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Canada's national laboratory for particle and nuclear physics
Laboratoire national canadien pour la recherche en physique nucléaire
et en physique des particules

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NSERC Brockhouse Canada Prize Honours Medical Isotope Team *CycloMed99*

(Vancouver, BC) – For their outstanding teamwork in realizing a solution for safe and reliable isotope production for hospitals in Canada, interdisciplinary research team CycloMed99 will be receiving a prestigious national award at a ceremony in Ottawa today. The Honourable David Johnston, Governor General of Canada, will present the NSERC Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering to the team in recognition of their seamless teamwork and successes.

The recipients of the Brockhouse Canada Prize include Drs. Paul Schaffer (TRIUMF), François Bénard (The University of British Columbia), Anna Celler (The University of British Columbia), Michael Kovacs (Western University), Thomas J. Ruth (TRIUMF), and John Valliant (McMaster University). *Full affiliations listed on page two.*

“My colleagues and I are proud to accept this award that so accurately reflects the spirit of collaboration shown by all over the past five years,” said Dr. Paul Schaffer, head of nuclear medicine at TRIUMF. “We stand on the shoulders of a tremendous team of experts from each of our home institutions.”

Drawing from expertise in physics, chemistry, and nuclear medicine, the team set out five years ago to develop a reliable, alternative means of production for a key medical isotope in order to eliminate the threat of a supply shortage – a catastrophic healthcare crisis for patients around the world. Technetium-99m (Tc-99m) is the world standard for medical imaging to diagnose cancer and heart disease. Every day, 5,000 medical procedures in Canada and 70,000 daily worldwide depend on this isotope. With funding support from NSERC, CIHR and Natural Resources Canada, the team developed technology that uses medical cyclotrons already installed and operational in major hospitals across Canada to produce enough Tc-99m on a daily basis.

"Our government is proud of TRIUMF's accomplishment in the development of new ways of increasing medical isotope supply," said Honorable Greg Rickford, Canada's Minister of Natural Resources. "This award is about collaboration, and the TRIUMF-led project is an excellent example of how Canadian researchers from many disciplines work together to solve important challenges."

This innovation is safer and more environmentally friendly than current technology because it eliminates the need for highly enriched uranium, also avoiding the generation of highly radioactive waste. Canada's healthcare system would save money by producing isotopes locally under a full-cost recovery model.

The project resulted in over a dozen scientific publications, several provisional patents and a training opportunity for more than 175 individuals.

Now, the research team is focused on working with the world's major cyclotron manufacturers to add factory-supported Tc-99m production capability to their existing product lines so the technology will become standard in future machines.

CycloMed99 is also working with a Canadian start-up company to license, transfer and sell this technology around the world. This will allow hospitals and companies with cyclotrons to retrofit their existing infrastructure with a Made in Canada solution to produce this valuable material.

Congratulations to the CycloMed99 team, recipients of the Brockhouse Canada Prize:

- Dr. Paul Schaffer, a chemist by training and Division Head, Nuclear Medicine at TRIUMF; Adjunct Professor, Dept. of Chemistry at Simon Fraser University; and Professor, Dept. of Radiology at the University of British Columbia (UBC);
- Dr. François Bénard, a clinician by training and BC Leadership Chair in Functional Cancer Imaging at the BC Cancer Agency; and Professor, Dept. of Radiology at UBC;
- Dr. Anna Celler, a medical physicist by training and Professor, Dept. of Radiology at UBC;
- Dr. Michael Kovacs, a chemist by training; PET Radiochemistry Facility Imaging Scientist at Lawson Health Research Institute; Associate Professor at Western University;
- Dr. Thomas J. Ruth, a nuclear chemist by training and researcher emeritus at TRIUMF; and Professor emeritus at UBC, and;
- Dr. John Valliant, a chemist by training and Scientific Director and CEO of the Centre for Probe Development and Commercialization; and Professor at McMaster University.

—With content from NSERC.

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Media Contacts

Melissa Baluk
Communications Coordinator, TRIUMF

604.222.7692
mbaluk@triumf.ca

Martin Leroux
Media and Public Affairs Officer, NSERC

613.943.7618
Martin.Leroux@nserc-crsng.gc.ca

About TRIUMF - TRIUMF is Canada's national laboratory for particle and nuclear physics. Together with its partner AAPS, Inc., TRIUMF also seeks to commercialize its technologies for the benefit of all Canadians. Located on the south campus of UBC, TRIUMF receives operating support from the Government of Canada through a contribution agreement via National Research Council Canada; the Government of British Columbia provides capital for new buildings. TRIUMF is owned and operated as a joint venture by a consortium of the following Canadian universities: University of Alberta, University of British Columbia, University of Calgary, Carleton University, University of Guelph, University of Manitoba, McGill University, McMaster University, Université de Montréal, University of Northern British Columbia, Queen's University, University of Regina, Saint Mary's University, Simon Fraser University, University of Toronto, University of Victoria, Western University, University of Winnipeg, and York University. Visit us at www.triumf.ca and tweet us @TRIUMFLab.