Murad Hossain, Ph.D.

Professor in the Department of Pharmaceutical Sciences,

North South University, Bangladesh

B.Pharm (DU, Bangladesh), MPharm & Ph.D. (NUPALS, Japan)

Postdoctoral Training, NUPALS (Japan), UND (USA), UIC (USA)

Email: murad.hossain@northsouth.edu, mhossain059@gmail.com

EDUCATION

2010 **Doctor of Philosophy (Ph.D.) in Pharmacy,** Niigata University of Pharmacy and Applied Life Sciences (NUPALS), Japan.

2007 **Master of Science (M. Pharm.) in Pharmacy,** Niigata University of Pharmacy and Applied Life Sciences (NUPALS), Japan.

2001 **Bachelor of Science (B. Pharm.) in Pharmacy,** Faculty of Pharmacy, University of Dhaka, Bangladesh.

TEACHING & RESEARCH EXPERIENCES

11/2023-Present **Professor,** Department of Pharmaceutical Sciences, North South University, Bangladesh.

04/2018-11/2023 **Associate Professor,** Department of Pharmaceutical Sciences, North South University, Bangladesh.

06/2019-05/2021 **Superintendent,** NSU Model Pharmacy, Department of Pharmaceutical Sciences, North South University, Bangladesh.

11/2017-11/2018 **Assistant Proctor**, North South University, Bangladesh.

09/2014-03/2018 **Assistant Professor,** Department of Pharmaceutical Sciences, North South University, Bangladesh.

02/2014- 09/2014 **Assistant Professor,** Department of Pharmacy, University of Asia Pacific, Bangladesh.

11/ 2013-12/2013 **Postdoctoral Research Associate,** Department of Medicine, University of Illinois at Chicago, USA

11/2010 – 11/2013 **Postdoctoral Research Fellow,** Department of Basic Sciences, University of North Dakota, Grand Forks, ND, USA.

04/2010-11/2010 **Postdoctoral Research Associate,** Department of Fundamental and Experimental Pharmacology, Niigata University of Pharmacy & Applied Life

Sciences, Niigata, Japan.

04/2005-04/2010 **Ph.D. Research Scholar,** Department of Pharmacology, Niigata University of Pharmacy & Applied Life Sciences, Niigata, Japan

TEACHING & MENTORING

PHR 114: Organic Pharmacy-I

PHR 121: Human Physiology-I

PHR 211: Human Physiology-II

PHR 214: Pharmacology and Clinical Pharmacy-I

PHR 215: Medicinal Chemistry-I

PHR 320: Medicinal Chemistry-III

PHR 324: Pharmacology and Clinical Pharmacy-III

PHR 411: Pharmacology and Clinical Pharmacy-IV

PHR 426: Clinical Pharmacokinetics

PHR510: Functional Food and Nutraceuticals

PHR 5201: Drug Design

RESEARCH PROFILE

- Scopus ID : 14056367500
- ORCID : 0000-0002-3680-6511
- SciProfiles : 1771907

MEMBERSHIP

- Member of NSU Institutional Biosafety Committee, Bangladesh
- Treasurer of Bangladesh Neuroscience Society (BNSS), Bangladesh
- Member of the Self-Assessment Committee (SAC) of IQAC, Bangladesh
- Member of the Society for Neuroscience, USA
- Member of the Japanese Pharmacological Society (JPS), Japan
- Member of Bangladesh Society of Toxicology (BDSOT), Bangladesh
- Member of Bangladesh Pharmaceutical Society (BPS), Bangladesh
- Member of Japanese Universities Alumni Association in Bangladesh (JUAAB), Bangladesh
- Member of Rotary Yoneyama Memorial Foundation, Japan

ACADEMIC DUTIES

- Prepare and give lectures for the Pharmacy curriculum for both Undergraduate and Graduate students.
- Supply the teaching material or handout to the students for both Undergraduate and Graduate students.
- Taking and evaluating different quizzes, exams, assignments, and presentation for both undergraduate and graduate students
- Supervised project research for both undergraduate and graduate students.
- Manuscript writing and participating in research work at local or international conferences.
- Apply for research grants for the government and private sector in Bangladesh.
- Participate in department committee members, for example, members of the purchase committee, members of the biosafety committee, members of the Pharma Fest program in the department, etc.

