



Hyuk Kyu Seoh, Research Scientist and Adjunct Professor, Department of Biology.

Hyuk Kyu Seoh, Ph.D., is a Research Scientist and Adjunct Professor at the Proteomic Core Facility within the Biology Department of Georgia State University. He received his BSPH from Yeungnam University, College of Pharmacy and his Ph.D. in Microbiology and Molecular Biology from Georgia State University. He also completed a Postdoctoral Fellowship in Molecular Biology and Microbiology at Tufts University, School of Medicine.

Dr. Seoh's research interests focus on understanding the molecular mechanisms of protein secretion and export across membranes in bacteria. He works jointly with Dr. Tai as co-principal investigator, and their laboratory utilizes genetic manipulation and biochemical studies to analyze the functions of SecA and other Sec proteins in the protein export process.

Specifically, their laboratory aims to understand the translocation of periplasmic and outer membrane proteins in *Escherichia coli*, using an *in vitro* protein translocation system developed in their laboratory. Dr. Seoh's recent work suggests that SecE/SecY, forming a protein conducting channel, are not obligatory for translocation of certain precursor proteins. Moreover, SecA performs an important structural role in protein translocation in addition to being a major component of essential ATPase.

Dr. Seoh's current work focuses on examining the structure and function(s) of SecA as an integral protein-conducting channel and determining the roles of SecYEG in the process. Through his research, he seeks to contribute to the understanding of protein secretion and export in bacteria, with potential implications for the development of new therapies and treatments.