Md Mizanur Rahman, **Hasan Mahmud Reza**, Md Ashraful Alam (20016). Dried Amalaki (*Emblica officinalis*) powder prevents oxidative stress and fibrosis in two kidney one clip (2K1C) model rats. Poster presented in *National Conference on Biochemistry and Molecular Biology for Life Sciences 2016*, Dhaka.
- Mohammad Nazmul Alam, Md. Mizanur Rahman, Anayt Ulla, Murad Hossain, Hasan Mahmud Reza, Md Ashraful Alam. (2016) Evaluation of Astaxanthin in Isoprenaline Induced Cardiac Remodeling in Aged Rats. Poster presented in *National Conference on Biochemistry and Molecular Biology for Life Sciences 2016*, Dhaka.
- Md. Mizanur Rahman, Mohammad Nazmul Alam, Anayt Ulla, Hemayet Hossain, Md. Ashraful Alam and Hasan Mahmud Reza (20016). Phenolic content analysis of Psidium guajava leaves powder by HPLC-DAD system and In vivo cardioprotective and antioxidant activity in FCA induced rats. Poster presented in National Conference on Biochemistry and Molecular Biology for Life Sciences 2016, Dhaka.
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- Syed Mustyen Quader, Dr. Murad Hossain, Md Mizanur Rahman, Hasan Mahmud Reza, Md Ashraful Alam (2016). Effect of superoxide dismutase mimetic, tempol, on carbon tetrachloride induced hepatic inflammation and fibrosis in the liver of rats. Oral presented in *National Conference on Biochemistry and Molecular Biology for Life Sciences* 2016, Dhaka.
- Razwa Saleh, Preeti Jain, Md. Ashraful Alam, Hasan Mahmud Reza. Prevalence of PPAR-γ2 (RS1801282), RETN (RS3745367) and ADIPOQ (RS2241766) SNP markers in the Bangladeshi diabetic population. Poster presented (Razwa Saleh) in 5<sup>th</sup> Biennial Conference of DASG (Diabetes in Asia Study Group), Dhaka, 2016.

