

Andy Garnier

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Experience

Associate Scientist, Lab Operations

May 2024 – Present

IQVIA Laboratories, Laval, QC

- Developing programs to automate data analysis, saving approximately 30 minutes a day per analyst
- Performs R&D and clinical testing of 6 projects using ELISA-based assays adhering to ICH-GCP, GDP, and GCLP
- Manages the application lifecycle for LabVantage LIMS ensuring smooth deployment and functionality
- Leading initiatives to implement and maintain the 6S lean methodology to improve workplace efficiency and safety

Graduate Researcher in Cell Biology

Sept 2021 – June 2022

McGill University, Montreal, QC

- Designed and conducted experiments for a project studying microtubule dynamics *in vitro*
- Operated and maintained lab equipment, including TIRF microscopes, ultracentrifuges, and pH meters
- Presented research findings to specialized and general audiences

Student Assistant in Food Biochemistry

Oct 2018 – June 2021

Memorial University of Newfoundland, St. John's, NL

- Prepared 10+ literature updates for food biochemistry book chapters
- Performed comprehensive reviews of 100s of scientific articles for relevant information to given topics
- Wrote as a first author for a review article

Education

Certificate in Applied Bioinformatics

Sept 2024 – Mar 2025

UC San Diego Extended Studies

- Acquired skills in bioinformatics tools, genomic sequencing technologies, UNIX-based data processing, and database design for managing complex biological information

Master of Science in Biochemistry

Aug 2022 – May 2024

McGill University, GPA: 4.00/4.00

- Thesis: Targeting heme oxygenase-1 dependency in SMARCA4-deficient cancers
- Project Summary: Targeted cancer cells by selective protein inhibition while minimizing harm to healthy cells, encompassing computational virtual docking of 50 million compounds to identify therapeutics and protein target validation using 10 cancer cell models

Bachelor of Science (Honours) in Biochemistry

Sept 2017 – May 2021

Memorial University of Newfoundland, GPA: 3.97/4.00

- Minor in Chemistry
- Thesis: Molecular dynamics simulations of alpha-synuclein with macromolecular crowding
- Project Summary: Explored the influence of the cellular environment on protein structure and dynamics by analyzing contact maps, radii of gyration, and secondary structure timelines of computational molecular dynamics simulations

Publications

Garnier, A. and Shahidi, F. (2021). Spices and herbs as immune enhancers and anti-inflammatory agents: A review. *Journal of Food Bioactives*, 14, 20-52.

Shahidi, F., Oh, W. Y., **Garnier, A.**, and Christophe, A. B. (2020). Structural Effects on Absorption, Metabolism, and Health Effects of Lipids. *Bailey's Industrial Oil and Fat Products*, 1-18.

Skills

Language English (Native), French (Professional)

Computational Languages (Python, Bash, R, HTML, CSS, JavaScript), OS (Windows, UNIX), Databases (SQL, NoSQL, XML), WebDocker, GitHub, High Performance Computing, Molecular Modeling (PyMOL, VMD, ChimeraX), Virtual Screening (AlphaFold, AutoDock Vina, VirtualFlow), Molecular Dynamics Simulations (GROMACS)

Laboratory ELISA, Immunoblot, Protein Purification, Molecular Cloning, Immunofluorescence Microscopy, Cell Culture, Lentiviral Transduction

Presentations

Cracking the code on Canada's silent killer <i>Three Minute Thesis Competition, McGill, Montreal, QC</i>	Mar 2024
A computational approach to treating cancer <i>GradTalks, School of Biomedical Science, McGill, Montreal, QC</i>	Mar 2024
Heme oxygenase-1 as a synthetic lethal target in SMARCA4-deficient cancers <i>Spotlight Seminar Series, Goodman Cancer Institute, Montreal QC</i>	Jan 2024
Des pixel au progrès: découvrant des médicaments par criblage virtual <i>Science POP Grand Provincial Final, Montreal Clinical Research Institute, Montreal, QC</i>	May 2023
Targeting the missing piece in cancer <i>Biochemistry Research Day, McGill, Montreal, QC</i>	Apr 2023
From pixels to progress: virtual screening's role in accelerating drug discovery <i>Science POP Competition, McGill, Montreal, QC</i>	Apr 2023
The effects of CKAP2 and CKAP2L on microtubule structure and dynamics <i>Anatomy and Cell Biology Research in Progress, McGill, Montreal, QC</i>	May 2022
Targeting CKAP2 and CKAP2L to treat cancer and rare disease <i>Molecular and Cellular Biophysics Center Blue Sky Day Symposium, Montreal, QC</i>	Mar 2022

Awards

Master's Training Scholarship – <i>Fonds de recherche du Québec</i> – (\$20,000/year) – Awarded for academic excellence and research potential in the field of human health	May 2023
First Place at McGill's Science POP Competition – <i>McGill University</i> – (\$200) – Achieved first place in a scientific communication competition	Apr 2023
Canada Graduate Scholarship-Master's – <i>Canadian Institutes of Health Research</i> – (\$17,500) – Prestigious national scholarship awarded to top graduate students in Canada	Sept 2022
Head's Prize – <i>Memorial University of Newfoundland</i> – Awarded for receiving all A's in biochemistry courses over the duration of the degree	May 2021
3x Dean's List, Faculty of Science – <i>Memorial University of Newfoundland</i> – Recognized for academic excellence by maintaining a GPA in the top 10% of the faculty	May 2018 – 2021
Cole Harbour Foundation Scholarship – <i>Cole Harbour Foundation</i> – (\$4000) – Awarded for academic excellence and community involvement	May 2018 – 2021

Volunteer/Extracurricular Experience

TEDx Event Host – <i>TEDxPlateauMontRoyal</i> – Presented an instructional talk, introduced guest speakers, and managed the day's progression	Nov 2024
VP Social Media – <i>McGill's Biochemistry Graduate Student Society</i> – Promoted events on social media platforms and plan events	June 2023 – May 2024
VP External/Finance – <i>McGill Improv</i> – Planned biweekly shows, led weekly workshops, and promoted the club	May 2022 – May 2024
Internal Affairs Committee Member – <i>McGill's Postgraduate Student Society</i> – Helped plan and execute frequent events for graduate students	Oct 2022 – May 2024
Head Runner – <i>McGill's Student Run Club</i> – Led weekly runs for an advanced running group (5-5:30min/km for 8+km)	May 2023 – Dec 2023
TEDx Event Host – <i>TEDxAveLorne</i> – Welcomed the audience, introduce guest speakers, and manage the days progression	Sept 2023
Orientation Events Leader – <i>McGill's Campus Life and Engagement</i> – Led events across campus and downtown for incoming students	Sept 2022 and 2023
Theatre Actor – <i>Theatre Sainte-Catherine</i> – Acted regularly in weekly improvisation comedy shows for the community	Sept 2021 – May 2023
VP Internal – <i>McGill's Cell Biology Graduate Student Society</i> – Planned regular events for students, managed social media, and organized meetings	Sept 2021 – June 2022