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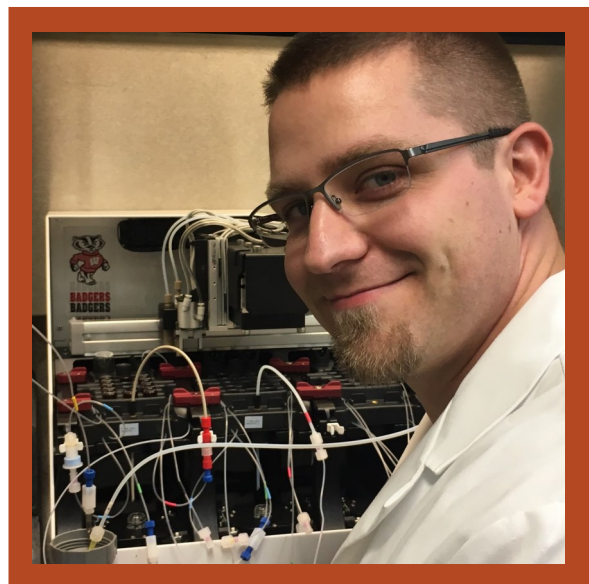
Medical Physics Seminar

Monday, February 5, 2018

1325 HSLC ~ 4:00 P.M.

Tobey J. Betthausser

Student of Dr. Bradley T Christian
Department of Medical Physics
School of Medicine and Public Health



Characterization of Positron Emission Tomography Radioligands for In Vivo Tau Imaging

The microtubule associated protein, tau, is implicated in neurodegenerative diseases and has potential for predicting future cognitive decline prior to symptoms of disease and unraveling the interactions between pathological features in Alzheimer's disease. Since the development of first-generation tau selective positron emission tomography (PET) radioligands in 2013, the nuclear medicine community has rapidly developed several biomarkers with potential for monitoring tau in vivo. Detailed characterization of radiopharmaceutical production and in vivo pharmacokinetics and spatial binding patterns of newly developed radiopharmaceuticals is needed to allow the use of these tracers for detecting tau in clinically oriented research and therapeutic drug trials. This work describes optimization and automation of radiopharmaceutical production, and in vivo characterization of three tau PET radioligands [^{18}F]THK-5317, [^{18}F]THK-5351, and [^{18}F]MK-6240 for use in humans.

1325 Health Sciences Learning Center (HSLC) 4:00 - 5:00 P.M.