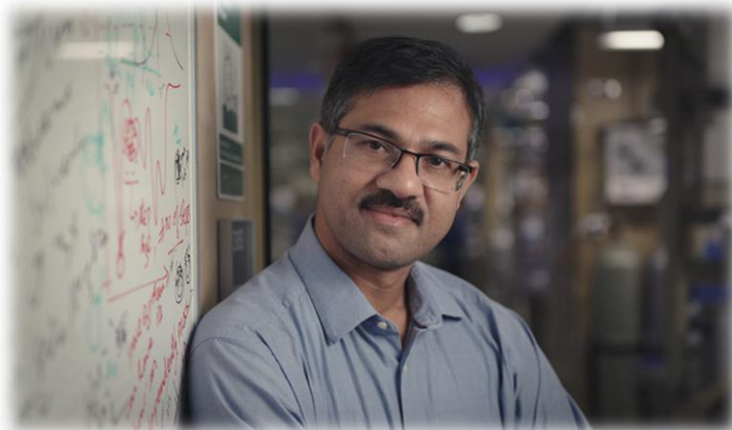


Protein and Small Molecule Engineering towards an Orthogonal Epigenetic

Prof. Kabirul Islam

Department of Chemistry

University of Pittsburgh



**Chemistry
Seminar on
epigenetics**

4:00 p.m.

Monday

April 26

Via Zoom

Please contact
Dr. Amitava
Choudhury at
choudhurya@mst.edu
for the zoom link.

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Abstract: Epigenetics is a set of nucleosome-dependent biochemical processes that regulate transcriptional potential of genome and allows cells to access genetic information. Cells employ a range of epigenetic mechanisms, most prominent being the chemical modifications of DNA and histones to alter gene expression. Elucidation of how chromatin-modifying proteins remodel diploid human genome with exquisite spatiotemporal control is fundamentally important towards the understanding of eukaryotic biology and disease. Since starting at the University of Pittsburgh in 2014, my group has built the foundation of a vibrant research program guided by this question. We employ a range of small molecules, peptides, proteins, nucleotides and their unnatural analogues towards functional elucidation of chromatin modifications in transcription and nuclear reprogramming. Our interdisciplinary research spans synthetic organic chemistry, protein and oligonucleotide engineering, mechanistic biochemistry, cell and structural biology, proteomics and transcriptomics.

About the speaker: Prof. Kabirul Islam received his doctoral training in organic synthesis under the guidance of Prof. Goverdhan Mehta at the Indian Institute of Science. Subsequently, he was trained in chemical biology in the laboratories of Prof. Tarun Kapoor at Rockefeller University and Prof. Minkui Luo at Memorial Sloan-Kettering Cancer Center before joining the Faculty of the University of Pittsburgh in the Department of Chemistry. His current research explores chemical approaches towards understanding epigenetic mechanisms in human biology and disease.

Further details of Prof. Islam's research can be found in the following link:

<https://www.chem.pitt.edu/person/kabirul-islam>