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EDUCATION

POHANG UNIVERSITY OF SCIENCE AND TECHNOLOGY (POSTECH) **Ph.D.**
Molecular and Life Sciences; Cellular Systems Biology – Pohang, Korea *2007–2013*
Advisor: Inhwan Hwang
Thesis title: Studies on the protein targeting mechanism of mitochondrial matrix proteins

POHANG UNIVERSITY OF SCIENCE AND TECHNOLOGY (POSTECH) **B.S.**
Life Sciences – Pohang, Korea *2003–2007*

RESEARCH EXPERIENCES

TOMOCUBE Inc.
Chief Scientist *2017-present*
Application / Research & Business Development
Label-free 3D/4D holotomography of living cells

National Forensic Service, Republic of Korea
Research Scientist *2014-2017*
Research Planning & Coordinate Division / Forensic DNA Division
Forensic Science R&D strategy, planning & budget allocation
DNA profiling, STR analysis for human identification

Pohang University of Science and Technology
Postdoctoral Researcher *2013-2014*
Supervisor: Inhwan Hwang – Cellular Systems Biology
Evolution of protein targeting signals to endosymbiotic organelles, Early events of mitochondrial and chloroplast protein targeting

Plant Energy Centre, University of Western Australia
Visiting Graduate Student Researcher *2011*
Advisor: James Whelan – Plant Energy Metabolism
In vitro import of protein precursors to *Arabiodopsis* mitochondria

Pohang University of Science and Technology
Undergraduate / Graduate Student Research Assistant *2006-2013*
Advisor: Inhwan Hwang – Cellular Systems Biology, Plant Molecular and Cell Biology
Analysis of mitochondrial and chloroplasts protein targeting signals, Protein trafficking mechanism, Molecular and Cell biology

Pohang University of Science and Technology
Undergraduate Student Research Assistant *2004-2005*
Advisor: Yong Song Gho – Cancer Biology
Screening and identification of natural compound inducing VEGF signaling during angiogenesis

PUBLICATIONS

1. 전병원, 정종근, 박희연, 김미정, **이수민**, 남윤형, 김나연, 선설희, 이해용, 박선희, 서영일. (2015) 오래 경과된 혈흔에서의 DNA 프로필 분석. 한국법과학회지 16(1), 59-62

2. 정종근, 김미정, 박희연, **이수민**, 신상철, 전병원, 임시근 (2014) 미량 디엔에이 증거물 채취를 위한 나노필라멘트섬유의 효용성. 15(1), 48-53

3. Moon D, Im DJ, **Lee S**, and Kang IS. (2014) A novel approach for drop-on-demand and particle encapsulation based on liquid bridge breakup, ***Experimental Thermal and Fluid Science*** 53, 251-258.

4. **Lee S**, Lee DW, Yoo YJ, Duncan O, Oh Y, Lee YJ, Lee G, Whelan J and Hwang I. (2012) Mitochondrial Targeting of the *Arabidopsis* F1-ATPase γ-Subunit via Multiple Compensatory and Synergistic Presequence Motifs. ***Plant Cell*** 24, 5037-5057.

5. Lee J, Lee H, Kim J, **Lee S**, Kim DH, Kim S, and Hwang I. (2011) Both the Hydrophobicity and a Positively Charged Region Flanking the C-Terminal Region of the Transmembrane Domain of Signal-Anchored Proteins Play Critical Roles in Determining Their Targeting Specificity to the Endoplasmic Reticulum or Endosymbiotic Organelles in *Arabidopsis* Cells. ***Plant Cell*** 23, 1588-1607.

6. Lee S, Lee DW, Lee Y, Mayer U, Stierhof YD, **Lee S**, Jürgens G, and Hwang I. (2009) Heat Shock Protein Cognate 70-4 and an E3 Ubiquitin Ligase, CHIP, Mediate Plastid-Destined Precursor Degradation through the Ubiquitin-26S Proteasome System in *Arabidopsis*. ***Plant Cell*** 21, 3984-4001.

7. Lee DW, **Lee S**, Oh YJ, and Hwang I. (2009) Multiple Sequence Motifs in the RbcS Transit Peptide Independently Contribute to Toc159-dependent Import of Proteins into Chloroplasts. ***Plant Physiology*** 151, 129-141.

8. Lee DW*, Kim JK*, **Lee S**, Choi S, Kim S, and Hwang I. (2008) *Arabidopsis* Nuclear-Encoded Plastid Transit Peptides Contain Multiple Sequence Subgroups with Distinctive Chloroplast-Targeting Sequence Motifs. ***Plant Cell*** 20, 1603-1622.

HONORS AND FELLOWSHIPS

The National Junior Research Fellowship
Ministry of Education, Science & Technology, Korea. *2010-2013*

Best Doctoral Thesis Award
Division of Molecular and Life Sciences, POSTECH, Pohang, Korea. *2013*

Undergraduate Research Grant
Pohang University of Science and Technology, Pohang, Korea *2006*

Undergraduate Research Grant
Ministry of Education & Human Resources Development, Korea. *2004-2005*

Full Scholarship
Pohang University of Science and Technology, Pohang, Korea. *2003-2007*

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