

George James Gatter

Contact Information

Preferred Name: James
Email Address: jggatter@gmail.com
Phone Number: 508-907-8872
Mailing Address: 5 Dartmouth St.,
Natick, MA 01760
LinkedIn Profile: <https://www.linkedin.com/in/jamesgatter/>
GitHub Profile: <https://github.com/jggatter>

Education

University of Massachusetts Amherst Commonwealth Honors College

Bachelor of Science in Biochemistry & Molecular Biology, May 2019

Minor in Computer Science, May 2019

Overall GPA 3.96, Major GPA 3.99, Dean's List (x8)

Awarded Scholarships:

- ❖ Dean's Award
- ❖ Stanley Z. Koplik Certificate of Mastery
- ❖ John and Abigail Adams Award
- ❖ University of Massachusetts Amherst Grant

Natick High School - Natick, Massachusetts

Graduated Class of 2015

College-scale GPA 4.32 (out of 4.0)

Professional Experience

Research Technician, Massachusetts Institute of Technology

June 2019 -

Present

Prof. Alex K. Shalek Laboratory Group - 400 Main St., Cambridge MA 02139

Associated positions: **Applications Analyst, Ragon Institute; Unpaid Affiliate, Broad Institute**

- ❖ Develop workflows for Alexandria / the Single-Cell Portal Platform to perform cloud computing jobs on Terra and the Google Cloud Platform
- ❖ Coordinate with the Broad's Single-Cell Portal team to solve logistical matters relating to implementation of analysis and pipeline features for Alexandria
- ❖ Program scripts to archive sequencing data from remote servers to cloud-based storage

Summer Research Student, Massachusetts Institute of Technology

May 2017 - Sept

2018

Prof. John M. Essigmann Laboratory Group - 77 Massachusetts Ave, Cambridge, MA 02139

- ❖ Crafted a pipeline using Bash and Python on a computer cluster environment based on the Oracle Sun Grid Engine to analyze somatic mutation data from the COSMIC cancer database
- ❖ Scripted Bash and Python programs to align and validate the integrity of raw sequencing data
- ❖ Assayed the mutagenicity of nucleoside analogs in *E. coli* to determine their utility in cancer immunotherapy treatments
- ❖ Supervised undergraduate researchers performing nucleoside pool mutagenesis assays
- ❖ Presented analytical work and research at laboratory meetings

Undergraduate Researcher for credit, *University of Massachusetts Amherst* Jan 2018 - May 2019
Prof. Alejandro P. Heuck Laboratory Group - 740 North Pleasant St, Amherst, MA 01003

- ❖ Conducted assays to measure binding of the Perfringolysin O (PFO) cytolysin variants to cholesterol on liposomes to verify the structure of PFO and its use as a molecular probe
- ❖ Created, expressed, and purified variants of PFO
- ❖ Honors Thesis: *Studies on the Binding of Perfringolysin O to Cholesterol-Containing Membranes*
- ❖ Wrote student research grant proposal which was awarded funds

Supervisor, Donelan's Supermarket

June 2015 - Sept 2015

Cashier, Donelan's Supermarket,

Jan 2014 - June 2015

177 Commonwealth Road, Wayland, MA 01778

- ❖ Managed assets and resources responsibly to exceed employer expectations.
- ❖ Interacted with coworkers and customers to provide a rewarding retail experience.
- ❖ Monitored and trained employees to reduce complications in everyday business.

Relevant Coursework

Molecular Biology

Introductory Biochemistry Lab

General Biochemistry I & II

Molecular Genetics and Genomics

Real World Biochemistry & Molecular Biology

General Chemistry I & II

Organic Chemistry I & II & Lab

Physical Chemistry

Introduction to Programming

Programming with Data Structures

Computer System Principles

Programming Methodology

Human Computer Interaction

Introduction to Statistics

Introduction to Biostatistics

Introductory Biology I & II

Computer and Programming Skills

In-depth experience with Python, Bash, R, WDL, and Docker programming languages

Familiarity and experience with Java, JavaScript, and C programming languages

Programming pipelines and workflows for the Google Cloud Platform cloud-based environments

Submitting script jobs to the Univa and Oracle Grid Engine computer cluster environments

Project management through GitHub (<https://github.com/jggatter>)

Laboratory Skills

Preparing media and plates

Inoculating and plating cultures of *E. coli*

Designing primers

Polymerase Chain Reaction

Transforming *E. coli* with recombinant vectors

Expressing recombinant vectors within *E. coli*

Affinity / Ion-exchange chromatography

Gel electrophoresis

Dialysis of protein

Conducting protein-liposome binding assays

Additional Skills and Interests

5 years of Spanish language education

Playing guitar and piano, songwriting

Cooking spicy food