- Farzana Akther Sumi, Umme Nahida Islam, Biswajit Kumer Sikder, Md Ashraful Alam, Hasan Mahmud Reza. Protective effect of antioxidant rich ethanolic extract of Citrus maxima Merr. fruit peels against carotid artery occlusion induced ischemia/reperfusion in brain of mice. Poster presented (by Farzana Akther Sumi) in 3rd National Conference on Natural Science and Technology (NCNST'16), Chittagong, Bangladesh, 2016. (Awarded Best poster)
- Anayet Ullah, Biswajit Sikder, Md Mizanur Rahman, Farzana Akther Sumi, Mostafe Khalid, Md Hemayet Hossain, Hasan Mahmud Reza, and Md Ashraful Alam. Supplementation of Eugenia jambolena seed powder prevented obesity, glucose intolerance, hyperlipidemia and oxidative stress in high carbohydrate high fat diet induced obese rats. Poster presented (Md Mizanur Rahman) in 3rd National Conference on Natural Science and Technology (NCNST'16), Chittagong, 2016.
- Mohammad Nazmul Alam, Md. Mizanur Rahman, Anayt Ulla, Nusrat Subhan, Hasan Mahmud Reza, Murad Hossain, Md Ashraful Alam (2016). Effect of astaxanthin on oxidative stress and cardiac remodeling in isoproterenol administered aged rats. Oral presentation (by Mohammad Nazmul Alam) presented in 3rd National Conference on Natural Science and Technology (NCNST'16), Chittagong, 2016.
- Hasan Mahmud Reza, Toan Thang Phan, Leonard Pek-Kiang Ang. Human Umbilical Cord Lining Epithelial Cells as Novel Feeder Layer for Ex-vivo cultivation of limbal epithelial cells. 2014. P-330, International Conference of Life Science and Biological Engineering, Japan.
- Mohammad Shohel, Rakibul Hasan, Md. Fakhar Uddin, Preeti Jain, Irfan Newaz Khan and Hasan Mahmud Reza. Phytochemical and pharmacological investigation of different extracts of *Dillenia Pentagyna*.2013. Ist International Symposium on Pharmaceutical Sciences: A global approach, Chittagong, Bangladesh.
- Ang LPK1, Ng BY2, Gimeno FL1, Toan TP3, Beuerman RW2, Reza HM. Transplantation of Umbilical Cord Lining Stem Cells as a Promising Novel Method for Epithelial Regeneration for the Treatment of Corneal and Ocular Surface Diseases. 2012. SingHealth Duke-NUS Scientific Congress, Singapore.
- Leonard Ang, HM Reza, XW Tan, PT Do, MT Zaw, LPS Ang, C Yap, TH Koon, DTH Tan and RW Beuerman. The Novel Use of a Human Cord Blood Serum-Supplemented Culture Medium for the Ex Vivo Expansion of Conjunctival and Limbal Epithelial Cells. 2011 Asia-ARVO meeting, Singapore.
- Leonard PK Ang, Ng Boon Yee, Toan Thang Phan, Donald TH Tan, Roger W Beuerman and **Hasan Mahmud Reza**. Isolation And Characterization Of A Novel Stem Cell Population From Human Umbilical Cord. 2010, 1st Singapore Health and Biomedical Congress, Singapore.
- LPK Ang, **HM Reza**, XW Tan, PT Do, MT Zaw, LPS Ang, C Yap, TH Koon, DTH Tan and RW Beuerman, 'The Novel Use of a Human Cord Blood Serum-Supplemented Culture Medium for the Ex Vivo Expansion of Conjunctival and Limbal Epithelial Cells' 2009, NHG International Ophthalmology Congress, <u>Singapore</u>.
- Hasan Mahmud Reza and Kunio Yasuda, 'Sequential and combinatorial roles of *maf* family genes define proper lens development' in the proceedings of the 65<sup>th</sup> Annual Meeting of the Society for Developmental Biology, 2006, Michigan, USA.
- Hasan Mahmud Reza, Yoshiko Takahashi and Kunio Yasuda, 'Regulatory interactions among the
  maf family genes and their roles in lens development' in the proceedings of the 39<sup>th</sup> Annual Meeting
  of the Japanese Society of Developmental Biologists, 2006, pp 117 (abstract). Hiroshima, <u>Japan</u>.
  (oral)
- Hasan Mahmud Reza and Kunio Yasuda, 'Pax6 activity and the expression of FGF8 and BMP4 in neural retina during chick eye development' In 15<sup>th</sup> International Society of Developmental Biologists Congress, Australia 2005. Abstract published in Mech Dev vol. 122 (suppl. 1), p92.
- **Hasan Mahmud Reza** and Kunio Yasuda, 'Functional comparison of Maf genes in lens development by in ovo electroporation'. *In 2<sup>nd</sup> SERI-ARVO Meeting on Research in Vision and Opthalmology*, Singapore 2005. (both oral and poster).
- Hasan Mahmud Reza and Kunio Yasuda, 'The involvement of neural retina Pax6 in lens fiber differentiation'. In 44<sup>th</sup> Annual Meeting of the American society for Cell Biology, Washington, DC, USA 2004. Abstract published in Mol. Biol. Cell vol. 15 (suppl.), p217.
- Hasan Mahmud Reza and Kunio Yasuda, 'Pax6 in neural retina plays role in the maintenance of L-Maf required for continued lens-fiber differentiation'. In the 2<sup>nd</sup> NAIST Bio-COE international

