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CURRICULUM VITAE

EDUCATION

2016 – Present Ph.D. Graduate Program, Microbiology, The University of Georgia, Athens, GA
- Advisor: Dr. Diana Downs
- GPA: In progress

2012 – 2015 B.S., Biological Science, San José State University, San José, CA
- Concentration in Microbiology. Minor in Chemistry
- GPA: 3.96

2009 – 2012 A.S., Biological Science, Mission College, Santa Clara, CA
- GPA: 4.00

RESEARCH EXPERIENCE

2016 – Present **Graduate Research Assistant**
Department of Microbiology, The University of Georgia, Athens, GA
Advisor: Dr. Diana Downs
- Project title: Investigation into the role of YggS in pyridoxal 5'-phosphate homeostasis in *Salmonella enterica* serovar Typhimurium LT2

2013 – 2016 **Undergraduate Research Assistant**
Department of Biological Sciences, San José State University, San José, CA
Advisor: Dr. Elizabeth Skovran
- Studied metabolism and physiology using systems biology and classical genetic and biochemical approaches
- Engineered *Methylobacterium extorquens* AM1 as a biosensor of lanthanides and to recover lanthanides from discarded electronics
- Designed transcriptional and translational fusion, expression and suicide vectors for use in *M. extorquens*
- Established and optimized new laboratory protocols including recombination cloning, transposon mutagenesis, PCR, methanol dehydrogenase enzyme assay, and microscale thermophoresis
- Trained students on media preparation, cloning procedures, transposon mutagenesis, growth curve analyses and transcriptional fusion assays
- Oversaw and aided fellow researchers in four projects

RESEARCH INTERESTS

- Bacterial genetics, physiology and metabolism

- Synthetic biology and bioengineering

PUBLICATIONS

1. Martinez-Gomez NC, **Vu HN**, Skovran E. 2016. Lanthanide Chemistry: From Coordination in Chemical Complexes Shaping Our Technology to Coordination in Enzymes Shaping Bacterial Metabolism. *Inorganic Chemistry*. *55*(20), 10083-10089.
2. Good NM, **Vu HN**, Suriano CJ, Subuyuj GA, Skovran E, Martinez-Gomez NC. 2016. Pyrroloquinoline Quinone-Containing Ethanol Dehydrogenase in *Methylobacterium extorquens* AM1 Extends Lanthanide-Dependent Metabolism to Multi-Carbon Substrates. *Journal of Bacteriology. 198*(22), 3109-3118.
3. **Vu HN**, Subuyuj GA, Vijayakumar S, Good NM, Martinez-Gomez NC, Skovran E. 2016. Lanthanide-Dependent Regulation of Methanol Oxidation Systems in *Methylobacterium extorquens* AM1 and Their Contribution to Methanol Growth. *Journal of Bacteriology. 198*(8): 1250-1259.

POSTERS

1. **Vu HN**, Subuyuj GA, Vijayakumar S, Skovran E. Characterization of Lanthanum-Dependent Methylotrophic Growth in *Methylobacterium extorquens* AM1. 27th Annual CSU Biotechnology Symposium CSUPERB Conference, Santa Clara, CA, January 2015.
2. **Vu HN**, Vijayakumar S, Skovran E. Lanthanum Differentially Regulates Expression of Methanol Dehydrogenase Genes during Methylotrophic Growth in *Methylobacterium extorquens* AM1. Gordon Research Conference: Molecular Basis of Microbial One-Carbon Metabolism, South Hadley, MA, August 2014.

HONORS and AWARDS

2014 – 2015	Jim Brown Student Support Award, San José State University
2014	California State University Program for Education and Research in Biotechnology (CSUPERB) Travel Grant
2014 – 2015	Dean's Scholar, San José State University
2013 – 2014	President's Scholar, San José State University
2011	American Mathematical Association of Two-Year College (AMATYC) Scholarship, Mission College
2009 – 2012	Dean's List, Mission College

TEACHING EXPERIENCE

2014 – 2015 **Instructional Student Assistant**
Department of Biological Sciences, San José State University, San José, CA

- Assisted in a general microbiology lecture and laboratory course
- Gave a lecture on Restriction Fragment Length Polymorphism Analysis
- Graded exams and notebooks

2010 – 2013 **Tutor**
Academic Support Center, Mission College, Santa Clara, CA
- Participated in one-on-one and group tutoring in Biology, Chemistry, Math and English as a Second Language
- Clarified concepts and discussed problem-solving strategies to students
- Assisted students in online practice activities

EXTRACURRICULAR ACTIVITIES

2014 – Present **Volunteer**, Bio-Link Depot, Cupertino, CA
- Provide knowledge on scientific instruments
- Organize laboratory equipment and supplies for school donations

2012 – 2013 **Volunteer**, BioCurious Community Laboratory, Sunnyvale, CA
- Introduced visitors to BioCurious
- Provided information regarding weekly events
- Assisted in workshops as needed

2011 **Saint Squad**, Associate Student Body, Mission College, Santa Clara, CA
- Assisted in event organization and promotion

REFERENCES

1. **Dr. Diana Downs**, Professor, The University of Georgia, Athens, GA
   Email: dmdowns@uga.edu
2. **Dr. Jorge Escalante**, Professor, The University of Georgia, Athens, GA
   Email: jcescala@uga.edu
3. **Dr. Elizabeth Skovran**, Assistant Professor, San José State University, San José, CA
   Email: elizabeth.skovran@sjsu.edu