

Coregistered microPET/MRI Brain Scans of Titi Monkey

Purpose of Study

The numerous differences in rodent and primate neurobiology make a non-human primate model of the neuroendocrine basis of social bonding desirable. Titi monkeys (*Callicebus cupreus*) form strong pair-bonds, characterized by preference for a familiar partner and activation of the hypothalamic-pituitary-adrenal axis upon separation. We used functional neuroimaging in order to investigate baseline differences in brain metabolism of pair-bonded and non-bonded monkeys.

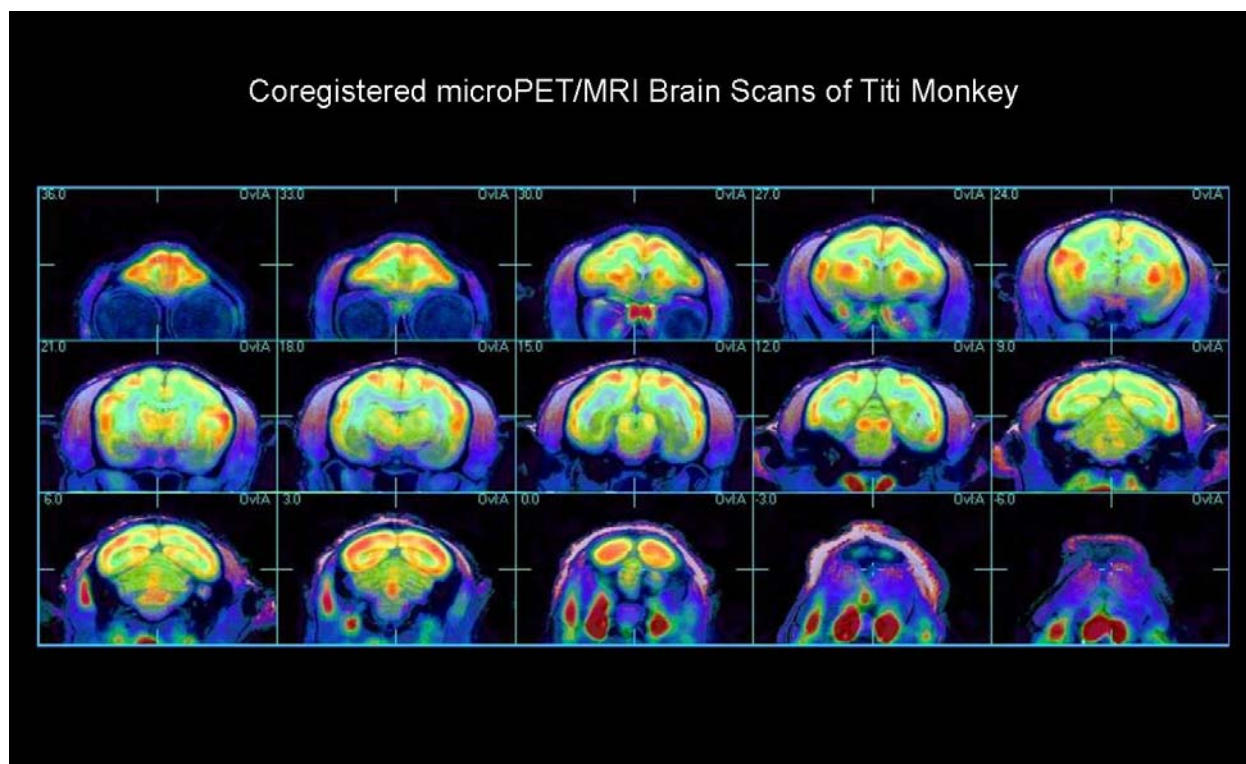
Protocol:

Conscious animals were administered approximately 1 mCi of FDG (IV) and were allowed to be active for 35 minutes before being anesthetized with ketamine (20/mg/kg, ip). Animals were positioned on the animal bed and were placed under isoflurane anesthesia for the 1-hour brain scan. Energy Window; 350-750, timing window: 6 ns.

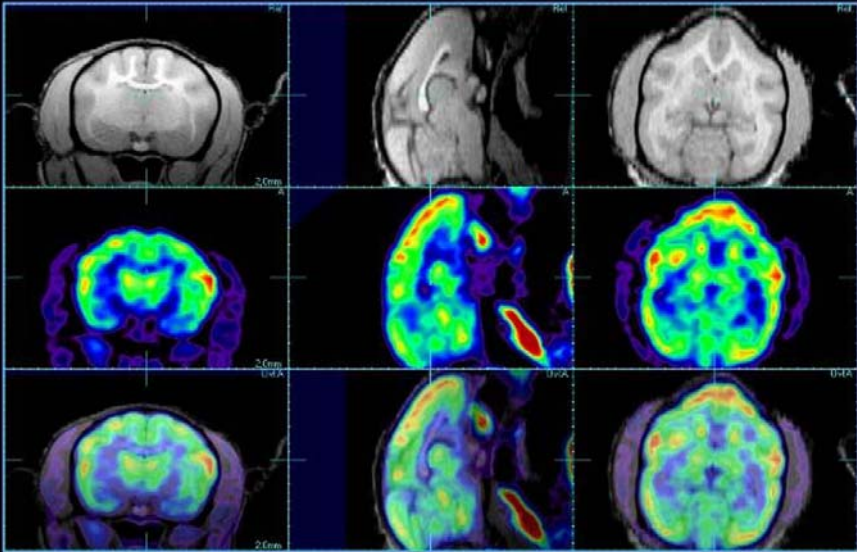
For MRI (1.5 Tesla), the animal was sedated with ketamine (10 mg/kg, im) and medazolam (0.1 mg/kg, im), and maintained on isoflurane during the 25-30 min MRI scan.

Scanner- microPET P4

Title: Coregistered microPET/MRI Brain Scans of Titi Monkey
Subject: Titi monkey (1.3kg)
Instrument: microPET P4
Tracer / Contrast Agent(s): FDG



MRI, microPET, and MRI/mPET Brain Slice Coregistered in 3 Planes



Data courtesy of CMGI University of California, Davis