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Call for proposals for CANSSI Health Science Collaborating Centres

October 16, 2017

Background

The Canadian Statistical Sciences Institute (CANSSI) was formed with the explicit purpose of tackling the big problems in statistics “of importance to science and the public interest”.

CANSSI aims for health sciences research include:

- stimulating and supporting innovation by **building collaborative relationships**, that advance both the health sciences and the statistical sciences
- **building capacity** in terms of new statistics Master and PhD graduates who are able to provide statistics and data science expertise to health sciences researchers

CANSSI would like to **partner with regional or provincial health organizations** (which could be provincial ministries, provincial granting agencies, SPOR Support Units, health data custodians, research organizations, hospitals, medical faculties and their centres or institutes) to collaborate on research and training that will lead to improvements in health.

Across the country there are researchers working in biostatistics or statistical genetics and genomics, able to collaborate with medical and health scientists on problems in such areas as population health, health services, treatment of chronic diseases, and monitoring infectious diseases. Biostatistics and statistical genetics and genomics attract substantial numbers of graduate students and postdoctoral fellows who need high quality experiential training. In order to capitalize on these strengths, CANSSI endeavours to facilitate research collaborations and training programs, through the development of provincial or regional **Health Science Collaborating Centres**.

Through these centres, regional or provincial health organizations are able to sponsor collaborative statistical research and training in a number of possible models. Particularly with respect to training, CANSSI could undertake to assist with the coordination of recruiting and, where feasible, to provide some financial support for trainees. Participating partner organizations are able to:

- engage with highly qualified trainees with the potential for long-term employment;
- build collaborations with university statistical scientists;
- initiate projects on emerging health issues.

Definition of a CANSSI Health Science Collaborating Centre

A CANSSI Health Science Collaborating Centre (HSCC) is a CANSSI-designated group of university researchers, at one or more institutions in the same Canadian province or region, who:

- carry out research in statistical or data science with applications in the health sciences
- train students at the senior undergraduate, masters, PhD, or postdoctoral level
- intend to incorporate collaboration formally into training, for example with co-op placements, internships, or other work assignments within health science organizations.

The HSCC has a steering committee to oversee the training programs and look for resources to fund placements, internships and fellowships. CANSSI assists with communications, promotion, networking with other CANSSI HSCCs across the country, and partnering with regional or provincial health organizations to provide support.

In their academic programs, graduate students acquire expertise in **a substantial selection of** the following areas:

Masters level:

- Research methods of epidemiology and biostatistics
- Programming in SAS, Stata, R
- Processing and cleaning of data sets
- Health services data structures
- Analysis using generalized linear models
- Survival analysis
- Principles of the design of experiments
- Data visualization
- Best practices for reproducible research

PhD level:

- Longitudinal data analysis
- Complex survey data analysis
- Analysis of geocoded and spatial data
- Causal inference
- Statistical learning
- Statistical genetics
- Analysis of microarray data

The co-op, internship or fellowship placements provide the students with opportunities to enhance their skills, deepen their understanding, and develop skills in communication and collaboration.

The call

Proposals are invited to establish CANSSI Health Science Collaborating Centres (HSCCs). These should be sent by January 31, 2018 to Angela Plagemann, CANSSI Scientific Coordinator at info@canssi.ca.

Planned programs eligible to be designated as CANSSI HSCCs will be in various stages of development. For some, seed funding in 2018 may be of assistance. A proposal not judged to be ready for the HSCC designation may receive seed funding, and may reapply for the designation in a subsequent call.

CANSSI expects to provide seed funding in 2018 for up to five proposed or already designated HSCCs.

Seed funding if requested and awarded is provided on a one-time basis, and is intended to enable groups of researchers to establish a coordinated presence locally for research collaboration, training of HQP, and linking with funding partners. Up to \$10,000 may be awarded for each centre, to be spent on HQP and/or staff support, organization related travel, meetings, and communications.

Proposal content

A proposal for a new CANSSI HSCC should consist of the following:

- Name of centre
- Participating universities
- Names and roles of university faculty members playing a major role in the organization, teaching or supervision associated with the centre (Please attach two-page CVs for up to 5 of the HSCC participating faculty)
- Collaborations already established between participating university faculty and researchers in health science organizations
- Details of requirements (including courses) of degree programs or training associated with the centre
- Enrolment numbers in those programs for the past 3 years, since September 2014 (if applicable); projected enrolments for the next 5 years, up to August 2022
- Details of experiential learning, through co-op placements, internships or other work assignments within health science organizations
- Experiential learning placements for the past three years, since September 2014 (if applicable); projected placements for the next 5 years, up to August 2022
- Letters of support from the health science organization(s) where students/trainees are to be placed
- If applicable, examples of research projects which have been or are expected to be undertaken with the health science organization(s)
- If seed funding is requested, a rationale and detailed budget for the use of the funds

A proposal from an established HSCC to receive seed funding should provide an update of the 2016 proposal, with particular attention to the rationale and detailed budget, and a report on activities in 2017.

Evaluation criteria

The proposal to establish an HSCC will be judged on:

- Strength of the researchers
- Potential availability of strong students, postdocs, and a training program involving experience
- Availability of co-op, internship or other work experience placements; other contributions from provincial or regional organization(s) or university institutes
- Capacity to undertake projects for provincial or regional organizations.

The decision of whether to award seed funding will be based also on the need for funds, as described in the budget rationale.

Questions about this call for proposals may be directed to Mary Thompson, Chair, CANSSI Health Sciences Committee. [methompson@uwaterloo.ca]