

**CancerCare Manitoba**, located in Winnipeg, Manitoba, Canada, is the provincial cancer authority responsible for setting strategic priorities and long-term planning for cancer and blood disorders for the province. CancerCare Manitoba (CCMB) provides clinical services to both children and adults. The cancer services the organization provides to Manitobans include prevention, early detection, multidisciplinary cancer treatment, supportive and end-of-life care. In addition to patient care, CCMB has been given the mandate for a program of research in cancer.

The CancerCare Manitoba Research Institute (the Institute) was unveiled in May 2021 as a department of CCMB. However, the Institute has a long and rich history of research in Manitoba, evolving from its predecessor institutes and dating back to its foundation as a joint venture with The University of Manitoba in 1969 as The Manitoba Institute of Cell Biology. Research disciplines at the Institute range from basic science, preclinical and translational research, clinical trials, health services research, health care informatics, epidemiology and psychosocial oncology research. Working in multi-disciplinary teams of clinicians, scientists, technicians, research nurses, trainees, and bioinformaticians, the Institute brings together diverse skill sets to translate basic science discoveries into improved patient outcomes.

Since CCMB's founding, research has been a key mandate of the organization. Today, research continues to be the pillar that drives CCMB's pursuit of excellence. As such, the goal of the Institute is to have a positive impact on the lives of cancer patients. Its mission is to gain, through an interdisciplinary program of research and training in the basic and clinical sciences, a better understanding of the nature of cancer and blood disorders.

The Institute is generously funded by a long-standing partnership with the CancerCare Manitoba Foundation, which provides extensive operational, research platform, equipment, education, and training support.

**We invite applications for the position of:**

**Data Scientist**  
**CancerCare Manitoba Research Institute**  
**5-year Contingent Appointment – possibility of extension**  
**May 1, 2022 – April 30, 2027**  
**Competition# 237-22**

**Job Summary:**

This is an exceptional opportunity for a qualified individual to contribute to the ongoing success of the Institute and the Institute's strengths in cancer health informatics and health services research, and to participate in interdisciplinary research and collaboration in an environment with complementary and diverse skills. Reporting to the Director of the Institute, the successful candidate is expected to develop an independent program of research that uses data-driven techniques to collaborate, develop, and lead research projects and teams to leverage unstructured clinical data and images to improve cancer control research and advance the strategic priorities of the Institute.

**Qualifications:**

The ideal candidate will have a PhD in computer science, computer engineering, or other data-science oriented discipline with demonstrated experience in data science using machine learning on unstructured data in the health care environment (e.g., natural language processing using data from medical charts and/or imaging analytics to translate diagnostic images). The candidate will have experience undertaking research that applies the principles of machine learning, deep learning, and text analytics on unstructured clinical and/or imaging data. The candidate should have an interest in the development, testing, and reporting of products or tools can be applied in practice. They should have a knowledge of deep learning models beyond the fundamental

introductory models (ex. multi-models that combine images and text). They should have the ability to effectively explain and convey the results of their work (i.e., good data visualization skills). Candidate must have a strong research record, as evidenced by quality publications that are directly relevant to the experience and knowledge required for this position in applicable journals, the potential to secure competitive extramural peer reviewed grants, and a history of effective and productive collaboration.

**Required:**

- PhD in computer engineering, computer science, mathematics, biostatistics, or other data science-oriented field
- 2 to 5 years relevant experience
- Experience with machine learning and deep learning on unstructured health data (i.e., natural language processing, imaging analytics)
- Experience using a variety of programming languages (e.g., Python)
- Experience using health and clinical data
- Strong working knowledge of statistics
- Excellent data visualization and reporting skills
- Experience answering complex problems and issues
- Experience working with multi-disciplinary research teams
- Experience preparing grant proposals and securing peer-reviewed funding
- Prior publications in peer-reviewed journals
- Must be legally able to work in Canada

**To be determined on the interview process:**

- Excellent communication skills and the ability to explain complex analyses and results
- Strong critical thinking skills

**Preferred:**

- Experience using data maximization methods, data augmentation methods, data cleaning approaches, and use of hyperparameters

**Asset:**

- Ability to speak French

**Salary:**

Compensation will be commensurate with qualifications and experience.

**Additional Information:**

CancerCare Manitoba is affiliated with The University of Manitoba and The Rady Faculty of Health Sciences, a major center of medical education and research linked to sister institutions throughout Canada and the world. The University offers a full range of undergraduate and postgraduate programs embracing basic biomedical sciences, clinical medicine and population health. The successful candidate will be expected to apply for and will be supported by CCMB in obtaining a nil-salary appointment in computer engineering, computer sciences or other appropriate department depending on their qualifications and expertise. Applicants will also be eligible to apply for probationary (tenure-track) positions in the appropriate faculty as they become available.

Application materials will be handled in accordance with the protection of privacy provision of *The Freedom of Information and Protection of Privacy* (Manitoba).

Please submit your application on the following URL: <https://careers.wrha.mb.ca/job-invite/318618/>

**Closing Date:** Until the position is successfully filled

***This position is subject to a Criminal Record Check, including Vulnerable Sector Search, an Adult Abuse Registry Check and a Child Abuse Registry Check. The successful candidate will be responsible for any service charges incurred.***

CancerCare Manitoba is committed to developing inclusive, barrier-free recruitment processes and work environment. If you are contacted by CancerCare Manitoba regarding a job opportunity or testing, please advise if accommodation measures must be taken to enable you to apply and be assessed in a fair and equitable manner.

CancerCare Manitoba is strongly committed to equity and diversity within its community and especially welcomes applications from women, racialized persons, Indigenous peoples, persons with disabilities, persons of all sexual and gender identities, and others who may contribute to the further diversification of ideas. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.