



Medical Physics Seminar

Monday, October 31, 2016

1345 HSLC — 4:00 PM



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Positron-Emitting Isotopes of Manganese and Applications Thereof

Manganese is an essential trace element in mammalian biology and has many prospective applications as an imaging agent in both PET and MRI including cell tracking, neural tract tracing, immunoPET, and β -cell mass quantification. Of the three positron-emitting isotopes of manganese, ^{52g}Mn ($t_{1/2}$: 5.6 d, β^+ : 29%) is best suited to preclinical research and ^{51}Mn ($t_{1/2}$: 46 min, β^+ : 97%) is best suited to clinical PET based on decay characteristics. Robust methods for the preparation of ^{51}Mn and ^{52g}Mn on low-energy medical cyclotrons are essential to the investigation of basic science and clinical questions relating to the biological role of manganese in disease. This talk will detail the development of radiomanganese preparation methods and briefly describe preclinical imaging results in a mouse model of type-I diabetes.

1345 HEALTH SCIENCES LEARNING CENTER (HSLC) - 4:00 - 5:00 P.M.