Education

University of Michigan – Ann Arbor, MI Dec. 2014

B. S. with High Distinction and High Honors in Cellular and Molecular Biology, Science GPA – 3.98

Honors Thesis: “Characterization of the Vitamin B12 Trafficking Proteins, CblC and CblD”

College for Creative Studies – Detroit, MI Dec. 2008

B. F. A. Honors in Industrial Design

Research Experience

Predoctoral Trainee - Schloss Lab, University of Michigan, Ann Arbor, MI May 2016 – Present

* NEW INFO

Predoctoral Rotation - Chen Lab, University of Michigan, Ann Arbor, MI Jan. 2015 – Apr. 2015

* NEW INFO

Predoctoral Rotation - Schmidt Lab, University of Michigan, Ann Arbor, MI Sept. 2015 – Dec. 2015

* NEW INFO

Predoctoral Rotation - Schloss Lab, University of Michigan, Ann Arbor, MI July 2015 – Aug. 2015

* NEW INFO

Research Assistant - Banerjee Lab, University of Michigan, Ann Arbor, MI Sept. 2012 – July 2015

* + Studied *Caenorhabditis elegans* CblC and CblD, intracellular B12 trafficking proteins that are orthologous to the human CblC and CblD, to elucidate their roles in human B12 disorders
  + Developed optimal expression protocols for *C. elegans* proteins in *Escherichia coli*
  + Characterized *C. elegans* CblC activity with B12 derivatives under aerobic and anaerobic conditions
  + Investigated *C. elegans* CblD expression conditions and its interaction with CblC
  + Presented research regularly to peers and attended research presentations

Publications

Li, Z., Lesniak, N. A., Banerjee, R. 2014. Unusual Aerobic Stabilization of Cob(I)alamin by a B12-Trafficking Protein Allows Chemoenzymatic Synthesis of Organocobalamins. *J Am Chem Soc* 136(46): 16108-16111. PMID: 25369151

Li, Z., Gherasim, C., Lesniak, N. A., Banerjee, R. 2014. Glutathione-dependent One-electron Transfer Reactions Catalyzed by a B12 Trafficking Protein. *J Biol Chem* 289(23): 16487-97. PMID: 24742678

Laboratory Techniques

qPCR

Plasmid Extraction

Anaerobic Protein Purification

ITC

Western Blot

Ni-NTA Protein Purification

Gel Filtration Chromatography

Native Gel Electrophoresis

Pull-down Assay

UV-visible Spectroscopy

ELISA

HPLC

Gas Chromatography

R

mothur

Anaerobic cultivation

Flow cytometry

ADD TECHNIQUES

Work Experience

Design Engineer – Henniges Automotive - General Motors, Warren, MI July 2010 – Aug. 2012

* + Designed door seals for 2015 GM vehicles through computer-aided design, finite element analysis, architectural prototypes, vehicle simulation and manufacturing feedback
  + Developed a design to pass and exceed performance requirements within manufacturing limits, which was previously eliminated from project due to failed performance and manufacturing constraints
  + Created a data tracker to maintain organization of parts and communication amongst departments, which were designing interacting parts used on seven different concurrently-designed vehicles
  + Coordinated with resources in Mexico, Germany, and India to develop international production parts
  + Improved product development efficiency through parametric CAD programing
  + Met all 15 project deadlines over 18 months

Honors and Awards

2015 Benard Maas Fellowship, University of Michigan, Ann Arbor, MI

2014 B.S. awarded with High Distinction and High Honors, University of Michigan, Ann Arbor, MI

2012-2014 Dean’s List, University of Michigan, Ann Arbor, MI

2012 Gripman Alumni Scholarship, University of Michigan, Ann Arbor, MI

2008 Faculty Select Design Award, College for Creative Studies, Detroit, MI

2008 B.F.A. awarded with Honors, College for Creative Studies, Detroit, MI

2007 Nike Design Team Award, College for Creative Studies, Detroit, MI

2006 - 2008 Dean’s List, College for Creative Studies, Detroit, MI

2005 - 2008 College for Creative Studies Scholarship, College for Creative Studies, Detroit, MI

2005 - 2008 College for Creative Studies Tuition Grant, College for Creative Studies, Detroit, MI