

MinGyu Choi

B.S. Student in Department of Chemistry
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Interests	Chemical Biology; Systems Biology; Computational Biology <ul style="list-style-type: none">• Biochemical analysis of diverse biomolecules and their interactions as a system• Computational approach decoding biological information of byzantine biological mechanisms
Education	B.S. Student Majoring in Chemistry, Minor in Computer Science & Engineering Seoul National University Mar. 2016 – Present Seoul, Korea
Research Experience	Laboratory of Protometabolism and Prebiotic Chemistry, University College London Jul. 2019 – Aug. 2019 London, UK <ul style="list-style-type: none">• Adviser : Dr. Matthew Powner• SNU-UCL Undergraduate Research Exchange Program• Ring-Opening of Thiolactones and Synthesis of Homocystamine in Prebiotic Conditions. Stimuli-Responsive Chemical Systems Lab, Seoul National University Feb. 2019 – Jul. 2019 Seoul, Korea <ul style="list-style-type: none">• Adviser : Dr. Dongwhan Lee• Undergraduate Internship Program, Department of Chemistry• Synthesis of Perpendicular Directed Molecular Building Block. Laboratory of Proteolytic Systems, Seoul National University Sep. 2017 – Jun. 2018 Seoul, Korea <ul style="list-style-type: none">• Adviser : Dr. Seokhee Kim• Undergraduate Internship Program, Department of Chemistry• Characterization and Engineering of Novel Omega-Ester Containing Peptides.
Publication	Hyunbin Lee, Mingyu Choi , Jung-un Park, Heejin Roh, Seokhee Kim. “Genome Mining Reveals High Topological Diversity of ω -Ester-Containing Peptides and Divergent Evolution of ATP-Grasp Macrocyclases” <i>J. Am. Chem. Soc.</i> 142 , 3013–3023 (2020)
Conference Presentations	Developing a Geometrically Perpendicular Organic ‘Turn’ Motif Jun. 2019 Seoul, Korea Seoul National University Undergraduate Research Symposium Cross-Reactivity of Microviridin-like RiPPs and Generation of Multi-Cyclic Peptides Jun. 2018 Seoul, Korea Seoul National University Undergraduate Research Symposium Discovery and Characterization of Novel Microviridin-like RiPPs Dec. 2017 Seoul, Korea Seoul National University Undergraduate Research Symposium

Honors and Awards

Korea Presidential Science Scholarship | Korea Student Aid Foundation , 2016 – 2019
Undergraduate Research Award: 1st place | Department of Chemistry, Seoul National University, 2019
Scholarship for International Undergraduate Internship | Department of Chemistry, Seoul National University, 2019
Dean's List | College of Natural Sciences at Seoul National University, 2017 – 2018
Undergraduate Research Award: 2nd place | Department of Chemistry, Seoul National University, 2018
Samsung HumanTech Paper Award: Silver Prize | Samsung Electronics, Field of Environment/Food/Hygiene, 2015

Extracurricular Activities

Military Service
Sep. 2019 – Apr. 2021 | Republic of Korea Air Force, 35th Flight Group.

Teaching Assistant
2017–2019 | General Chemistry, Seoul National University

Honors Society
2017–2018 | GLEAP, Honors Society of Department of Natural Science, Seoul National University.

Academic Exchange Program
Jan. 2019 | Global exchange program with National University of Singapore, SPS.
Feb. 2018 | Global exchange program with Tokyo Institute of Technology, SAGE
Mar. 2017 – Feb. 2018 | Scientific Exchange Program Adviser for Exchange Program with Honors Societies of KAIST (KPF) and Seoul National University department of engineering (STEM)

Skills

Software Languages
C, JAVA, Assembly Language

Biochemical Techniques
Cloning, Protein Expression and Purification

Organic Synthesis
Textbook Basic Organic Synthesis, Pd–Coupling RXNs

Analytical Equipments
HPLC, MALDI–TOF, NMR(including HSQC, HMBC), Fluorescence(for both Enzymes and Small molecules)
Small molecule Crystalization and X-ray Crystallography