Curriculum Vitae of
Mahbub Hasan, PhD

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PROFESSIONAL EXPERIENCES

Professor (Assistant) (April'2018 - Now)
Dept. of Biochemistry and Molecular Biology
Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Bangladesh.

Post-doc Fellow/Visiting Scientist (Aug'2016 - Aug'2018)
Doping Control Center
Korea Institute of Science and Technology (KIST), Korea.

Graduate Research Fellow (2011- 2016)
Korea Institute of Science and Technology (KIST), Korea.

Research Assistant (2009 - 2010)
Institute of Food and Radiation Biology (IFRB), Bangladesh Atomic Energy Commission

SCHOLASTIC BACKGROUND

Doctor of Philosophy (2011- 2016)
Major: Biological Chemistry (Excellent performance)
Korea Institute of Science and Technology, Republic of Korea.
Thesis title: Neurochemical and genomic studies on experimental autoimmune encephalomyelitis (EAE)-induced obese mice

Master of Science (2009-2010)
Major: Biochemistry & Molecular Biology
Jahangirnagar University, Bangladesh (First Class)

Bachelor of Science with Honors (2004-2008)
Major: Biochemistry & Molecular Biology
Jahangirnagar University, Bangladesh (First Class)

KEY ACCOMPLISHED RESEARCH PROJECTS

1. Biomarkers for exacerbated experimental autoimmune encephalomyelitis (EAE) in obese mice by biochemical and genomic approaches
2. Method validation and approval of blood transfusion (BT) method for doping analysis in PyeongChang Winter Olympic'2018.
3. Method development for routine analysis of gene doping for athletes
4. Doping tests for athletes
5. Discovery of anti-obesity agents against novel therapeutic target
6. Pharmacokinetic study and analysis of tissue neurotransmitter by using HPLC-ECD, etc. Toxicity assessment of quantum-dot Nanoparticles (QD-NP)

MAJOR ACHIEVEMENTS

Research papers

1. **Mahbub Hasan**, Hophil Min, Khandoker Asiqur Rahaman, Anca Raluca Muresan, Hyeyoon Kim, Dohyun Han, Oh-Seung Kwon. Quantitative proteome analysis of brain sub-regions and spinal cord from experimental autoimmune encephalomyelitis mice by TMT-based mass spectrometry. ***Proteomics.*** 2019 Mar;19(5):e1800355. doi: 10.1002/pmic.201800355.
2. **Mahbub Hasan,** Ji-Eun Seo, Khandoker Asiqur Rahaman, Min-Jung Kang, Byung-Hwa Jung, and Oh-Seung Kwon. Increased levels of brain serotonin correlated with MMP-9 activity and IL-4 levels resulted in severe experimental autoimmune encephalomyelitis (EAE) in obese mice. (***Neuroscience****. 2016 Apr 5; 319:168-82*) (SCI, IF = 3.4).
3. Joon-Seung Han, Khandoker Asiqur Rahaman, Ji-Eun Seo, **Mahbub Hasan**, Kyung-Tae Lee, Hophil Min, Kang Mi Lee, Ju-Hyung Park, Ho Jun Kim, Ki Hun Kim, Junghyun Son, Jaeick Lee, Oh-Seung Kwon, Human chorionic gonadotropin (hCG) sub-chronic administration mediated MMP-9 activities and cytokine association deteriorate experimental autoimmune encephalomyelitis (EAE) condition in mice model. ***J Pharm Investig*** *2016 Sep 12; 46(7):375–383*
4. **Mahbub Hasan**, Ji-Eun Seo, Khandoker Asiqur Rahaman, Hophil Min, Ki Hun Kim, Changmin Sung, Junghyun Son, Min-Jung Kang, byung Hwa Jung, Won Sang Park, and Oh-Seung Kwon. Novel genes in brain tissues of EAE-induced normal and obese mice: Upregulation of metal ion-binding protein genes in obese-EAE mice. **(*Neuroscience*** *2016 Dec 10; 343:322-336*) (SCI, IF = 3.23).
5. **J**i-Eun Seo, **Mahbub Hasan,** Khandoker Asiqur Rahaman, Min-Jung Kang, Byung-Hwa Jung, and Oh-Seung Kwon. A leading role for NADPH oxidase in an invitro study of experimental autoimmune encephalomyelitis. (***Mol Immunol****. 2016 Feb 26; 72:19-27*) (SCI, IF = 2.9).
6. Ji-Eun Seo, **Mahbub Hasan**, Joon-Seung Han, Min-Jung Kang, Byung-Hwa Jung, Seung-Ki Kwok, Ho-Youn Kim, Oh-Seung Kwon. Experimental autoimmune encephalomyelitis and age -related correlations of NADPH oxidase, MMP-9, and cell adhesion molecules: The increased disease severity and blood–brain barrier permeability in middle-aged mice. (***J Neuroimmunol****. 2015 Oct 15; 287:43-53*) (SCI, IF = 2.46).
7. Ji-Eun Seo, **Mahbub Hasan**, Joon-Seung Han, Nak-Kyoon Kim, Ji Eun Lee, Kang Mi Lee, Ju-Hyung Park, Ho Jun Kim, Junghyun Son, Jaeick Lee, Oh-Seung Kwon. Dependency of experimental autoimmune encephalomyelitis induction on MOG 35–55 properties modulating matrix metalloproteinase-9 and interleukin-6 (***Neurochemical Research****, 41(4), 666-676)* (SCI, IF = 2.6).
8. Md. Mamunul Haque, Hye- Yeon Im, Ji-Eun Seo, **Mahbub Hasan**, Kyoungja Woo, Oh-Seung Kwon. Effects of folic acid and polyethylene glycol coated quantum dots on toxicity and tissue uptake to precision-cut spleen slices of rats. (***J of Pharmaceutical Investigation*** (2013) 43:375–383).
9. Md. Mamunul Haque, Hye- Yeon Im, Ji-Eun Seo**, Mahbub Hasan**, Kyoungja Woo, Oh-Seung Kwon. Acute Toxicity and Tissue Distribution of CdSe/CdS-MPA Quantum Dots after Repeated Intraperitoneal Injection to Mice. (***J Appl Toxicol****. 2013 Sep;33(9):940-50*) (SCI, IF = 2.98).
10. Md. Mamunul Haque, Hye- Yeon Im, Ji-Eun Seo, **Mahbub Hasan**, Sailendra Nath Sarma, Kyoungja Woo, Oh-Seung Kwon Evaluation of CdSe/CdS-PEG-FA quantum dots: distribution and observable-adverse-effect-level in mice after intravenous injection. (***J of Pharmaceutical Investigation*** *(2012) 42:4: 203-212)*.
11. M. A. Z. Chowdhury, **Mahbub, Hasan**, Nurul Karim, A.N.M. Fakhruddin, Shakaoat Hossain, A.K.M. Alauddin Chowdhury,Hafeza Akter, Khorshed Alam. Contamination and Health Risk Assessment of Pesticide Residues in Vegetables from Agricultural Fields of Gazipur District, Bangladesh. American-**Eurasian J. Agric. & Environ. Sci.** 01/2014; 5(14):421-27.

