Tuesday,
April 27th
3:45 pm – Zoom mtg.

Accelerator-based radionuclide and radiopharmaceutical research at TRIUMF

Abstract: From its inception, the Life Sciences Division at TRIUMF has leveraged the laboratory's extensive particle accelerator infrastructure and expertise to develop novel technologies that help understand life at the molecular level. The production of short-lived (half-life <2 hr) positron emitting isotopes (C-11, F-18, N-13, etc.) and corresponding radiopharmaceuticals has long provided a foundation for the division's interdisciplinary science program. Recent efforts have focused on the collaborative development of novel F-18 chemistry and applications toward the synthesis of radiolabeled amino acids as novel imaging agents for cancer.

Beyond imaging, a global renaissance in the production and application of various therapeutic, alpha- (Ac-225, Bi-213, At-211), beta- (Lu-177, Y-90) and Auger- (Hg-197, Sb-119) emitting isotopes is underway; and TRIUMF is actively engaged in producing many of these isotopes, and corresponding radiopharmaceuticals, in anticipation of enabling clinical trials for the treatment of late-stage cancers.

This presentation will provide a summary of our radioisotope and radiopharmaceutical research efforts, with a focus on some of the recent imaging and therapeutic applications being pursued. The seminar will conclude with a brief discussion on new infrastructure being built at TRIUMF.

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