Limitations

1. they did not validate the binding of the tracer to clinical measures such as gray matter atrophy, CSF or plasma analytes or cerebral glucose metabolsim known to be affected by or correlated to tau deposition.

2. They did not test the tracer in non-AD tau-related such as Down's syndrome, fronto-temporal lobar degeneration (FTLD), Guam Parkinsonism-dementia complex, progressive supranuclear palsy (PSP), etc ..

3. They could not properly explain why 18F-T807 only binds to human PHF-tau and not to mouse PHF-tau.

Questions:

1. Apart from PHF-tau, does it bind to ay other known ultrastructural conformations of tau? As with A-beta, the polymorphism of tau aggregates might affect tracer binding. With PiB, there were some cases of familial autosomal dominant forms of AD or early stages of Abeta deposition lacking the typical fibrillar Abeta conformation which resulted in little PiB retention. This could also happen with other tau conformations.

2. Is the 25x fold selectivity for tau over Abeta enough to perform tau imaging in vivo? Because of lower tau concentrations than Abeta in the brain (5-20 times lower), previous studies suggested that a 20-50 fold selectivity for PHF tau over Abeta is required to image tau.