Syed A K Shifat Ahmed

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Education

Ulster University, Coleraine, United Kingdom
2017 Ph.D. Faculty of Life and Health Sciences (Biomedical Sciences) "Quorum sensing mediated adaptability, pathogenicity and rhamnolipid production in *Pseudomonas aeruginosa*"
Thesis Advisors: Professor James Dooley and Professor Ibrahim Banat

Ulster University, Coleraine, United Kingdom
2011 M.Sc. Faculty of Life and Health Sciences (Biomedical Sciences) "Detecting the presence and assessing the activity of DNase in *Pseudomonas aeruginosa* clinical isolates from Cystic Fibrosis patients"
Thesis Advisors: Professor James Dooley

University of Calcutta, Kolkata, India
2009 B.Sc. Microbiology (Hons)

Academic School, Dhaka, Bangladesh
2005 A Level Science

Employment Experience

Independent University, Bangladesh (IUB), Bashundhara, Dhaka
School of Life Sciences
Senior Lecturer, Jan 2012 - present

Bangladesh Disaster Preparedness Centre, Dhaka, Bangladesh
Climate Change Cell
Programme Officer, June 2009-July 2010

Academic Appointments

Ulster University, Coleraine, United Kingdom
School of Biomedical Sciences
Teaching Assistant, Jan -June 2017

Research Experience

Ulster University, Coleraine, United Kingdom
School of Biomedical Sciences

- Optimized a RT-qPCR assay following recommended MIQE guidelines for studying the expression levels of quorum sensing regulated genes in *Pseudomonas aeruginosa* under investigative conditions.

- Investigated the effect of plant based natural compounds for their ability to inhibit quorum sensing ability in *Pseudomonas aeruginosa* using RT-qPCR and HPLC-MS.

- Assessed the dynamic behavior exhibited by clinical isolates from Cystic Fibrosis patients for infection establishment and adaptation through *in-vitro* assays, genetic screening and characterization of the temporal production of virulence factors.

- Production of biosurfactant rhamnolipid from bacteria using shake flask culture.

- Chemical characterization of products from a series of *Pseudomonas aeruginosa* mutants.

- Establishing an in-house gene knockout system for Gram-negative bacteria.

Honors/Awards

- Vice-Chancellor Research Scholarship (Ulster University, UK) Oct 2013- Oct 2016.

Publications

Chebbi A., Elshikh M., Haque F., **Ahmed S.**, Dobbin S., Marchant R., Sayadi S., Chamkha M., Banat I. (2017). "Rhamnolipids from *Pseudomonas aeruginosa* strain W10; an antibiofilm/antibiofouling products for metal protection". Journal of Basic Microbiology 57(5): 364-375.

Elshikh M., Funston S., Chebbi A., **Ahmed S**., Marchant R, Banat I. (2017). "Rhamnolipids from non-pathogenic *Burkholderia thailandensis* E264: Physicochemical characterization, antimicrobial and antibiofilm efficacy against oral hygiene related pathogens". New Biotechnology 36: 26-36.

Elshikh M., **Ahmed S.**, Funston S., Marchant R., Banat I. (2016). "Resazurin-based 96-well plate microdilution method for the determination of minimum inhibitory concentration of biosurfactants". Biotechnology Letter 38(6): 1015-1019.

Ahmed S., Dooley J., Deb S., Talukder D., Hossain S., Anwar A. (2013). "*Pseudomonas aeruginosa* infection in Cystic Fibrosis patients: mini-review". Journal of Dhaka Medical College. 22(1): 77-86.

Conference Papers and Presentations

Ahmed S, Dooley J, Banat I and Rudden M. "Attenuation in quorum sensing behaviour of *Pseudomonas aeruginosa* using plant compounds." Creating Healthier Communities and Environments. Coleraine, United Kingdom, June 2017.

Ahmed S, Dooley J, Banat I and Rudden M. "Targeting quorum sensing in *Pseudomonas aeruginosa* with natural compounds. An alternative to antibiotics?" Microbiology Society Annual Conference, Edinburgh, United Kingdom, April 2017.

Ahmed S, Rudden M, Banat I and Dooley J. "Presence of quorum sensing deficient *Pseudomonas aeruginosa* isolates in patients with Cystic Fibrosis" SGM Focused Meeting 2016- Irish Division, Dublin, Ireland, June 2016.