### **% TRIUMF**

# Welcome to the 6<sup>th</sup> RaDIATE Collaboration Meeting

#### **Oliver Kester**

Associate Laboratory Director – Accelerator Division



Discovery, accelerated

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#### Vançouver





TRIUMF is Canada's particle accelerator centre.

Its one of Canada's major investments in large-scale research infrastructure

With >500 staff and >200 students & post-doctoral researchers,

we advance isotope science and technology, both fundamental and applied.



Our multidisciplinary community uses TRIUMF's world-class infrastructure to drive research, train people, and deliver impact in science, medicine, and business



### **TRIUMF's Research**

Both fundamental and applied:



Expanding the boundaries of human knowledge



Advancing the treatment of critical diseases



Developing new technologies and innovations



Deepening our understanding of the natural world



TRIUMF has five decades of experience in building a rich particle accelerator infrastructure that nurtures cutting-edge research. The largest cyclotron in the world is the workhorse of the facility complex!

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### **∂**TRIUMF



### **TRIUMF** accelerator complex

#### Primary beam driver: Cyclotron, 520 MeV, H<sup>-</sup> Produces rare isotopes, neutrons and muons!

Isotope Separator and Accelerator facility - ISAC Isotope Separator Online (ISOL) facility ISAC-I: Normal conducting-linac, 0.15-1.8 MeV/u ISAC-II: Superconducting-linac, 1.5-16.5 MeV/u

#### 4 Cyclotrons for medical isotope production

#### Advanced Rare Isotope Laboratory

- ARIEL

Superconducting electron linac 30 MeV, 10 mA, cw



### **Innovation and Collaboration**

### **Selected Partners**









# Advanced Rare Isotope Laboratory (ARIEL)

- Leveraging made-in-Canada superconducting RF accelerator technology, ARIEL will triple TRIUMF's rare isotope production capacity – enabling more science, more training, and more commercial activity
- Represents ~\$100 million investment by federal and provincial governments.
- Supported by 21 universities from across Canada.



## Institute for Advanced Medical Isotopes

- IAMI is a > \$50M facility supported by the Government of Canada, the Province of British Columbia and other partners
- The Institute will serve as a global centre for nuclear medicine research and radiopharmaceutical development.
- Full funding for the new facility was announced by PM Justin Trudeau on November 1, 2018 at TRIUMF.









### Thank you Merci

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