- symposium on Molecular network in cellular signal transduction and environment responses. Nara, Japan 2004. (both oral & poster).
- **Hasan Mahmud Reza** and Kunio Yasuda, 'Regulation of L-Maf by Pax6 during chick lens development' in *International mini-symposium on Multiple roles of Pax6 in development* 2003, p 9 (abstract), Tohuku, Sendai, <u>Japan</u> (Invited speaker).
- Hasan Mahmud Reza and Kunio Yasuda, 'Interactions between Pax6 and L-Maf during lens formation' in International Symposium on Deciphering the regulatory network of transcription factors: Function and regulation of Maf and CNC transcription factor families 2003, pp 29 (abstract), Tsukuba, Japan (Invited speaker).
- Hasan Mahmud Reza and Kunio Yasuda, 'Pax6 expressed in neural retina plays role in lens fiber differentiation via maintaining L-Maf expression'. In the 25<sup>th</sup> Annual Meeting of the Molecular Biology Society of Japan 2002, pp. 620 (abstract) Yokohama, Japan.
- Hasan Mahmud Reza, Hajime Ogino and Kunio Yasuda, 'Involvement of Pax6 in eye morphogenesis'. In 14<sup>th</sup> International Congress of Developmental Biology (ICDB) 2001, Kyoto, Japan, abstract published in *Dev. Growth Diff.* Vol. 43, Supplement, S9-p61.
- Hasan Mahmud Reza, Hajime Ogino and Kunio Yasuda, 'Requirement for Pax6 activity in lens progenitor cells is prerequisite for the expression of transcription factors L-Maf and Prox1' in proceedings of 2001 Meeting on Stem and Progenitor Cells: Biology and Application 2001, pp. 57 (abstract), Cold Spring Harbor Laboratory, New York, <u>USA</u>.
- Hasan Mahmud Reza, Hajime Ogino and Kunio Yasuda, 'Induction of lens differentiation factors L-Maf and Prox1 requires Pax6 function' in the 23<sup>rd</sup> Meeting of Molecular Biology Society of Japan (MBSJ) 2000, pp. 23-24 (abstract). Kobe, <u>Japan</u>.
- Hajime Ogino, Hasan Mahmud Reza and Kunio Yasuda, in the 14<sup>th</sup> International Congress of Eye Research (ICER) 2000, Santa Fe, New Mexico, <u>USA</u>, abstract published in Exp. Eye Res. Vol. 71, Suppl. 1, S.190.

#### **DISSERTATIONS**

- 1. **Hasan Mahmud Reza** and Kunio Yasuda. The role of Pax6 and L-Maf in chick lens development (PhD thesis). Naist publication, Japan 2002.
- 2. **Hasan Mahmud Reza** and Abdul Jabbar. A study on Streptomyces species (MPharm thesis), Department of Pharmacy, University of Dhaka 1996.

#### **BOOKS**

- 1. Kunio Yasuda and **Hasan Mahmud Reza**. Series: New Century of Biological Sciences; Body Plan of Animals; Eye Formation. Chapter 7, Kyoritsu Publishing House, Japan 2004.
- 2. Leonard P.K. Ang, **Hasan M Reza**, Donald T.H. Tan. Stem cells of the eye: basic science and clinical applications. Chapter 15, Stem Cells: From Bench To Bedside; edited by EH Lee and A Bongso, Second Edition, World Scientific Publishing Group. 2011.

# INVITED TALKS (PROCEEDINGS)

**Hasan Mahmud Reza** and Kunio Yasuda, 'Regulation of L-Maf by Pax6 during chick lens development' in *International mini-symposium on Multiple roles of Pax6 in development* 2003, p 9 (abstract), Tohuku, Sendai, <u>Japan</u> (Invited speaker).

**Hasan Mahmud Reza** and Kunio Yasuda, 'Interactions between Pax6 and L-Maf during lens formation' in International Symposium on Deciphering the regulatory network of transcription factors: Function and regulation of Maf and CNC transcription factor families 2003, pp 29 (abstract), Tsukuba, <u>Japan</u> (Invited speaker).

Hasan Mahmud Reza, 'Apocyanin prevented inflammation and oxidative stress in carbon tetra chloride induced hepatic dysfunction in rats' in 1st International Conference on Scientific Research

and Practice (icSRP)-2017 organized by GCSTMR, 2017, Dhaka, Bangladesh.