AWARDS & RESEARCH GRANTS ACHIEVED

- **2025-2026** NSU CTRG 2024-2025 as Principal Investigator.
- **2024-2025** NSU CTRG 2024-2025 as Principal Investigator.
- **2023-2024** NSU CTRG 2023-2024 as Principal Investigator.
- **2020-2021** NSU CTRG 2020-2021 as Principal Investigator.
- **2020-2021** Research & Development of Technology Grant from Ministry of National Science and Technology, Government Bangladesh as Principal Investigator.
- **2019-2020** NSU CTRG 2019 as Principal Investigator.
- **2019-2020** Research & Development of Technology Grant from Ministry of National Science and Technology, Government Bangladesh as Principal Investigator.
- **2018-2020** BANBEIS Advance Research Grant from Education Ministry, Gov. of Bangladesh as Principal Investigator.
- **2018-2019** Research & Development of Technology Grant from Ministry of National Science and Technology, Government Bangladesh as Principal Investigator.
- **2016-2017** NSU CTRG in 2016-1017 as Co-Principal Investigator.

SCIENTIFIC PUBLICATIONS

1. Md. Mazedul Hasan, Md. Shaki Mostaid, Asim Kumar Bepari, Hasan Mahmud Reza, and **Murad Hossain***. Discovery of a novel KEAP1 inhibitor for Neurodegeneration through Virtual Screening and Molecular Dynamics Simulations. PLoS One. 2026 Feb 2;21(2):e0341965. doi: 10.1371/journal.pone.0341965. PMID: 41628199. (2026)

2. Suparna Datta, Kazi Tasnuva Alam, Mahira Islam Asfie, Bisnudeb Kapasia, Fariha Ahammed Simran, Fiza Afifa Hossain, Md Adit Muktadir Pavel, Muhammed Mahfuzur Rahman, **Murad Hossain**, Md Shaki Mostaid. "Meta-analysis reveals significant association between polymorphisms of CHRNA5-A3-B4 gene cluster with nicotine dependence." Human Gene, 48: 201546 (2026). https://doi.org/10.1016/j.humgen.2026.201546

3. Md. Mazedul Hasan, Manik Chandra Shill, Asim Kumar Bepari*, Hasan Mahmud Reza, and **Murad Hossain***. Machine Learning and Molecular Simulation-Based Virtual Screening for the Discovery of Potent RIPK1 Inhibitors. Accepted in-silico pharmacology (2026)

4. Rumky Rahman1, Zasia Hossain Tishe1, Sudip Saha1, Hemayet Hossain, **Murad Hossain**, Preeti Jain, Hasan Mahmud Reza1, Manik Chandra Shill. Swertia chirayita ameliorates acrylamide-induced hepatorenal toxicities and oxidative damage through modulating biomarkers and pro-inflammatory genes. Accepted in Journal of Food Biochemistry (2026)

5. Miah MA, Sathi MA, Hasib MG, Rahman M, Mahmud N, Shill MC, Reza MH, **Hossain M**, Rahman MM, Mostaid MS. Rice bran oil ameliorates the symptoms of benign prostatic hyperplasia in male Wistar rats. Accepted in Avicenna J Phytomed, 2025. Epub ahead of print. (2025)

6. Biswas AM, Emran T, Khan SI, Shabnam S, Jain P, Bepari AK, Shill MC, **Hossain M**, Reza HM. Transforming Growth Factor-β-mediated attenuation of cardio-renal oxidative stress, inflammation and fibrosis by L-arginine in fludrocortisone acetate induced-hypertensive rats. European Journal of Pharmacology. 5;996:177559 (2025)

