PET Investigation of Neurodevelopment and Neurodegeneration: Translating methods to models (and other assorted alliterations)

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12 noon (Please arrive early for lunch)
Fitkin Amphitheatre, LMP 1094, 789 Howard Ave.
*Note talk location change*

Abstract:

PET is an ideally suited imaging modality for tracking neurochemical changes in the brain throughout the life course of neurodevelopment and neurodegeneration. However, a major challenge for all longitudinal neuroimaging studies is acquiring an adequate sample size within budgetary constraints. While choice of radiotracer is a critical consideration for study design, careful selection of human cohorts and animal models are also essential for detecting the subtle neurochemical alterations resulting from disease-specific pathology or environmental perturbations. Nonhuman primates serve as excellent models not only for radiotracer development and characterization, but also as models of human development, behavior and aging. This lecture will present our research focusing on PET studies using the nonhuman primate model for radiotracer characterization and translation and as a model for studying neuroadaptive mechanisms. Also presented will be our PET studies of neurodegeneration in individuals with Down syndrome as part of an ongoing project to identify biomarkers for Alzheimer’s Disease in this population.