The [Department of Food Science and Agricultural Chemistry](#) at McGill University is seeking applications to fill a Postdoctoral Fellow position under the supervision of Dr. Stéphane Bayen:

Postdoctoral Researcher - Position in chemical fingerprinting of food
[1 year renewable for another six months – maximum 1.5 years]

Position Summary / Responsibilities:
Proposed project title: ***"Chemometric approaches for the authentication of honey based on LC/MS fingerprints".*** Food fraud (including substitution, adulteration or mislabeling – e.g., origin) is a threat to our food system. A robust, fast and innovative analytical tool has been developed for the non-targeted fingerprinting of honey. As part of an NSERC Alliance project with private and public partners, the overall objective of the present research is to compare different chemometric approaches for the authentication (floral origin, adulteration) of honey using LC-MS based fingerprints collected by our team.
In this context, the Postdoctoral Researcher will:

- Develop and apply Python based workflows to analyze data obtained with liquid chromatography (LC) coupled to high resolution mass spectrometry.
- Deploy various models (incl. PLS-DA, random forest and other machine learning algorithms) to classify honeys with different quality attributes (e.g. floral origin, rural/urban) and assess their predictive capacities.
- Assess data quality and investigate the impact of data quality scenarios on the classification.
- Compare the LCMS fingerprints for >300 honey samples obtained on different instruments.
- Build guidelines for the standardization of data analysis steps in LC-MS based authentication studies.

The Food Toxicant Laboratory (approximately 1,000 square feet) is located in the Macdonald-Stewart building of Macdonald campus of McGill University (https://www.mcgill.ca/macdonald/). The laboratory is part of the Faculty of Agricultural and Environmental Sciences, one of the eleven faculties of McGill University, is at the forefront in applied bioscience, food, nutritional and environmental sciences research and teaching. The candidate will be provided with research space in this laboratory and the resources to perform his/her research. The Food Toxicant Laboratory is equipped with all the necessary instruments for this project (incl. UHPLC-QTOF-MS/MS, computers…). Research group and individual project meetings are held bi-weekly, alternatively. Research group members are also taking part in events organized in the field of mass spectrometry.

Qualifications:
Please refer to McGill's requirements on postdoctoral appointments, www.mcgill.ca/gps/postdocs, for conditions and additional information on the status of the position. (In Quebec, a Postdoctoral Fellow is a full-time student status and trainee category, and the Ministère de l'Education, Enseignement Supérieur et Recherche (MESRS) stipulates that all postdocs must be registered on a university student registration system.) Please note that non-Canadian postdoctoral fellows must have valid Citizenship or an Immigration Canada (CIC) work permit to legally work in Canada.

Education / Experience:

The Food Toxicant Laboratory at McGill University (http://foodtox.lab.mcgill.ca/) is searching for an enthusiastic candidate with a strong interest in food authenticity and data analysis. The ideal candidate for this position has the following qualifications:

• A PhD degree in a related field (science, ideally (bio)chemistry or food science)
• Strong proven background (published work in peer-reviewed journals) in data analysis, ideally with concrete applications for chemometrics.
• Proficiency in programming/handling Python (preferred language, though other tools possible).
• At least two first-authored English papers (or three if co-first authors) with submitted, accepted or published status in peer-reviewed journals
• Good spoken and written communication skills in English

The initial position is for **one year**. Depending on the performances in the first year and the research interests of the candidate, the fellowship can be extended another six months (total maximum 1.5 years).

Annual Salary:	$45,000.00 negotiable
Hours Per Week:	35 (Full time)
Location:	Macdonald Campus, 21111 Lakeshore Road, Ste. Anne de Bellevue, Quebec, Canada, H9X 3V9
Supervisor:	Stéphane Bayen, Associate Professor (stephane.bayen@mcgill.ca)
Position Start Date:	Latest 1/11/2022
Position End Date:	31/10/2023

How to Apply:

Applicants must apply through the career portal at
https://mcgill.wd3.myworkdayjobs.com/mcgill_careers
(job posting JR0000030380)

Guide for candidates (external or former employees):
https://www.mcgill.ca/hr/files/hr/workday_guide_for_candidates_extenal_en.pdf

Please submit the following materials to [**stephane.bayen@mcgill.ca**]: a cover letter; CV; a 2-3 page personal / research statement speaking to relevant coursework, research skills and interests, and what research you hope to pursue in the lab, up to three sample publications; and the contact details of three referees. The priority deadline is September 15th, 2022. Review of applications will continue until the position is filled. If you have questions, please email Dr. Bayen at [stephane.bayen@mcgill.ca].

McGill University hires on the basis of merit and is strongly committed to equity and diversity within its community. We welcome applications from racialized persons/visible minorities, women, Indigenous persons, persons with disabilities, ethnic minorities, and persons of minority sexual orientations and gender identities, as well as from all qualified candidates with the skills and knowledge to productively engage with diverse communities. McGill implements an employment equity program and encourages members of designated groups to self-identify. Persons with disabilities who anticipate needing accommodations for any part of the application process may contact, in confidence, accessibilityrequest.hr@mcgill.ca or 514-398-3711.