7. Ahmed A, Rawshan AEM, Tishe ZH, Shawkat S, Popy MN, Shohag MH, **Hossain M**, Mostaid MS. Association of CD58 rs12044852 and rs2300747 polymorphisms with the risk of multiple sclerosis: A systematic review and meta-analysis. Mult Scler Relat Disord.;82:105411 (2024)

8. Chandra Shill, M., A. All Rakib, S. Islam Khan, M. Hossain, S. Alam, **H. Hossain**, U. Kumar Karmakar, M. S. Bhuia, M. Shahriar, H. Mahmud Reza, C. Sarkar, E. Sönmez Gürer, J. Sharifi-Rad, M. Butnariu and M. Torequl Islam (2024). "Polyphenol-Standardized *Aphanamixis polystachya* Leaf Extract Ameliorates Diabetes, Oxidative Stress, Inflammation, and Fibrosis in Streptozotocin-Induced Diabetic Rats." Journal of Food Biochemistry, 9441968, (2024)

9. Md. Hasanuzzaman Shohag, Syed Abdul Kuddus, Esfat M. Saim Brishty, Salman Sakir Chowdhury, Md.Tofazal Hossain, Maruf Hasan, Sabrin Islam Khan, **Murad Hossain**, Hasan Mahmud Reza. Post-market quality assessment of 22 ciprofloxacin brands by HPLC available in Bangladesh market. in Heliyon 6: e17180 (2023).

10. Monishita Shaswati, Fihima Hossain Oeishy, Sadia Biswas Mumu, Md Zahidul Islam Zahid, **Murad Hossain**, Md Aminul Haque, Hasan Mahmud Reza, Md Shaki Mostaid. "Interleukin-6 (IL-6) Genetic Polymorphisms and Susceptibility to Cervical Cancer in Bangladeshi Women: A Case-Control Study. Health Science Reports,6(5): e1238 (2023)

11. **Murad Hossain*,** Tamanna Tanjim Suchi, M. M. Monirul Islam, Javed Hasan, Md. Ashrafur Rahman, Manik Chandra Shill, Asim Kumar Bepari, G.M. Sayedur Rahman, Hasan Mahmud Reza*. Coenzyme Q10 Ameliorates Carbofuran Induced Hepatotoxicity and Nephrotoxicity in Wister Rats. Heliyon 9(2):e13727 (2023)

12. Manik Chandra Shill, Md. Nurul Absar Bin Mohsin, Usha Showdagor, Sharif Nahid Hasan, Md. Zahidul Islam Zahid, Sabrin Islam Khan, **Murad Hossain**, Ghazi Mohammad Sayedur Rahman, Hasan Mahmud Reza. Microbial sensitivity of the common pathogens for UTIs are declining in diabetic patients compared to non-diabetic patients in Bangladesh: An institution-based retrospective study. Heliyon, 9(1):e12897 (2023)

13. Md Ashrafur Rahman, Arif Anzum Shuvo, Asim Kumar Bepari, Mehedi Hasan, Manik Chandra Shill, **Murad Hossain**, Mohammed Uddin, Md. Rabiul Islam, Biplob Bakshi, Javed Hasan, Ghazi Muhammad Sayedur Rahman, Hasan Mahmud Reza. Curcumin improves D-galactose and Normal-aging Associated Memory Impairment in Mice: in vivo and in silico-Based Studies. PLoS One. 17(6):e0270123 (2022)

14. Emran T, Chowdhury NI, Sarker M., Bepari AK, **Hossain M**, Rahman G, & 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 and Pharmacotherapy. 143:112139 (2021)

15. Akash SZ, Lucky FY, **Hossain M**, Bepari AK, Rahman GMS, Reza HM, Sharker SM. Remote Temperature-Responsive Parafilm Dermal Patch for On-Demand Topical Drug Delivery. Micromachines. 12(8):975 (2021)

