Gordon Luu

gluu2@uic.edu

Education

University of Illinois at Chicago — Aug 2018 – Present
Graduate Student in Pharmacognosy
Advisor: Dr. Laura Sanchez

San Francisco State University — Aug 2013 – May 2018
Bachelor of Science in Microbiology
Minor in Chemistry
Graduated *cum laude*

Research Experience

Graduate Student Researcher — Mar 2019 – Present
University of Illinois at Chicago

- The goal of my thesis work is to analyze the secondary metabolites facilitating complex community interactions derived from the cheese rind microbiome using mass spectrometry-based untargeted metabolomics. The overall goal of the project is two-fold 1) to determine their ecological roles, and 2) identify potential dietary health benefits.

Undergraduate Research Assistant — Apr 2016 – Jul 2018
San Francisco State University
Advisor: Dr. Taro Amagata

- I generated and screened a chemical extract library from Actinomycetes to prioritize strains producing unknown cytotoxic secondary metabolites requiring isolation and structure elucidation for discovery of novel anti-cancer therapeutics.

Awards

University of Illinois at Chicago

- NCCIH T32 Training Grant — January 2020
- Northeastern University May Institute Travel Fellowship — May 2019

San Francisco State University

- SFSU COSE 20th Annual Student Showcase — May 2018
  - Poster Section UL 3rd Place

Publications

1. Cleary, J.L., **Luu, G.T.**, Pierce, E.C., Dutton, R.J., Sanchez, L.M. (2019). BLANKA: an Algorithm for Blank Subtraction in Mass Spectrometry of Complex Biological Samples. *Journal of The American Society for Mass Spectrometry*. 30(8): 1426-1434. doi:10.1007/s13361-019-02185-8.

2. Grim, C.M.*, **Luu, G.T.***, Sanchez, L.M. (2019). Staring into the void: demystifying microbial metabolomics. *FEMS Microbiology Letters*. 366(11): pii:fnz135. doi:10.1093/femsle/fnz135.

3. Spraker, J.E., **Luu, G.T.**, Sanchez, L.M. (2019). Imaging mass spectrometry for natural products discovery: a review of ionization methods. *Natural Product Reports*. epub ahead of print. doi:10.1039/c9np00038k.

4. Caudill, V.R., Qin, S., Winstead, R., Kaur, J., Tisthammer, K., Pineda, E.G., Carja, O., Eggo, R.M., Koelle, K., Lythgoe, K., Roy, S., Allen, N., Aviles, M., Baker, B.A., Bauer, W., Bermudez, S., Carlson, C., Catalan, F.L., Chemel, A.K., Evans, D., Fiutek, N., Fryer, E., Goodfellow, S.M., Hecht, M., Hopp, K., Hopson Jr., E., Jaberi, A., Kinney, C., Lao, D., Le, A., Lo, J., Lopez, A.G., Lopez, A., Lorenzo, F.G., **Luu, G.T.**, Mahoney, A., Melton, R.L., Nascimento, G.D., Pradhananga, A., Rodrigues, N.S., Shieh, A., Singh, R., Sulaeman, H., Thu, R., Tran, K., Tran, L., Winters, E.J., Wong, A., Pennings, P.S. (2020). CpG-creating Mutations are Costly in Many Human Viruses. *Evolutionary Ecology.* In Press.

5. **Luu, G.T.***, Condren, A.R.*, Kahl, L., Dietrich, L., Sanchez, L.M. (2020). Evaluation of data analysis platforms and compatibility with MALDI-TOF imaging mass spectrometry data sets. *Journal of The American Society for Mass Spectrometry*. In Press.

* indicates co-first authorship

Oral Presentations

1. **Luu, G.T.*** and Amagata, T. Discovery of Novel Cytotoxic Secondary Metabolites in Actinomycetes Through Analysis of Biosynthetic Gene Clusters. UC Berkeley 19th Annual Microbiology Student Symposium. Berkeley, CA. April 2018.

2. **Luu, G.T.*** and Sanchez, L.M. Cheese-Rind Microbes: Untargeted metabolomics of complex biological systems. UIC Small Metabolite Community. Chicago, IL. February 2019.

3. **Luu, G.T.*** and Sanchez, L.M. Discovery of Ovarian Cancer Biomarkers Using Bottom Up Proteomics. UIC Small Metabolite Community. Chicago, IL. April 2020.

* indicates presenter(s)

Posters

1. **Luu, G.T.***, Bray, W.M., Lokey, R.S., Valeriote, F.A., Amagata, T. A New Cytotoxic Furaquinocin Isolated from the Marine-Derived Streptomyces sp. CP53-67. Poster at CSUPERB 2018. Santa Clara, CA, January 2018.

2. **Luu, G.T.*** and Amagata, T. Discovery of Novel Cytotoxic Secondary Metabolites in Actinomycetes Through Analysis of Biosynthetic Gene Clusters. Poster at UC Berkeley 19th Annual Microbiology Student Symposium. Berkeley, CA. April 2018.

3. **Luu, G.T.***, Bray, W.M., Lokey, R.S., Amagata, T. Discovery of Novel Secondary Metabolites from Streptomyces sp. CP26-58. Poster at SFSU COSE 20th Annual Student Showcase. San Francisco, CA. May 2018.

4. **Luu, G.T.***, Grim, C.M.*, Zink, K., Burdette, J., Sanchez, L.M. Investigation of the metabolites in ovarian cancer using imaging mass spectrometry. Poster at Chicago Mass Spec Day. Chicago, IL. July 2019

* indicates presenter(s)

Teaching Experience

PHAR 504 Teaching Assistant — Aug 2019 – Dec 2019
University of Illinois at Chicago College of Pharmacy
- Pathophysiology, Drug Action, and Therapeutics (PDAT) 5: Immunology/Respiratory

PHAR 505 Teaching Assistant — Jan 2019 – May 2019
University of Illinois at Chicago College of Pharmacy
- Pathophysiology, Drug Action, and Therapeutics (PDAT) 5: Cardiovascular

PHAR 503 Teaching Assistant — Aug 2018 – Dec 2018
University of Illinois at Chicago College of Pharmacy
- Pathophysiology, Drug Action, and Therapeutics (PDAT) 3: Renal, Electrolytes, and Nutrition

Supplemental Instruction Facilitator — Aug 2016 – May 2018
San Francisco State University College of Science and Engineering
- Facilitator for supplemental instruction classes in Calculus II and General Chemistry I

CHEM 335 Teaching Assistant — Aug 2017 – Dec 2017
San Francisco State University College of Science and Engineering
- Organic Chemistry II

Outreach Activities

Expand Your Horizons 2020 Conference (canceled Due to COVID-19) — Mar 2020
- Workshop: Cheese Rind Microbes: Introducing A Taste of Science
- 60 minute workshop designed for middle school-aged girls to provide a high level overview of microbial diversity in fermented foods, including hands-on microbiology demonstrations and discussion on microbial diversity and metabolites.

NSF Cheese Outreach Module — Sep 2018 – Oct 2018
- Set of three workshops for the education of elementary school aged students from underserved communities on microbial communities using the cheese microbiome as a model system for fermented foods.