**Hasan Mahmud Reza** and Razwa Saleh, 'Umbilical cord lining stem cells: A promise in regenerative medicine' in *International Conference on Genomics, Nanotech and Bioengineering-2017 (ICGNB-2017)*. Dhaka, Bangladesh.

### **RESEARCH GRANTS AWARDED**

- A survey on knowledge, attitude and practice among quack doctors and pharmacy shopkeepers towards the use of antibiotics in rural Bangladesh. (2020-21); Tk. 400,000.
- Development of a novel formulation of Flutamide using self-nanoemulsifying drug delivery systems (SNEDDS) to increase bioavailability and reduce hepatotoxicity via Quality by Design (QbD) approach. (2019-2020); Tk. 498500.
- Development of resveratrol containing Self-nano emulsifying drug delivery systems (SNEDDS) to enhance bioavailability and efficacy of drug. Bangladesh Medical Research Council. (2020-21) Tk. 500,000.
- Post-market in-vitro quality assessment of different brands of ciprofloxacin 500 mg tablet. Bangladesh Medical Research Council. (2019-20); Tk. 500,000.
- Study of Antioxidants for the prevention and Treatment of Cardiovascular disorder in Rats. Funding source: BANBEIS, Ministry of Education (2018-20); Tk. 2,200,000.
- Evaluating the role of natural antioxidants in diet induced obesity and fat metabolizing gene expression in animal model. Funding source: Ministry of Science and Technology, Bangladesh. Tk. 300,000. (2016).
- Expression profiling of c-Maf and Sox2 in limbal tissue as possible stem cell markers and cultivation of limbal stem cells in vitro for clinical transplantation. Funding source: North South University Research Grants (2013-2014); Tk. 350,000.
- Functional analysis of maf family members in chick lens development. Principal Investigator. Funding source: Monbukagakusho, Japan (Apr 2004-Mar 2006); amount: 300,0000 Japanese yen.
- Study of HtrA gene in embryonic chick eye. Principal Investigator. Funding source: Naist-Bio-COE, Japan (Apr 2005-Mar 2006); amount: 180,0000 Japanese yen.

### AWARDS AND HONORS

- 1. Best Researcher Award (2021) from North South University for Outstanding Research Performance during 2018-2020.
- 2. Dean's Award (2016) from North South University for Outstanding Research Performance during 2011-2015.
- 3. Best Poster- SingHealth Duke-NUS Scientific Congress 2012, Raffles City Convention Centre. Singapore.
- 4. Alcon Research Prize (Best Paper, Senior category), NHG International Ophthalmology Congress 2009, Singapore.
- 5. NHG-NUHS Silver Award, NHG International Ophthalmology Congress 2009, Singapore.
- 6. Japanese Govt. Scholarship (MONBUSHO) for post-graduate studies in the Nara Institute of Science and Technology (1998-2002).
- 7. Chancellor Award for outstanding result in Secondary School Certificate Examination (1986).

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# MEMBERSHIP in professional Societies

- Editor (2016-), Frontiers in Public Health
- Consulting Editor (2012-), Asian Journal of Applied Science and Engineering
- BPSA (1995-) Bangladesh Pharmaceutical Society Association
- PGA (1995-) Pharmacy Graduates Association, Bangladesh
- MBSJ (2000 -) The Molecular Biology Society of Japan
- JSDB (2001-) The Japanese Society of Developmental Biologists
- ARVO (2009-) Association for Research in Vision and Ophthalmology
- JEXCA (1988-) Life member, Jhenidah Ex-Cadet Association
- DUPAA (2007-) Life member, Dhaka University Pharmacy Alumni Association

#### **REFERENCES**

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2. Professor Yasumasa Bessho

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Contact No: (81-743)-72-5470. E-mail: ybessho@bs.naist.jp

3. Professor Kunio Yasuda

Ex President, Nara Institute of Science and Technology, Japan

Lab. of Molecular and Developmental Biology, Nara Institute of Science and Technology, Japan,

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4. Assoc Professor Phan Toan-Thang

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