16. 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 Inflammation Research. 14:443-459 (2021)

17. Jain Preeti, Hossain Khondker Rufaka, Islam Tairin, Gias Zarin Tasnim, **Hossain Murad**, Reza Hasan Mahmud. Antioxidant and antibacterial activities of different solvent extracts of *Citrus acida* leaf and correlation with phenolic content. *Medicinal Plants - International Journal of Phytomedicines And Related Industries*, 13(2):302-312 (2021)

18. Ferdous Khan, Syed A. Kuddus, Md. H. Shohag, Hasan M. Reza and **Murad Hossain***, "Astaxanthin, the Natural Antioxidant, Reduces Reserpine Induced Depression in Mice", Current Bioactive Compounds, 16(9) (2020)

19. Valladares DT, Kudumala S, **Hossain M**, Carvelli L. Caenorhabditis elegans as an in vivo model to assess amphetamine tolerance. Brain Behavior and Evolution, 95:247-255 (2020)

20. Islam, Md. Mominul, Rokeya Nazneen Jarna, Preeti Jain, Md. Ashraful Alam, Hasan Mahmud Reza,

Murad Hossain, Sourabh Paul, S. M. Rayan Kabir, Dr. and Majedur Rahamn. Potential Anti-Diabetic Medicinal Plants in Bangladesh: A Comprehensive Review. *World Journal of Pharmaceutical Research* 8(6):140-150 (2019).

21. Al-Amin MM, Chowdury MIA, Saifullah ARM, Alam MN, Jain P, **Hossain M**, Alam MA, Kazi M, Ahmad A, Raish M, Alqahtani A and Reza HM. Levocarnitine Improves AlCl3-Induced Spatial Working Memory Impairment in Swiss albino Mice. *Frontier Neuroscience*. 13:278 (2019)
22. Alam MN, **Hossain M**, Rahman MM, Subhan N, Mamun MAA, Ulla A, Reza HM, Alam MA. Astaxanthin Prevented oxidative stress in heart and kidneys of isoproterenol-administered aged rats. *J Diet Suppl*, 10:1-13 (2018)
23. Ulla A, Mohamed MK, Sikder B, Rahman AT, Sumi FA, **Hossain M**, Reza HM, Rahman GMS, Alam MA. Coenzyme Q10 prevents oxidative stress and fibrosis in isoprenaline induced cardiac remodeling in aged rats. *BMC Pharmacol Toxicol*, 18(1):29 (2017)
24. Alam MA, Subhan N, Hossain H, **Hossain M**, Reza HM, Rahman MM, Ullah MO. Hydroxycinnamic acid derivatives: a potential class of natural compounds for the management of lipid metabolism and obesity. *Nutr Metab (Lond).* 11, 13:27 (2016)
25. Safratwoich BD, **Hossain M**, Bianchi L, Carvelli L. Amphetamine potentiates the effects of β-phenylethylamine through activation of an amine-Gated chloride channel. *Journal of Neuroscience*. 34(13):4686-91(2014)
26. **Hossain M**, Wickramasekara RN, Carvelli L. β-Phenylethylamine requires the dopamine transporter to increase extracellular dopamine in *Caenorhabditiselegans* dopaminergic neurons. *Neurochemistry International Journal,* 34(13):4686-91 (2014)
27. **Hossain M**, Muntasir HA, Ishiguro M, Bhuiyan MA, Rashid M, Sugihara T, Nakamura T, Nagatomo T. Mechanism of inverse agonist activity of sarpogrelate at the constitutively active mutant of human 5-HT_{2A} receptor revealed by molecular modeling, *Biological and Pharmaceutical Bulletin,* 35(9):1553-9 (2012)
28. Hao J, Chen B, Yao Y, **Hossain** M, Nagatomo T, Yao H, Kong L, Sun H. Practical access to four stereoisomers of naftidrofuryl and their binding affinity towards 5-hydroxytryptamine 2A receptor. *Bioorganic & Medicinal Chemistry Letters*, 22(10):3441-4(2012)
29. Bhuiyan MA, **Hossain M**, Ishiguro M, Nakamura T, Nagatomo T. Engineered mutation of some important amino acid in angiotensin II Type 1(AT1) receptor causes increase in binding affinity of AT1 receptor antagonists. *Journal of Pharmacological Science* 113, 57-65 (2010)
30. Bhuiyan MA, **Hossain M**, Nakamura T, Ozaki M, and Nagatomo T. Internalization of constitutively active N11G mutant of AT1 receptor induced by angiotensin II receptor antagonist candesartan, losartan, and telmisartan: Comparison with Valsartan. *Journal of Pharmacological Sciences* 112, 459-462 (2010)
31. **Hossain M**, Bhuiyan MA and Nagatomo T. Pharmacological and molecular studies for the regulation of β_1-Adrenergic receptor that reveals activation and inactivation, *Pharmacomatrics,* 78(1/2) 1-9 (2010)