12. Alamgir Zaman Chowdhury, **Mahbub Hasan**, M. S. Hossain, Md. Baki Billah, Lutfun Nahar, Md. Abdus Salam, Nurul Karim. Determination of pesticide residues from irrigated water in Gazipur district, Bangladesh using High-Performance Liquid Chromatography (HPLC). **Jahagirnagar University Journal of Biological Science** 01/2012.

Oral presentation in symposiums/conferences

1. **Mahbub Hasan**, et al., Quantitative proteome analysis in brain and spinal cord of EAE mice by TMT-based mass spectrometry. The Korean Society of Applied Pharmacology (KSAP), Samsung Hall, Seoul National University, Seoul Oct. 13, 2017.
2. **Mahbub Hasan**, Ji-Eun Seo, et al., Gene Expression Profiles of Experimental Autoimmune Encephalomyelitis in Brain Tissue of Normal and Obese Mice. *Asian Federation for Pharmaceutical Sciences (AFPS), Ramada Plaza Hotel, Jeju, Republic of Korea. Nov 20-22 2013*.
3. **Mahbub Hasan**, Ji-Eun Seo, et al., Increased Matrix Metalloprotease-9 Activity in Diet-Induced Obesity Aggravates Disease State in Mouse Model of Multiple Sclerosis. *3rd University of Science and Technology Conference, Daejeon, the Republic of Korea, November 1-2, 2012; p58.*

Poster presentation (International and first author)

1. **Mahbub Hasan**, Ji-Eun Seo, et al., Significant upregulation of metal ion-binding protein genes in experimental autoimmune encephalomyelitis (EAE)-induced obese mice. *2016 International Conference of Korean Society of Pharmaceutical Science and Technology, The K-Hotel, Seoul, Korea Dec 1-2, 2016 (pBPM 010).*
2. **Mahbub Hasan**, Ji-Eun Seo, et al. Changes of Dopamine and Serotonin Levels In Plasma And Brain of 79 Weeks Old Normal and Diet-Induced Obese Experimental Autoimmune Encephalomyelitis Mice. *55th Annual Meeting, Society of Toxicology, Ernest N. Morial Convention Center, New Orleans, LA, USA, March 13-17, 2016 (P522).*
3. **Mahbub Hasan**, Ji-Eun Seo, et al., Identification of novel genes up-regulated in the brain tissue of experimental autoimmune encephalomyelitis (EAE) mice fed in normal and high fat diet. *International Symposium and Annual meeting of the Korean society of applied biological chemistry, Hueundae Geand Hotel, Busan, Korea. June 19-21, 2014. PBM-109*.
4. **Mahbub Hasan**, Ji-Eun Seo, et al., Effects of Brain 5-HT levels and Plasma MMP-9 Activity on Disease Severity of Experimental Autoimmune Encephalomyelitis in High Fat Diet Induced Obese Mice. *The XIII International Congress of Toxicology, COEX, Seoul, Republic of Korea. June 30- July 4, 2013.*
5. **Mahbub Hasan**, Ji-Eun Seo, et al., Inflammatory changes in high fat diet induced obese mice exacerbate Experimental Autoimmune Encephalomyelitis (EAE). *2012 KSMCB (Korean Society for Molecular and Cellular Biology) Annual Meeting, COEX, Seoul, Republic of Korea. October 10-12, 2012; G5.*
6. **Mahbub Hasan**, Hye-Yeon Im, et al., Screening of anti-obesity drug candidate KPOS0017, a new synthetic 5-HT_{2C} receptor ligand, by acute and two weeks repeated administration to C57BL/6 mice. *2012 Proceedings of International Congress of Korean federation of Pharmaceutical Societies, International Convention Center (ICC), Juju, Republic of Korea. April 19-21, 2012; P2-35.*

Poster presentation (As co-author):

+20 international poster presented in Korea, and USA