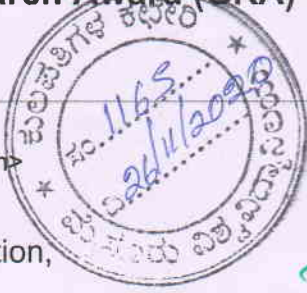# MITACS Globalink Research Award (GRA) Thematic Campaign - Query from a Canadian Faculty

1 message

Pikee Sharma <pikee@sici.org.in>   Tue, Nov 24, 2020 at 4:54 PM
To: Pikee Sharma <pikee@sici.org.in>

Dear Indian Member Institution,

Hope all well.

As you are aware, SICI and Mitacs are providing funding for research collaborations between Canadian and Indian member institutions via a special competitive call for applications to Mitacs Globalink Research Award (GRA) programme in areas of strategic importance for the Canadian and international research communities. GRA programme facilitates mobility of graduate students between India and Canada. The link to apply for this programme can be accessed **here**. Deadline for submission is **December 7, 2020 | 5:00 PM (PT)**

Dr. Tony Kusalik's, Department of Bioinformatics, University of Saskatchewan, is interested in developing a particular project within the GRA thematic call and he is looking for a student who could be a part of this project. His query is as follows –

"Understanding of gene regulation is very important in breeding of better crop varieties since differences in gene expression can lead to differences in traits (phenotypes) such as water usage, yield, and response to heat stress. One mechanism controlling gene regulation is chromatin accessibility. Hence a better understanding of chromatin accessibility will lead to breeding of superior crop varieties. The ability to computationally predict chromatin accessibility based on genomic sequence can lead to that improved understanding. Portions of genomic sequence, or variations in portions of sequence, that lead to accurate prediction performance would provide candidates for further investigation as key components in the regulation mechanisms. Finally, a staple food crop for much of the world is wheat. Thus the project will involve using a deep learning approach to predict chromatin accessibility in wheat. The results will be identification of genomic sequences that, if further explored, could lead to the breeding of improved strains of wheat. As such the project fits under the grant program categories of "responsible AI" and "sustainable agriculture". Collaborators in plant science have available the necessary data, the software exists (though applied to other problems), and the requisite computing resources are available. All that is missing is a motivated and intelligent student."

Please let us know if your institution holds expertise in this area of research so that we can inform Dr Kusalik accordingly.

Look forward to hearing from you soon.

Please take care.

Regards,

Pikee Sharma

Programme Officer – Communication & Facilitation

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