

HANNAH CHUNG

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Research Interests

During undergraduate years, I have acquired essential skills for investigating biological processes at molecular level through biophysical/chemical techniques and learned how to control organic molecules and polymeric products through chemical synthesis. Current research interests include **genomic/protein engineering, biophysical research on novel biological mechanisms and design/synthesis of biochemical tools.**

Education

2016- **Seoul National University**, College of Natural Sciences, Seoul, South Korea
B.S. in Chemistry
Foreign study at King's College London (2018 summer)

Research Experience

Mar2020-	Undergraduate Research, Department of Chemistry, Seoul National University Laboratory of Proteolytic Systems, Advisor: Seokhee Kim - Genome mining of peptidyl N-methyltransferase for the modular biosynthesis of N-methylated peptide - Characterization of N-methylated peptide using heterologous expression and examination of its leader core motif using alanine scanning	Seoul, Republic of Korea
Sep2019-Dec2019	Undergraduate Research, Department of Chemistry, Seoul National University Functional Organic Material Lab, Advisor: Tae-Lim Choi - Synthesis of fluorene monomer and cyclopolymerization with Grubbs 3 rd catalyst - Characterization of conjugated homopolymer structure by controlling conditions such as concentration, temperature, and co-solvent	Seoul, Republic of Korea
Jun2019-Aug2019	Visiting Summer Researcher, Department of Chemistry, University College London Molecular Bionics Lab, Advisor: Giuseppe Battaglia - Research on the association of LRP-1 and syndapin-2 on brain endothelium and tubular structures formed using immunofluorescence microscopy and proximity ligation assay	London, United Kingdom
Sep2018-Dec2018	Undergraduate Research, Department of Chemistry, Seoul National University Single-Molecule & Cell Dynamics Lab, Advisor: Nam Ki Lee - Demonstration of transcription-translation coupling by simultaneous DNA/mRNA imaging with super-resolution microscopy - Identification of localization and dynamics of DNA & mRNA crucial for understanding gene expression mechanism in bacteria	Seoul, Republic of Korea

Honors & Awards

- 2019 **Outstanding Undergraduate Research 3rd place**, Department of Chemistry, Seoul National University
- 2018/2020 **Work-study Scholarship**, Department of Chemistry, Seoul National University
- 2018 **Outstanding Undergraduate Research 2nd place**, Department of Chemistry, Seoul National University

Conference Presentations

- [1] “Investigation of Self-Assembled 2D Parallelogram Nanosheets of Conjugated Homopolymers”, Seoul National University Undergraduate Research Symposium, Seoul, South Korea, 2019 [Poster]
- [2] “Investigation of Transcription-Translation Coupling in *Escherichia coli* Using Super-Resolution Microscopy”, Seoul National University Undergraduate Research Symposium, Seoul, South Korea, 2019 [Poster]

Work/Teaching Experience

Research Investigator. *JL Medilabs. Seoul, Republic of Korea 2021*

Validated and selected protein cancer biomarkers for serum diagnosis kit

Dream Camp Mentoring. *High school of Gwang-ju, Republic of Korea 2017*

Organized mentoring program about designing roadmap for one's dream for high school students in countryside

SNU Science Volunteering Camp Tutoring. *Yeongdeok, Republic of Korea. 2016*

Conducted interesting scientific experiments for elementary school students and self-planned mentoring for high school students in underprivileged areas in Korea

Extracurricular Activities

- Mar2018-Aug2019 *Student Ambassador.* Seoul National University Student Ambassador
- Mar2018-Feb2019 *Council Member.* Photography club of Seoul National University.
- Jul2018-Oct2018 *President.* Student Council of Department of Chemistry at Seoul National University
- Oct2017-Jun2018 *Vice-President.* Student Council of Department of Chemistry at SNU

Skills

Lab techniques:

- *Biochemistry:* Cell culture/Cloning, Protein expression and purification, SDS-PAGE/Western blot
- *Organic & Polymer chemistry:* Textbook organic synthesis, Polymerization techniques using Grubbs catalyst
- *Analytical Techniques:* HPLC, Proximity ligation assay(PLA), MALDI-TOF, Super-resolution microscopy, Immunofluorescence microscopy, NMR spectroscopy & analysis, TEM imaging, Size-exclusion chromatography(SEC), UV-Vis spectroscopy

Languages: Korean(native), English(fluent), French(basic)