

**Scientists meet in Sherbrooke to start new Medical Isotope Production Facility:  
Cyclotron production of Tc-99m on Track!**

**Sherbrooke, March 26, 2012** –Today scientists from the CHUS' Centre de Recherche Clinique Étienne – Le Bel (CRCELB), University of Alberta in Edmonton and Advanced Cyclotron Systems Inc. (ACSI) in Vancouver are meeting in Sherbrooke to participate in commissioning of the CHUS new cyclotron facility and to start first production runs of technetium-99m (Tc-99m) using TR-24 – a 24 megaelectron volt (MeV) – cyclotron built and installed by ACSI. These first test runs will pave the road to establishing a conceptually new way of producing medical isotopes with far less environmental impact than those produced by nuclear reactors. These organizations first proposed the use of this technology to alleviate the medical isotope crisis back in 2009 when the NRU reactor was shut down for 15 months due to heavy water leaks. Joint work of these partners resulted in the first successful demonstration of Tc-99m production using TR-19 (19 MeV) cyclotrons with subsequent animal trials in Sherbrooke and Edmonton.

Today, the three partners held a workshop detailing the work that has been done on the project entitled “*Commercializing Cyclotron Production of Tc-99m in Canada*”. This \$11 million project is part of the \$35 million program initiated by Natural Resources Canada – *Non-Reactor Based Isotope Supply Program (NISP)* – created to diversify and improve Canada's isotope supply chain.

Sherbrooke's new TR-24 cyclotron, installed in January this year, is now operational and ready to start producing the precious material. “An identical cyclotron will become operational at our new facility this summer”, says Dr. Steve McQuarrie, from the University of Alberta. “This workshop allowed us to demonstrate that the new TR-24 cyclotron operates as expected up to 24 MeV and high power”, explains Dre. Brigitte Guérin, researcher at CHUS' CRCELB and professor at the Faculté de médecine et des sciences de la santé at the Université de Sherbrooke. “The last technetium shortage in 2009 and 2010 led to delays or cancellations for many nuclear medicine procedures in North America, impacting many clinical investigations that were deemed urgent. The results of our project is a significant step towards developing a viable alternative to the production of medical isotopes using aging and potentially dangerous nuclear reactors”, says Dr. Alexander Zyuzin, project principal investigator and director of R&D at ACSI in Vancouver.

**Next steps**

Scientists and engineers from CRCELB, University of Alberta and ACSI will continue the research and development program to investigate large-scale production of technetium-99m and other medical isotopes needed to advance growing needs of the Canadian health care system.

CRCELB will be focusing on the development of a secure supply of medical isotopes, including Tc-99m, in addition to the current PET tracers for CHUS's clinical and scientific programs. The mid-term goal is to increase production levels to supply up to 50% of Quebec's Tc-99m needs. The University of Alberta is establishing an isotope production facility that will meet the needs of Alberta. ACSI will continue working on improving cyclotron and target technology to further increase production capabilities of new versatile TR-24 systems.

**Informations and interviews coordination**

Maud Coussa-Jandl, communications advisor

Centre de recherche clinique Étienne – Le Bel du CHUS

819 346-1110, poste 12871 or mobile 819 570-1646

[mcoussajandl.chus@ssss.gouv.qc.ca](mailto:mcoussajandl.chus@ssss.gouv.qc.ca)

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