

Postdoctoral Position in Bayesian Methods for Clinical Trials

Biostatistics, McGill University

We invite applications for a Postdoctoral Position with a research focus on Bayesian methods in clinical trials under the co-supervision of Drs Shirin Golchi (McGill University) and Lara Maleyeff (Université de Montréal/Montreal Heart Institute). This is a one-year (12-month) position with the possibility of renewal subject to satisfactory performance and funding availability. The position is available immediately with a preferred start date of August 1st, 2026. The salary will be \$70,000 per year plus [benefits](#). Additional funding is available to support research related travel, including collaborative meetings and the dissemination of research results at meetings, conferences or workshops.

Position Description

The postdoctoral researcher will work at the interface of statistical methodology development and hands-on collaborative research in clinical trials. The position is structured to involve approximately:

- 50% methodological research on the development of Bayesian statistical methods for clinical trials, with a particular emphasis on adaptive designs, and
- 50% applied work on the design, and analysis of real-world clinical trials in close collaboration with clinical investigators and trialists.

This position provides a unique opportunity to combine hands-on involvement in real clinical trials with fundamental methodological research aimed at top-rated statistics and biostatistics journals.

Methodological Research Component

The methodological component will focus on advancing Bayesian methodology for clinical trials, particularly in areas such as:

- Adaptive and adaptive enrichment trial designs;
- Modelling and detection of treatment effect heterogeneity;
- Biomarker-driven and subgroup-based decision making;
- Borrowing of information across subpopulations or external data sources;
- Computationally efficient Bayesian methods for complex trial designs.

The postdoctoral researcher is expected to pursue an independent line of methodological research leading to peer-reviewed publications in leading statistics and biostatistics journals.

Applied Research Component

The applied component will involve close collaboration with clinician scientists and trial investigators. Responsibilities may include:

- Bayesian design of clinical trials including evaluation of operating characteristics via simulation studies;
- Development of statistical analysis plans;
- Contribution to the statistical sections of trial protocols, grant applications, manuscripts, reports, and regulatory-related documents.

This work will provide substantial experience in collaborative clinical trials research and exposure to practical challenges central to Bayesian clinical trials.

Training Environment

The postdoctoral researcher will join a collaborative and interdisciplinary research environment with opportunities to:

- Develop an independent research profile in Bayesian clinical trials;
- Strengthen collaborative skills essential for academic, governmental, or industry careers;
- Participate in seminars, training activities, and national research networks in biostatistics and clinical trials.

Qualifications

Applicants should have:

- A PhD (completed or nearly completed) in Statistics or Biostatistics;
- Strong training in Bayesian statistics;
- Demonstrated interest in clinical trials methodology;
- Proficiency in statistical programming; experience with Bayesian software (e.g. Stan, JAGS) is an asset.

Application Process

Applications should be sent by email to shirin.golchi@mcgill.ca and include:

1. A cover letter describing research interests and fit for the position;
2. A curriculum vitae;
3. A brief research statement (1–2 pages);
4. Contact information for 2–3 references.

Review of applications will begin immediately and will continue until the position is filled.