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Uses and abuses of μ MRI and simultaneous μ PET/ μ MRI: A Chemists talks with Physicists about Biology

Tuesday 14 June 2016 15:00 (45 minutes)

Like any technology, μ MRI and μ PET have appropriate and inappropriate uses. I will discuss why one might bother with either; then cover a range of applications: how 3D atlas of mouse and quail can be created from high resolution MR images; delve into how lesions and brain structure changes in mouse models of multiple sclerosis are amenable to study with MRI; describe how statistical parametric mapping (SPM) of multiple MRI brain scans of transgenic mouse models provide information about neuronal circuitry alterations. Monitoring changes in tumor physiology is an important aspect of both clinical and pre-clinical imaging –ADC, DCE and cell tracking work will be discussed. Recording of μ PET and μ MR images simultaneously is a recent development with a host of uses and abuses –work in mouse models of atherosclerosis and oncology require the sensitivity of μ PET and resolution with anatomical context of μ MRI.

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