David A. Galambos

Personal Data

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Education

Expected June 2020 — Bachelor of Arts in Biology, **Carleton College**, Northfield, MN
Minor: Biochemistry
GPA: 3.89/4.0

Research Experience

June 2019-August 2019 — Avgousti Lab, Fred Hutchinson Cancer Research Center, Seattle, WA
Summer Undergraduate Research Program (SURP)

The Avgousti Lab studies the interactions between viruses and host chromatin. Using chimeric viruses previously developed in the lab, I studied how the interaction between Adenovirus protein VII and the host protein HMGB1 affects the progression of viral infection. I infected human and mouse cell lines and analyzed HMGB1 localization, viral genome replication and viral protein levels using immunofluorescence, qPCR and Western blot. I also gained experience with virus production, purification, and plaque assays.

June 2019-Jan. 2019 — Mitra Lab, Carleton College, Northfield, MN
Research Assistant

The Mitra Lab studies how the effectors of *R. solanacearum* cause bacterial wilt disease. We do this by screening for interactions between these effectors and tomato host proteins using yeast 2-hybrid assays and microscopy of GFP-tagged constructs. Based on a preliminary yeast 2-hybrid screen that identified several potential targets of these effectors in tomato plants, I cloned these targets into the GATEWAY system so that we would be able to replicate the yeast 2-hybrid and tag them with GFP for microscopy.

March 2018-Oct. 2018 — Calderone Lab, Carleton College, Northfield, MN
Research Assistant

The Calderone Lab investigates the biosynthetic mechanism of the nonribosomal peptide AMB. We expressed and purified a mutated construct of the nonribosomal peptide synthetase AmbE, which is one of the proteins in the *amb* gene cluster for AMB synthesis. We tested several different enzyme/reagent combinations that included other enzymes from the cluster and analyzed the products using HPLC.

Sept. 2019 **May 2017** — Anderson Lab, Carleton College, Northfield, MN
Research Assistant

The Anderson Lab studies microbial ecology at deep-sea hydrothermal vents. Based on existing metagenomic and metatranscriptomic data from the Mid-Cayman Rise, we conducted a study of metabolic capabilities in bacteria and archaea. We combined data describing whole vent sites with data for individual genomes recovered at those sites to provide a more complete picture of both community and genome-level metabolic dynamics.

Work Experience

Current — Academic Support Center, Carleton College
Sept. 2017 — *Writing Assistant*

Provide individualized one-on-one writing consultations for a first-year seminar of 14 students.

Prepare consultation material and advice consistent with professor's expectations and teaching style.

Offer weekly appointments to general student population.

March 2019-June 2019 — Academic Support Center, Carleton College
Prefect, BIOL126

Lead twice-weekly sessions for a class of 70 students to review lecture material and prepare for exams.

Developed practice problems and answer keys for every session.

Tutored individual students in weekly one-on-one sessions.

Sept. 2018 — Department of Computer Science, Carleton College
Computational Biology Workshop Assistant

Beta-tested hands-on modules for the Undergraduate Computational Biology Workshop at Carleton College.

Assisted in workshop set-up and logistical operation.

March 2018-June 2018 — Department of Chemistry, Carleton College
Organic Chemistry Tutor

Facilitated problem set help sessions (2x/week).

Guided students in developing effective exam study strategies.

Assessed patterns in student questions to report common conceptual misunderstandings to faculty.

Jan. 2018-March 2018 — Department of Biology, Carleton College
Lab Teaching Assistant, BIOL125

Assisted with setup and maintenance of lab materials and equipment.

Answered student questions about lab procedures and associated biological concepts.

Graded and provided feedback for notebooks, quizzes and post-laboratory assignments.

Publications

Galambos, D., Anderson, R.E., Reveillaud, J., and Huber, J.A. (2019). Genome-resolved metagenomics and metatranscriptomics reveal niche differentiation in functionally redundant microbial communities at deep-sea hydrothermal vents. Environ Microbiol 1462-2920.14806.

Presentations

Galambos DA, Calderone CC. "Biosynthetic mechanism of the nonribosomal peptide AMB in *Pseudomonas aeruginosa*." American Society of Biochemistry and Molecular Biology (ASBMB) Annual Meeting , April 6-9, **2019**; Orlando, FL.

Galambos DA, Reveillaud J, Anderson RE, Huber JA. "Archaeal Metabolic Profiles at Deep-sea Hydrothermal Vents in the Mid-Cayman Rise." 2017 American Geophysical Union (AGU) Fall Meeting, December 11-15, **2017**; New Orleans, LA.

Lauriello AF, **Galambos DA**, Greengo SD, Kennicott HR. "Obesity-Induced T-cell Polarization

in Pancreatic Cancer Leads to Immunosuppression and Reduces the Efficacy of Immunotherapy." 2017 Mayo Clinic IMPACT Symposium, March 18, **2017**; Rochester, MN.

Awards

ASBMB Undergraduate Student Travel Award (2019)
Carleton College Dean's List (2017) – *Top 10% of class*
National Merit Scholar (2016)

Languages

French (proficient), Russian (native), Hungarian (native)