32. Bhuiyan MA, **Hossain M**, Masanobu W and Nagatomo T. Selectivity of valsartan to the human angiotensin II type one receptor as assessed by binding affinity, Functional Activity and Molecular Modeling. *Pharmacomatrics,* 78 (1/2) 11-20 (2010)
33. **Hossain M**, Bhuiyan MA, Nakamura T, Ozaki M, and Nagatomo T. Mutagenesis of important amino acid reveals unconventional homologous internalization of β_1-Adrenergic receptor. *Life Science,* 85, 339-344 (2009)
34. Bhuiyan MA, **Hossain M**, Miura S-I, Nakamura T, Ozaki M, and Nagatomo T. constitutively active mutant N111G of AT_1 receptor induces homologous internalization through mediation of AT_1 receptor antagonist. *Journal of Pharmacological Sciences,* 111(3):227-34 (2009)
35. Aly SAR, **Hossain M**, Bhuiyan MA, Nakamura T and Nagatomo T. Assessment of binding affinity to 5-HT_{2A} receptor and inverse agonist activity of Naftidrofuryl: comparison with those of Sarpogrelate. *Journal of Pharmacological Sciences* 110, 445-450 (2009)
36. Bhuiyan MA, Ishiguro M, **Hossain M**, Nakamura T, Ozaki M, Miura S-I, Nagatomo T. Binding sites of valsartan, candesartan and losartan with angiotensin II receptor 1 subtype by molecular modeling. *Life Science*, 85(3-4), 136-40 (2009)
37. **Hossain M**, Ahmed M, Bhuiyan MA, Ishiguro M, Tanaka T, Muramatsu I and Nagatomo T. Mutation of important amino acid residue of residue of asp104lys in human β_1-adrenergic receptor triggers functional and constitutive inactivation", *Biological and Pharmaceutical Bulletin33(8),* 1517-1522 (2008)
38. Ahmed M, **Hossain M**, Bhuiyan MA, Ishiguro M, Tanaka T, Muramatsu I and Nagatomo T. Mutational analysis of the α_{1a}-adrenergic receptor binding pocket of antagonists by radioligand binding assay. *Biological and Pharmaceutical Bulletin.* 31(4), 598-601(2008)
39. NagaokaY, AhmedM, **HossainM**, Bhuiyan MA, IshiguroM, NakamuraT, Watanabe M and NagatomoT. Amino acids of the human α_{1d}-adrenergic receptor involved in antagonist binding. *Journal of Pharmacological Sciences.*106 (1) (2008)
40. Takahashi K, **Hossain M**, Ahmed M, Bhuiyan MA, Ohnuki T, Nagatomo T. Asp125 and Thr130 in transmembrane domain 3 are major sites of α_{1b}-adrenergic receptor antagonist binding. *Biological and Pharmaceutical Bulletin.* 30(10): 1891-4 (2007)
41. Muntasir HA, **Hossain M**, Bhuiyan MA, Komiyama T, Nakamura T, Ozaki M, Nagatomo T. Identification of a key amino acid of the human 5-HT_{2B} serotonin receptor important for sarpogrelate binding. *Journal of Pharmacological Sciences.* 104(3): 274-7 (2007)
42. Miyajima K, Nakazawa M, Muntasir HA, **Hossain M**, Ahmed M and Nagatomo T. Differential inhibition by oxygen radicals of vasoactive amines-induced contraction in porcine coronary artery. *Biological and Pharmaceutical Bulletin.* 30(7):1242-1245 (2007)
43. Ahmed M, Muntasir HA, **Hossain M**, Ishiguro M, Komiyama T, Muramatsu I, Kurose H, Nagatomo T. Beta-blockers show inverse agonism to a novel constitutively active mutant of β_1-adrenoceptor. *Journal of Pharmacological Sciences.* 102(2):167-72 (2006)
44. Muntasir HA, Takahashi J, Rashid M, Ahmed M, Komiyama T, **Hossain M**, Kawakami J, Nashimoto M, Nagatomo T. Site-directed mutagenesis of the serotonin 5-HT_{2C} receptor: identification of amino acids responsible for sarpogrelate binding. *Biological and Pharmaceutical Bulletin* 29(8):1645-50 (2006)

