



<b>SUBJECT</b>	<b>TRIUMF INSTITUTE FOR ADVANCED MEDICAL ISOTOPES (IAMI) PROJECT</b>
<b>MEETING DATE</b>	<b>FEBRUARY 7, 2019</b>

Forwarded on the Recommendation of the President

**APPROVED FOR SUBMISSION**

Santa J. Ono, President and Vice-Chancellor

**FOR INFORMATION**

<b>Report Date</b>	January 9, 2019
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- Presented By**
- Gail Murphy, Vice-President Research & Innovation
  - Peter Smailes, Vice-President Finance & Operations
  - Dermot Kelleher, Vice-President Health and Dean, Faculty of Medicine
  - Michael White, Co-Interim Vice-President External Relations
  - John Metras, Associate Vice-President Facilities
  - Grant Miller, Director of Planning, Development Services

**EXECUTIVE SUMMARY**

The Institute for Advanced Medical Isotopes (IAMI) will be a state-of-the-art facility for research into next-generation, life-saving medical isotopes and radiopharmaceuticals to be located at the existing TRIUMF site on the UBC Vancouver campus. It will include an integrated series of labs and one of the most technologically advanced commercial cyclotrons in the world. The IAMI project will significantly increase British Columbia’s and Canada’s capacity for the sustainable and reliable production and distribution of medical isotopes currently critical for Canadian health research and clinical use, including Technetium-99m and Fluorine-18.

TRIUMF is Canada’s national laboratory for particle and nuclear physics. It is a stand-alone research entity owned and operated by a consortium of 20 Canadian universities located on a leased site in the South Campus area of the UBC Vancouver campus. It was founded in 1968 by The University of British Columbia, Simon Fraser University, and the University of Victoria to meet research needs that no single university could provide. The IAMI project is being developed fully under the auspices of TRIUMF and as such does not require approval from the UBC Board of Governors. The project is however subject to UBC Land Use Rules and will require Development and Building Permits from Campus and Community Planning which includes technical and design review and public consultation prior to issuance of a development permit.

Attachments

1. Site Plan
2. Renderings

STRATEGIC CORE AREAS SUPPORTED

- People and Places
- Research Excellence
- Transformative Learning
- Local / Global Engagement

**DESCRIPTION & RATIONALE** TRIUMF is a hub for discovery and innovation attracting almost 900 national and international users every year and providing advanced research facilities and opportunities to 150 students and postdoctoral fellows. In addition to the onsite program, TRIUMF serves as a key broker for Canada in global research in particle, nuclear, and accelerator physics.

Building on TRIUMF's 30-years of experience in nuclear medicine and life sciences, the Institute for Advanced Medical Isotopes (IAMI) will be a major new part of TRIUMF life sciences program for research into next-generation, life-saving medical isotopes and radiopharmaceuticals.

The 3400 m<sup>2</sup> IAMI facility, to be constructed on the current TRIUMF site, will bring together interdisciplinary TRIUMF faculty and students with partners from academia, not-for-profits, government and industry for research into a diversity of medical isotopes for health research and clinical use.

IAMI will significantly increase British Columbia's and Canada's capacity for the sustainable and reliable production and distribution of medical isotopes. These include isotopes for the imaging and diagnosis of cancer and cardiovascular diseases, for Alzheimer's and Parkinson's research and for the development of new, targeted treatments for late-stage cancers.

Similarly, IAMI will be a research hub for the Vancouver region's diverse nuclear medicine sectors, centrally managing the production of radioisotopes and radiotracers for clinical research and commerce. For example, IAMI will provide UBC's new Djavad Mowafaghian Center for Brain Health (DMCBH) with currently used and new experimental tracers for the DMCBH's advanced PET/MR scanner and a pre-clinical PET scanner.

The facility which will accommodate a new TR-24 cyclotron and integrated lab and office space is being developed fully under the auspices of TRIUMF and as such does not require approval from the UBC Board of Governors. The project is however subject to UBC Land Use Rules and will require Development and Building Permits from Campus and Community Planning (C+CP). The project complies with land use designations and both the Land Use Plan and the Vancouver Campus Plan. As with any other project undertaken on the UBC Vancouver campus, C+CP are conducting a development review process including technical and design review and public consultation prior to issuance of a development permit.

There is a desire to improve the TRIUMF campus and as such the building is both highly functional and esthetically pleasing to staff and visitors. The five-level building will be located on the south side of the TRIUMF leased property (away from the Wesbrook Village Neighbourhood), within the secured site. Of the five levels, two are below grade and house a cyclotron, substantial radiation shielding, and ancillary services, radioisotope processing laboratories are on the ground floor, and the two upper levels accommodate some office space and the extensive mechanical services required for the facility. The production and processing of radioactive isotopes that will occur in IAMI will be licensed by the Canadian Nuclear Safety Commission and by Health Canada.

While the technical review is ongoing, in December 2018, the proposal was reviewed and supported by the UBC Advisory Urban Design Panel and was well received at a public open house held on the site at TRIUMF.

<p><b>BENEFITS</b> Learning, Research, Financial, Sustainability &amp; Reputational</p>	<p>IAMI will support:</p> <ul style="list-style-type: none"> <li>• Secure isotope supplies: IAMI promises to secure a local supply of several important medical isotopes, including critical imaging isotope 99mTc, and to enable Canadian access to the global 99mTc market.</li> <li>• Next-generation cancer therapies: By developing targeted radionuclide therapies for metastatic cancers, IAMI researchers will contribute to improving health outcomes for Canadians, place Canada at the centre of this promising, fast-growing field, and allow Canadian access to radionuclide therapy markets</li> <li>• Accelerated global drug development: Some early-stage drug development trials rely on highly sought-after isotope-based radiotracers to gauge drug efficacy. IAMI will provide a unique infrastructure for radiotracer production, positioning Canada as a key player in this space.</li> <li>• Improved health outcomes for Canadians: IAMI will supply additional isotopes to the TRIUMF-UBC neuroimaging program at the Djavad Mowafaghian Centre for Brain Health and bring the power of personalized medicine to more patients who suffer from addiction, dementia, and other mental health issues. It will also boost the supply and diversity of important positron-emission tomography (PET) isotopes for BC Cancer patients, enabling thousands of PET scans annually at UBC and BC Cancer sites.</li> <li>• Industry partnerships and investment: IAMI will provide certified infrastructure for isotope production, enabling the development of new diagnostic and therapeutic substances by industry partners. The Institute will also establish a powerful training platform — at the interface between science and business — for young researchers.</li> </ul>
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<p><b>RISKS</b> Financial, Operational &amp; Reputational</p>	<p>The IAMI project is being developed fully under the auspices of TRIUMF and as such does not require approval from the UBC Board of Governors. With a successful 50 year history at UBC staff are confident IAMI poses no operational or reputational risk.</p>
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<p><b>COSTS</b> Capital &amp; Lifecycle Operating</p>	<p>Construction of the IAMI facility is estimated at \$31.8M and funded by TRIUMF with support from the Government of Canada and Province of British Columbia.</p>
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<p><b>SCHEDULE</b> Implementation Timeline</p>	<p>Construction of the facility is expected to begin in Spring 2019.</p>
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Attachment 1: Site Plan



Attachment 2: Renderings

