Benjamin **Gerlovin**

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Objective

After several years of working in chemistry laboratories, I have decided to pursue computer science and software development. I am looking for a challenging and stimulating position where I can both develop new skills and make a meaningful contribution. I am a quick and highly motivated learner, with a keen attention to detail and strong time management abilities.

Education

Bachelor of Science | Class of 2020 | McGill University | Current GPA: **3.76**

Major: Honors Chemistry (concentration: Bio-Organic Chemistry)

Skills and Abilities

Programming: Advanced in **Java** (Design Patterns, OOP, DS & Algorithms, GUI via Swing /FX); knowledge of HTML/CSS, Javascript and **Spring/Hibernate**

Development: Fundamental experience in Agile development techniques: **Issue-tracking** (JIRA), **Version Control** (GitHub, GitLab, Bitbucket), **Automation** (Bash scripting), **Databases** (MySQL)

Research Experience

Software Engineering Research Assistant **| Kienzle Laboratory, McGill University | 1/2020 – Present**

Currently, I am conducting research with the Kienzle group in the faculty of Computer Science. I am working on developing new features for a modelling tool used for creating sequence/class diagrams for large, distributed systems. I primarily focus on linking new GUI modalities with existing backend code and integrating those new features within the existing framework.

Intern, Discovery Chemistry **| Merck Research Laboratories, New Jersey | 5/2019 – 8/2019**

I conducted organometallic chemistry research related to selective hydrogenation reactions of poly-heteroaromatic systems. My work focused on discovering viable and robust conditions for catalysis; I primarily used high throughput experimentation methods (HTE) to test and analyze a myriad of reactions simultaneously. In addition, I assisted my supervisor in synthesizing a library of intermediate compounds, which fed into Merck's preclinical drug candidate research.

Research Assistant **| Guindon Laboratory, Clinical Research Institute of Montréal (IRCM) | 9/2018 – 5/2019**

Under the guidance of a post-doctoral fellow, I planned and executed synthetic methodologies within the field of nucleic acid chemistry in Dr. Yvan Guindon's laboratory. My work focused on the designing highly substituted, stererospecific nucleic acid analogues, which were then tested for their biological activity against a wide range of targets. The breadth of my chemistry knowledge and intuition grew immensely while at the IRCM, and I was exposed to a wide range of techniques such as: HMBC, NOESY, and other advanced NMR tests, moisture-sensitive reactions, transition-metal and Lewis acid catalysis, and chromatographic purification by automated systems.

Research Assistant **| Moitessier Laboratory, McGill University | 1/2018 – 9/2018**

I conducted organic chemistry research under a PhD student mentor in Dr. Moitessier's lab to assist in the complete synthesis of enzyme dual inhibitor molecules. I was able to learn various laboratory techniques first by observation, then by designing and performing my own experiments. My work throughout the summer culminated in a publication intended for the Journal of Organic Chemistry on the synthesis and stereochemistry of dual inhibitor molecules; I was honored to be listed as one of the primary contributing authors.

***Intern, Analytical Chemistry Department* | Cabot Corporation, Massachusetts | 6/2017 – 8/2017**

My main tasks were to aid the senior scientists in quantifying and identifying unknown substances through a variety of tests. I rotated between two labs on any given day: the first was focused on the purification of synthetic powders using Soxhlet extractors, followed by quantitative analysis through a GC/MS (gas chromatography/mass spec). The second lab was primarily interested in quantifying specific characteristics of the aforementioned synthetic materials using methods such as UV-Vis spectroscopy, pH testing, and OAN (oil absorption number) testing.

Scholarships and Awards

***Kurt and Helena Ekler Scholarship in Chemistry* | McGill University Department of Chemistry | 8/2018**

The Ekler Scholarship in Chemistry, in the amount of $4,000, is awarded based on academic merit and contributed to paying my tuition fees in the 2018-2019 school year.

***SURA Scholarship (Science Undergrad. Research Award)* | McGill University Faculty of Science | 5/2018 – 8/2018**

Distributed through the Faculty of Science ($3,500), the SURA Scholarship was one of two grants that funded my summer research project in the Moitessier Lab (May-August 2018). The SURAs are typically funded by external donors, in my case by Dr. Marc Tessier-Levigne of Stanford University through the Tessier-Levigne Family award.

***GEPROM Scholarship (Group d'Études de Protéines Membraines)* | McGill University Science Dept. | 5/2018 – 8/2018**

The second of two scholarships awarded in the summer of 2018, the GEPROM award ($4,000) was contingent upon a strong and reasonable research goal as well as a presentation at a Research Symposium at the end of the summer. This scholarship comes from a research group that exclusively investigates membrane proteins and their biochemical mechanisms – this was the focus of my research in the Moitessier laboratory.

Leadership Experience

***Editor-in-Chief* | Luminous: McGill Journal of Theories, Hypotheses and Conjectures | 5/2019 – Present**

My functions as the editor-in-chief are primarily operational – I am responsible for ensuring that every branch of the journal is running smoothly and pushing content on a consistent schedule. In addition, I coordinate recruitment events and workshops at the beginning of each semester, as well as manage the journal's finances for various social activities that are hosted throughout the school year.

***Academic Committee Chair* | Luminous: McGill Journal of Theories, Hypotheses and Conjectures | 4/2018 – Present**

Luminous Journal has two broad goals: to help connect students to exciting and novel research being conducted on campus and worldwide, and to foster interest in undergraduate research possibilities than extend beyond the laboratory. My primary role as chair of the Academic Committee is to encourage students to submit research proposals that are modeled after academic publications. Most of my work goes into planning writing workshops and events to help undergraduates develop strong academic writing skills and gain confidence in the world of research – these events typically feature a professor or graduate student.

Volunteer Experience

***Volunteer* | ICU Bridge Program - Jewish General Hospital | 4/2018 – 1/2019**

I work weekly shifts at the Intensive Care Unit of the JGH under the ICU Bridge Program, which aims to assist patients and their families in navigating the ICU and to lend comfort and care. During each shift, a partner and I operate a desk at the entrance of the ICU to direct patients' families, as well as relaying any information from the nurses or doctors.