45. Ahmed M, Muntasir HA, Ishiguro M, Komiyama T, Muramatsu I, **Hossain M**, Takahashi N and Nagatomo T. Pharmacological and molecular characterization of novel SWR-compounds for β_1-adrenergic receptors as assessed by molecular modeling, site-directed mutagenesis, binding affinity and functional activity. *Pharmacomatrics,* 71 (1/2) 1-20 (2006)
46. **Hossain M**, Ali MS, Saha A, Alimuzzaman M. Antinociceptive activity of whole plant extracts of *Paederiafoetida*, *Dhaka University Journal of Pharmaceutical Science*, 5, 67-69 (2006)

SCIENTIFIC PRESENTATION

1. Kasfia Tasnim Humaira, Fahmida Abdullah Tully, Hasan Mahmud Reza, **Murad Hossain***. Neuroprotective role of hesperidin on carbofuran induced Autism mice model. Poster Presentation in 2nd International Conference on Genomic, Nanotech & Bioengineering 2022, Organized by School of Health & Life Science, June26-28, 2022, abstract published (PHP-059)
2. Maruf Rahman Shibli, Tamanna Tanjim Suchi, Manik Chandra Shill, Asim Kumar Bepari, G.M. Sayedur Rahman, Hasan Mahmud Reza, **Murad Hossain*.** Coenzyme Q10 Ameliorates Carbofuran Induced Hepatotoxicity and Nephrotoxicity in Wister Rats. Poster Presentation in 2nd International Conference on Genomic, Nanotech & Bioengineering 2022, Organized by School of Health & Life Science, June26-28, 2022, abstract published (PTP-004)
3. Hosne Jahan Shetu, Hasan Mahmud Reza, **Murad Hossain***. Effect of Sida cordifolia on Chronic Restraint Stress Induced Depressive Mice Model. Poste presentation in 18th International Congress of International Society for Ethnopharmacology 2018, Organized by Department of of Pharmacy, Faculty of Pharmacy, University of Dhaka, 13-15 January 2018, abstract published (ISE-SFEC 18/P-95)
4. Sanjana Binte Mahbub, Pierce Ritchil, Md. Ashraful Alam, Hasan Mahmud Reza, **Murad Hossain***. Effect of Astaxanthin on chronic restraint stress induced depressive mice. Poster Presentation in 1st International Conference on Genomic, Nanotech & Bioengineering 2017, Organized by School of Health & Life Science, May 15, 2017, abstract published (PTP_019)
5. Kulsum Sultana, Umme Safa Mohsina, Papia Saha, Hasan Mahmud Reza, **Murad Hossain**. Effect of Rice bran oil on Chronic restraint stress induced depressive mice. Poster Presentation in 1st International Conference on Genomic, Nanotech & Bioengineering 2017, Organized by School of Health & Life Science, May 15, 2017, abstract published (PTP_020)
6. Shakil Ahmed, Afsana Ferdous Tania, Noor Jahan Moon, Md. Ashraful Alam, Hasan Mahmud Reza**, Murad Hossain**. Effect of CoenzymeQ10 on Chronic Restraint Stress (CRS) induced depressive mice. Poster Presentation in 1st International Conference on Genomic, Nanotech & Bioengineering 2017, Organized by School of Health & Life Science, May 15, 2017, abstract published (PTP_021)
7. Aysha Akhter, Mr. Al-Mamun, **Murad Hossain**. Appraisal of MTHFRC677T Gene Polymorphism Related to Miscarriage Risk During Pregnancy in Perception of Bangladesh. Poster Presentation in 1st International Conference on Genomic, Nanotech & Bioengineering 2017, Organized by School of Health & Life Science, May 15, 2017, abstract published (GHP_019)
8. Syed Mustyen Quader, **Murad Hossain**, Md Mizanur Rahman, Dr Hasan Mahmud Reza, Dr Md Ashraful Alam. 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, Organized by The Bangladesh Society for Biochemistry and Molecular Biology, December 10, 2016.

