

**University of Windsor
Senate**

5.10: **Report of the Vice-President, Research and Innovation**

Item for: **Information**

Forwarded by: **Michael Siu**

2022 has been a busy year for major institutional funding applications. Research and Innovation has been heavily engaged in the following:

1. *Canada Foundation for Innovation (CFI) – Innovation Fund.* UWindsor is leading a pan-Canadian initiative that engages 17 universities from coast to coast. There are a total of 120 researchers from 22 institutions involved with a total project value of ~ \$47M. The proposal includes funding for and installation of a Compact Accelerator for Neutron Scattering (CANS) in Windsor, as well as funding for access to international neutron facilities. The proposal is led by Dr. Drew Marquardt, Associate Professor, Department of Chemistry and Biochemistry; and President of the Canadian Institute for Neutron Scattering. The CANS infrastructure will enable boron neutron capture therapy, a new therapeutic modality for refractive cancers, including brain cancers, that are not readily treatable by surgery. CANS will also provide a local source of the fluorine isotope, ¹⁹F, for the synthesis of ¹⁹F-fluorodeoxyglucose (FDG), the radiochemical required in PET scanning. ¹⁹F has a half-life of < 2 hours, thereby necessitating a local source. A letter of intent for the CANS initiative was submitted in February and the full application is due on July 15, 2022. Thus far, the consortium of 17 universities has committed ~ \$15M of their CFI envelopes; a similar amount will be requested from provincial agencies. CFI's mandate is to fund up to 40% of a given project with the balance contributed by provincial governments and collaborating institutions. International neutron facilities will be supporting CANS in the form of co-investments.
2. *Canada First Research Excellence Fund (CFREF).* CFREF was created in 2015 to support universities in their areas of strength that are well-aligned with Canada's science, technology, and innovation priorities. The current competition is the third one. UWindsor is leading a pan-Canadian consortium of 11 universities from coast to coast, to seek funding for a very large-scale initiative on automobility and automotive engineering entitled FutureE 🍁 Car. The project lead is Dr. Narayan Kar, Professor, Department of Electrical and Computer Engineering; Tier 1 Canada Research Chair in Electrified Vehicles; and Director, Centre for Hybrid Automotive Research and Green Energy (CHARGE). The consortium of 11 universities includes all of Canada's research-intensive universities that have significant automotive science and engineering programs. Collaborating industry includes OEMs, Tiers I, II, and III manufacturers, power utilities and providers, telecoms, and battery manufacturers. FutureE 🍁 Car has seven research pillars (thrusts) that embrace the impact of electric and electrified vehicles (EVs) on mobility, society, and climate policy; security and safety; battery chemistries and materials; energy sources and integration; EV propulsion and drives; thermal management; and light-weighting and crash worthiness. The amount of research funding being sought is > \$100M, which will leverage an additional >\$100M from research partners. A letter of intent was submitted in April and the full application, upon invitation, is due on August 31, 2022.
3. *Canada Excellence Research Chair (CERC).* CERC funds key personnel in research fields that are aligned with Canada's science, technology, and innovation priorities. The goal is to repatriate expert Canadians or to recruit international talent. UWindsor will be applying for a CERC in automobility, autonomous, and connected vehicles. When successful, the CERC program will bring to the University \$1M per year of funding over seven years for a senior chair plus junior chairs, which will be aligned with UWindsor's EV initiatives. The registration deadline is September 15 with submission of the full application due on October 13, 2022.