

Postdoctoral Fellowship – TRUSTSPHERE – Data Architecture

Posting expiry

Open until filled

Job summary

The BC Children’s Hospital Research Institute (BCCHR) is seeking a full-time postdoctoral fellow, for an appointment of 2 years, to take a significant role within a new TRUSTSPHERE project.

The TRUSTSPHERE project at BC Children’s Hospital (BCCH), will develop and validate an integrated digital trust platform that will simplify research participation and data collection in a way that will transform patient care and health research. This digital trust platform will contribute a multi-disciplinary framework to help better understand Type 1 diabetes and patient care, while also providing health researchers a digital toolset with comprehensive data integration, where patients and families have the agency to donate data and participate in research.

We are looking for a highly motivated, self-driven, and engaged candidate with experience and interest in data architecture to help extract, transform, link and store data for clinical research purposes, as well as software development to assist in capturing and integrating data in the proposed project (applying methods from e.g. computer science and/or health informatics fields).

The position is available to a PhD trained individual with a desire to embrace the complexity of clinical research and to build technology-based solutions to improve researchers’ access to patient donated data to ultimately impact the safety and quality of patients’ care. The successful candidate will need to demonstrate technical expertise in data storage and software development, be able to collaborate with clinicians, patients, academic researchers, and industry partners, and have a keen interest in exploring advanced design and implementation strategies.

Organizational status

TRUSTSPHERE is a collaboration between the University of British Columbia Departments of Pediatrics; Anesthesiology, Pharmacology & Therapeutics and Electrical and Medical Genetics. The Principal Investigator is Dr Shazhan Amed, who is based on the BC Children’s Hospital campus. The Fellow will receive supervision and guidance from lead supervisor Dr. Elodie Portales-Casamar and co-supervisors Drs. Wyeth Wasserman and Bruce Verchere, as well as IDENTOS Chief Technical Office, Alec Laws. The Fellow will benefit from being embedded in a multi-disciplinary team and gain work experience working with both industry (IDENTOS) and academia.

Work performed

Primary activities will include

- CORE TRUSTSPHERE Product development (Alpha releases)
- Data Architecture to support data integration through the Research App
- Establishment of processes for data access
- Participation with development and system integration activities
- Engagement with patients, family, researchers, and providers to inform development and evaluation of end product
- Evaluation report
- Publication of findings and presentation at conferences

In addition, the Postdoctoral Fellow will be involved in:

- Documenting the TRUSTSPHERE data architecture
- Developing and implementing new software programs
- Maintaining and improving the performance of existing software
- Clearly and regularly communicating with the technical support team during the development cycle



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- Designing of data storage architecture
- Testing and maintaining software products to ensure strong functionality and optimization
- Recommending improvement to existing software programs as necessary
- Developing a model for storing user donated data
- Combining biological data, patient generated data, administrative health data (optimized for easy researcher access and data analytics) for future cross-disciplinary (bench-to-bedside to health systems) research applications

Qualifications

The successful candidate should be able to demonstrate evidence of:

- Strong knowledge of data systems (ranging from RDBMS to flat file systems), health data models (OMOP, PCORNet), health data management and standards, and software development.
- Applications of data storage for optimized analysis (Integrated Data Repositories), including strategies to overcome real-world problems, such as combining of disparate data; experience with healthcare data would be desirable.
- A doctorate degree in a relevant discipline, e.g., Computer Science, Bioinformatics, Health Informatics or equivalent.
- A strong publication record and excellent technical communication and interpersonal skills; knowledge of research processes, including the conduct of clinical studies; detail-oriented as well as high-level conceptual, analytical, and critical appraisal skills.
- Able to work independently, and solve technical and methodological problems that arise during the course of the research; be comfortable with change, and be adaptable as the project evolves; able to thrive in a collaborative team environment and work effectively with research personnel, clinicians, patients, industry partners.
- Personal motivation and self-management; able to take responsibility for meeting deadlines within timelines that are partially dictated by industry partners and clinicians; must exhibit a high level of professionalism, judgement, ethical conduct, discretion and diplomacy.

Contact

Apply by email to Elodie Portales-Casamar (eportales-casamar@bcchr.ca), sending a curriculum vitae with all relevant employment and academic experience; 1-2 writing samples (publications) or a thesis chapter; names of three references; and a cover letter, noting research experience and interest in the position. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the BC Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person.

Funding

This fellowship is supported by MITACS and IDENTOS, and the selected candidate will receive CAD \$50,000.00/year plus benefits.

Further Information

<https://www.digitalsupercluster.ca/programs/precision-health/trustsphere/>