9. 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, Organized by The Bangladesh Society for Biochemistry and Molecular Biology, December 10, 2016.
10. **Hossain M,** Safratwich BD, Carvelli L**,** Multiple exposures to AMPH induced desensitization of the dopaminergic system in living animals. Poster presentation in the *Society for Neuroscience 41st Annual Meeting in* Washington DC Convention Center on November from 12 to 16th, 2011, abstract published (444.08/D22).
11. **Hossain M**, Bhuiyan MA and Nagatomo T. Mutagenesis of important amino acid reveals unconventinal homologous internalization of β_1-adrenergic receptor. Oral presentation in the *83rd Annual Meeting of the Japanese Pharmacological Society* in Osaka Grand Cube Convention Center on March 16-18, 2010, abstract published (AS2C-2-3).
12. **Hossain M**, Bhuiyan MA and Nagatomo T. Assessment of binding affinity to 5-HT_{2A} receptor and inverse agonist activity of naftidrofuryl: comparison with those of sarpogrelate. Poster presentation in the *11th OyoYakuri/Pharmacometrics conference* on September 26, 2009 in Niigata University of Pharmacy and Applied Life Sciences.
13. Bhuiyan MA, **Hossain M**, and Nagatomo T. Angiotensin II receptor antagonists induce homologous internalization in constitutively active mutant N111G of AT_1 receptor" Oral presentation in the 60th*Conference of Japanese Pharmacological Society*on September 27, 2009, in Toyama, Japan, abstract published (B-II-1).
14. **Hossain M**, Bhuiyan MA, Aly SAR**,** Shoe S and Nagatomo T. Evaluation of binding and functional potency of naftidrofuryl to human recombinant 5-HT_{2A} receptor: comparison with sarpogrelate. Oral presentation in the *14th Serotonin Conference* on February 7, 2009, in Tokyo, Japan, abstract published (I-1).
15. Bhuiyan MA, **Hossain M**, Aly SAR, Ishiguro M, Miura S-I and Nagatomo T. Assessment of valsartan for binding affinity and functional potency towards angiotensin ii type 1 (AT_1) receptors. Oral presentation in the 59*th Conference of Japanese Pharmacological Society* on September 27, 2008, in Sendai, Japan, abstract published (C-II-5).
16. Muntasir HA, Bhuiyan MA, **Hossain M,** and Nagatomo T. Evaluation of Mechanism of Inverse Agonist Action of Sarpogrelate by Molecular Modeling. Oral presentation in the *13th Serotonin Conference* on February 2, 2008, in Tokyo, Japan, abstract published (I-1).
17. **Hossain M**, Bhuiyan MA and Nagatomo T. Inverse agonism of β-blockers to a novel constitutive active mutant of β_1-adrenergic receptor. Oral presentation in *5th International Symposium on Receptor Mechanisms, Signal Transduction and Drug Effects.* Grandship (Shizuoka Convention and Art Center), Shijuoka, Japan, May 10th –May 11th, 2007 Abstract publish (P22)
18. **Hossain M**, Ahmed M, Ishiguro M and Nagatomo T**.** Beta adrenergic antagonists show inverse agonism to a novel constitutively active mutant of β_1-adremergic receptor**.** Oral presentation in the *50th Japan Pharmaceutical Seminar.* October 14-15, 2006, Niigata, Japan, abstract published (H05)

