

Gözde Sultan Demirer

2227 Parker St, Berkeley, CA 94704
gdemirer@berkeley.edu · (510) 944-6168

EDUCATION

University of California Berkeley , Berkeley, CA Ph.D. Candidate, Chemical and Biomolecular Engineering Ph.D. Advisor: Markita P. Landry, GPA 3.94/4.00	2015-Present
Koc University , Istanbul, Turkey B.S. Chemical and Biological Engineering B.S. Advisor: Yaman Arkun, GPA 4.10/4.30	2010-2015
University of Pennsylvania , Philadelphia, PA Semester Abroad, Chemical and Biomolecular Engineering GPA 3.50/4.00	Spring 2014
Stanford University , Palo Alto, CA Summer Session, Human Physiology and Advanced Linear Algebra GPA 4.00/4.00	Summer 2013

HONORS AND AWARDS

• Schlumberger Foundation, Faculty for the Future Fellowship	2016-Present
• Eltoukhy East-West Gateway Fellowship	2015-2016
• B.S. Valedictorian, Top Ranking Student Award College of Engineering, Koc University	2015
• Academic Achievement Award, Koc University	2015
• Best Senior Project Award Project title: Biodiesel Production from Microalgae using CO ₂	2015
• Stanford Summer International Honors Award	2013
• Vehbi Koc Scholar for Excellence in Academics	2012-2015
• 1 st place in Life Sciences Research Project Competition Project title: Analysis of the effects of mercury and temperature on the protein and cholesterol levels of earthworms	2010

PUBLICATIONS

6. **Demirer, G.S.**, Chang R., Zhang H., Chio L., Landry, M.P. High Aspect Ratio Nanomaterials Enable Biomolecule Delivery and Transgene Expression or Silencing in Mature Plants, submitted (2017).
5. **Demirer, G.S.**, Landry, M.P. Delivering Genes to Plants. *AIChE SBE* (2017).
4. Del Bonis, J. T., Beyene, A. G., Chio, L., **Demirer, G. S.**, Yang, D., Landry, M.P. Engineering Molecular Recognition with Bio-mimetic Polymers on Single Walled Carbon Nanotubes. *JOVE* (2017).
3. **Demirer, G.S.**, Beyene, A.G., and Landry, M.P. Nanoparticle-templated molecular recognition platforms for detection of biological analytes. *Curr. Protoc. Chem. Biol.* 8:197-223 (2016).
2. **Demirer, G.S.**, Okur, A.C., and Kizilel S.S. Synthesis and Design of Biologically Inspired Biocompatible Iron Oxide Nanoparticles for Biomedical Applications. *Journal of Materials Chemistry B*, (2015).

1. Nazli C., **Demirer G.S.**, Yar Y., Acar H.Y., Kizilel S.S. Targeted Delivery of Doxorubicin into Tumor Cells via MMP-sensitive PEG Hydrogel Coated Magnetic Iron Oxide Nanoparticles, *Colloids and Surfaces B: Biointerfaces*, (2014).

PATENTS

1. **Demirer, G.S.**, Landry, M.P. Mature Plant Transfection Using Carbon Nanotubes. *Patent submitted (2017)*.

PRESENTATIONS

6. **Demirer G.S.** and Landry M.P., Nanoparticle-Guided Biomolecule Delivery for Transgene Expression and Gene Silencing in Mature Plants. *AICHE 2017 Annual Meeting*, Bionanotechnology Graduate Student Award Session and Bionanotechnology for Gene and Drug Delivery II, Minneapolis, MN, October 2017.
5. **Demirer G.S.** and Landry M.P., High Aspect Ratio Nanomaterials as Biomolecule Delivery Tools for Plant Systems, *Innovative Genomics Institute (IGI) Open House*, Berkeley, October 2017.
4. **Demirer G.S.**, Yang D., Pinals R., Chio L., Landry M.P., The Power of Near Infrared Light to Probe Complex Biological Systems, *Chan-Zuckerberg Biohub Interlab Confab*, San Francisco, CA, August 2017.
3. **Demirer G.S.** and Landry M.P., Carbon Nanotubes as Biomolecular Cargo Transporters in Plants, *SEED 2017*, Genetic Engineering Tools, Vancouver, Canada, June 2017.
2. **Demirer G.S.** and Landry M.P., Nanoparticles as Biomolecular Cargo Transporters in Plants and Plastids. *ICPSBB 2016*, Plant Genome Editing, Miami, FL, December 2016.
1. **Demirer G.S.** and Landry M.P., Nanoparticles as Biomolecular Cargo Transporters in Plant Systems. *AICHE 2016 Annual Meeting*, Nanoscale Science and Engineering, San Francisco, CA, November 2016.

RESEARCH EXPERIENCE

University of California Berkeley, Landry Lab

2015-Present

Graduate Student Researcher

- Carbon nanotube functionalization and characterization
- Biomolecule loading onto nanomaterials
- Biomolecule delivery into plants cells and subcellular locations using nanomaterials
- Nanomaterial-mediated gene expression and silencing in plants for agricultural engineering

Koç University, Kizilel Lab

2011-2015

Undergraduate Student Researcher

- Researched targeted delivery of doxorubicin into tumor cells via MMP-sensitive PEG hydrogel coated magnetic iron oxide nanoparticles

University of Pennsylvania, Tsourkas Lab

Spring 2014

Visiting Researcher

- Studied superparamagnetic iron oxide nanoparticles (SPIONs) for contrast-enhanced magnetic resonance imaging

Organik Kimya, Istanbul

Summer 2014

Intern at Production Management

- Learned flow-sheeting process
- Conducted mass and energy balance calculations for polystyrene emulsion production

Ashland Inc. Specialty Chemical Company, Istanbul

Summer 2013

Intern at Pharmaceutical Laboratory

- Conducted powder and tablet analyses
- Assisted to tablet coating process

TEACHING AND MENTORING EXPERIENCE

UC Berkeley, Research Mentor

2016-Present

- Roger Chang, Chemical and Biomolecular Engineering Undergraduate
- Arismel Tena, Chemistry Undergraduate

Bay Area Scientists in Schools, Team Leader and Volunteer Teacher

2016-Present

- Teaching hands-on science and engineering classes in Bay Area public elementary schools

UC Berkeley, Graduate Student Instructor

- Nanoscience and Engineering Biotechnology
- Chemical Engineering Thermodynamics

Fall 2017

Spring 2016

Koç University AIChE Student Chapter

2012-2015

Member and Representative of Juniors

- Mentored chemical and biological engineering juniors
- Organized study sessions and breaks
- Introduced safety and warnings sheets to many laboratories

Koç University Education Group, Volunteer Teacher

2011-2012

- Tutored and mentored underprivileged middle school children to improve their math and science skills and academic performance in general

Koç University Community Volunteers Foundation

2010-2011

Team Leader and Member

- Made agreements with bakeries to provide underprivileged people free bread, and controlled the general flow of the project during one year.
- Gave training to primary school students about environment and recycling. Was in contact with the municipalities to provide recycling bins to the schools.

SKILLS

Languages English (Fluent), Spanish (Advanced), Turkish (Fluent), German (Beginner)

Computer MATLAB, Adobe Photoshop and Illustrator, Aspen, MS Office Programs

Interest Teaching, Traveling, Latin and Spanish Culture, Dancing, Swimming