19. Muntasir HA, Bhuiyan MA, **Hossain M,** Kawakami J, Ishiguro M, Komiyama T and Nagatomo T. Inverse Agonist Activity of several 5-HT_{2A} Receptor Antagonists at the Constitutively Active Human 5-HT_{2A} Receptor. Oral presentation in the *34th Symposium on Structure Activity Relationship.* November 14-15, 2006, Niigata, Japan, full paper and abstract published (KP07).

INDUSTRIAL TRAINING

In plant Training has been completed as a part of my BPharm curriculum in Sanofi Aventis Limited, Multinational pharmaceutical company, arranged by Faculty of Pharmacy of Dhaka University. I observed manufacturing as well as quality control operation of tablets, capsules, injectable (both antibiotic and non-antibiotic), ointment, toiletries and liquid preparations.

ANALYTICAL SKILLS

1. Molecular Techniques

- Isolation of genomic DNA, plasmid, RNA and Protein
- Blotting techniques (Southern, Northern and Western)
- PCR based site- directed mutagenesis
- DNA sequencing,
- PCR and qRT-PCR
- Co-immunoprecipitation
- ELISA

2. Biochemical techniques

- Electrophoresis
- Chromatographic technique
- Colorimetric and enzyme assay

3. Microscopic techniques

- Fluorescence microscopy
- Confocal microscopy

4. Culture techniques

- Bacterial Cell culture
- Plasmid transformation into bacterial cells
- Mammalian cell culture (Isolation and maintaining, passaging and transfection)

5. Behavioral experiments

- Force Swim test
- Tail Suspension test
- Maze tests (Elevated Plus, Radial Arm Maze, Morris Water)
- Social interaction test
- Novel object recognition test

6. ***Animal handling experiences***

- Mice, rat and nematode (*C. elegans)*

7. Computer-Aided Drug Design (CADD) & Bioinformatics

- **Virtual Screening & Molecular Docking:** Proficient in performing structure-based drug design using tools such as AutoDock Vina, MGLTools, PyMOL, and UCSF Chimera.

- **Machine Learning for Drug Discovery:** Experienced in applying Python and R (RStudio) for data-driven approaches in drug design and predictive modeling.

- **Molecular Dynamics Simulation:** Skilled in using GROMACS for molecular dynamics simulations to analyze the stability and behavior of protein-ligand complexes at the atomic level.

JOURNAL EDITOR

- Associate Editor of Pharmaceutical Drug Regulatory Affairs Journal (PDRAJ)

ORGANIZER

- Organizing committee member of 1st International Conference of Genomic, Nanotech, & Biotechnology (ICGNB) in Bangladesh organized by NSU School of Health and Life Sciences. (2017)
- Organizing committee member of 2nd International Conference of Genomic, Nanotech, & Biotechnology (ICGNB) in Bangladesh organized by NSU School of Health and Life Sciences. (2022)