

Supporting Information

Radiochemical Synthesis and Evaluation of 3-[¹¹C]Methyl-4-aminopyridine in Rodents and Nonhuman Primates for Imaging Potassium Channels in the CNS

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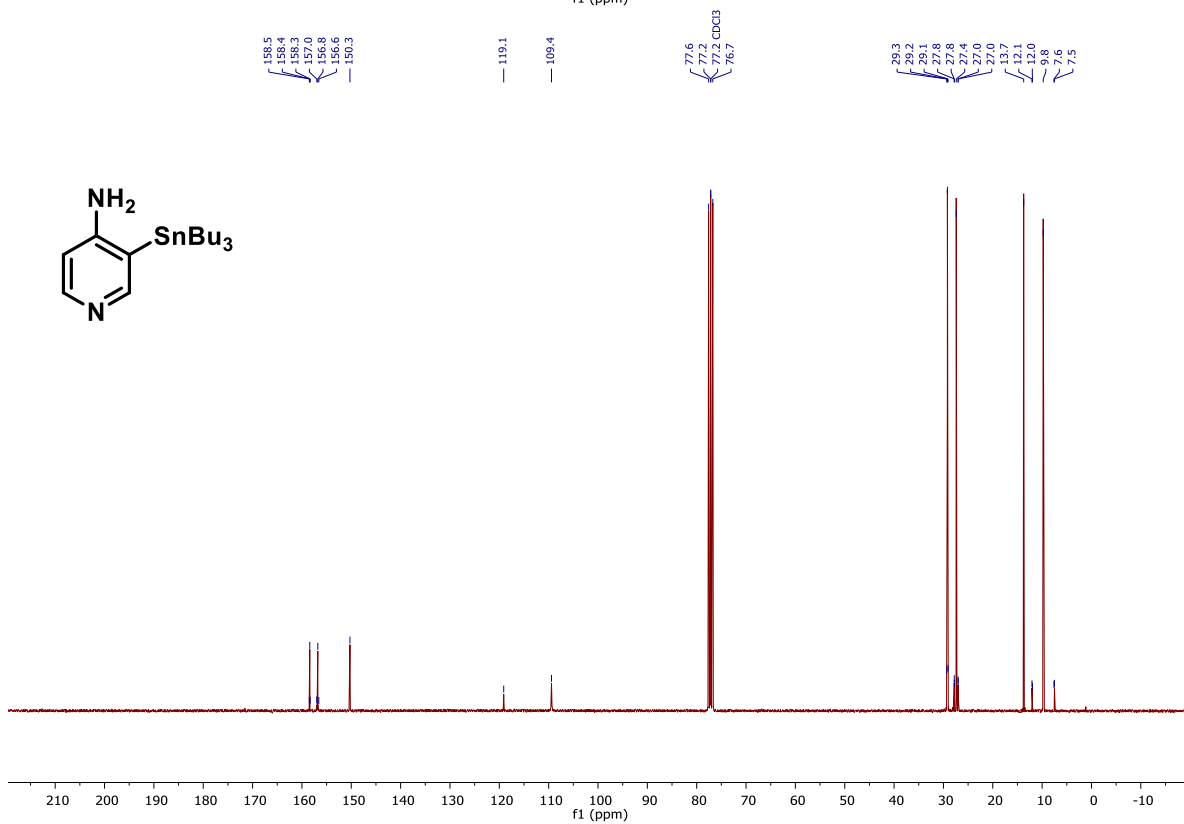
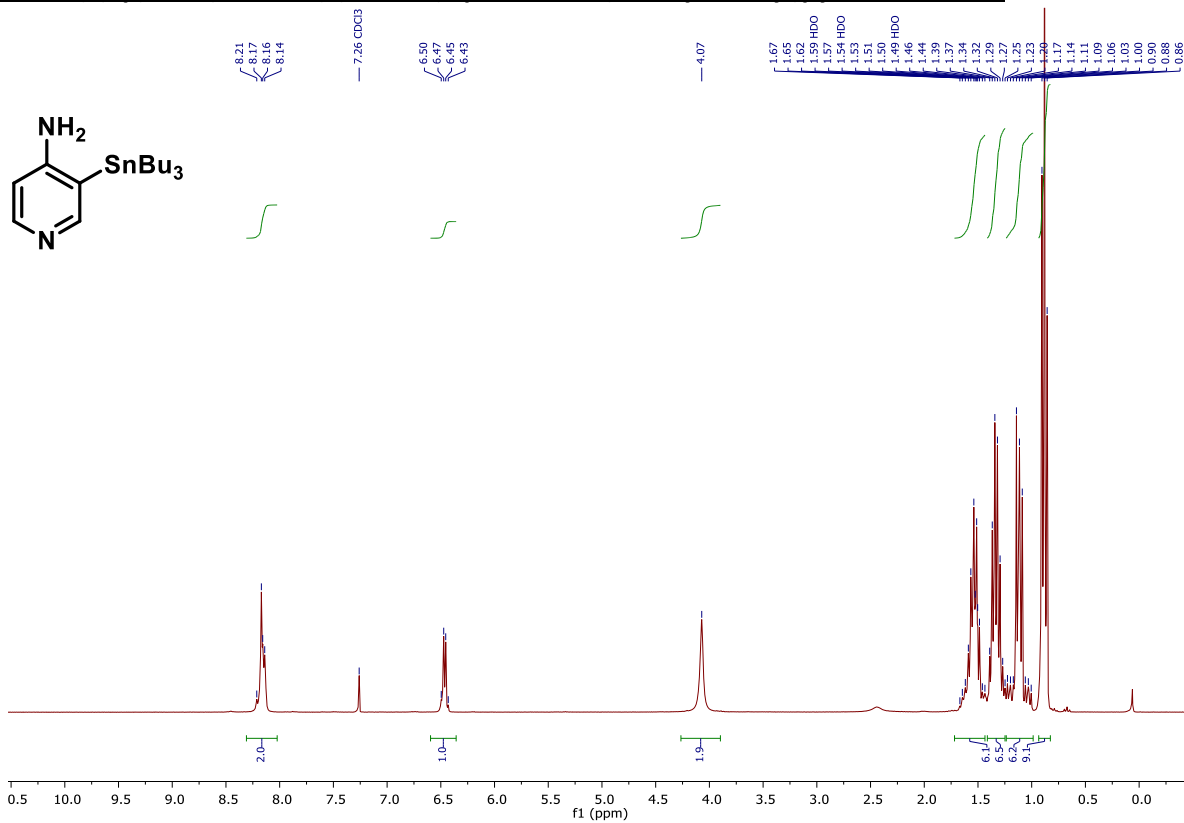
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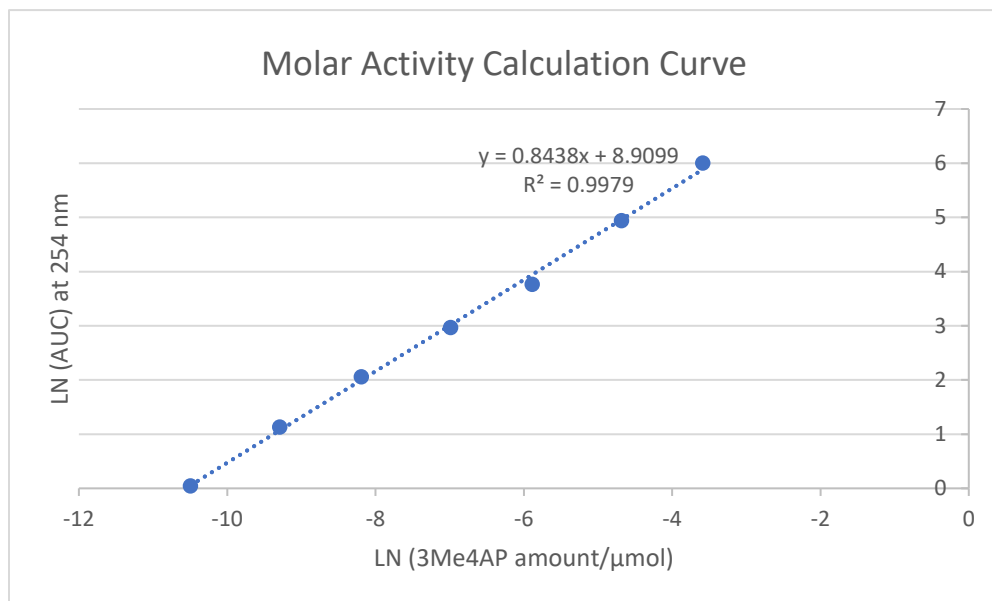
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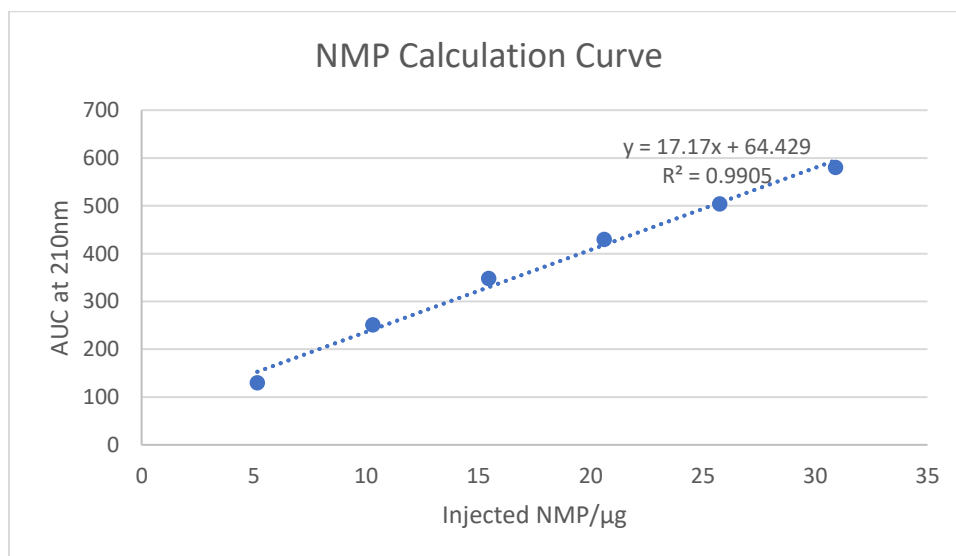
$\{^1\text{H NMR}\}$ (up) and $\{^{13}\text{C NMR}\}$ (bottom) spectra of 3-(tributylstannyl)pyridin-4-amine:



The molar activity calculation curve was determined by injecting serial concentrations of 3Me4AP solution in the same volume into HPLC to get the corresponding area under the curve at 254 nm.



NMP residue determination in the [¹¹C]3Me4AP dose solution: NMP calculation curve was determined by injecting serial amounts of NMP into HPLC to get the corresponding area under the curve at 210 nm with waters XBridge C18 column (3.55 μm, 4.6 × 150 mm) and gradient 3 to 30% acetonitrile in 10mM NH₄HCO₃ aqueous solution as mobile phase.



Then the final [¹¹C]3Me4AP solution in the semiprep HPLC mobile phase was injected into the HPLC and calculated finding that the concentration of NMP is 43±8 ppm, which means the absolute NMP amount in 10 mL solution is 0.43±0.08 mg.

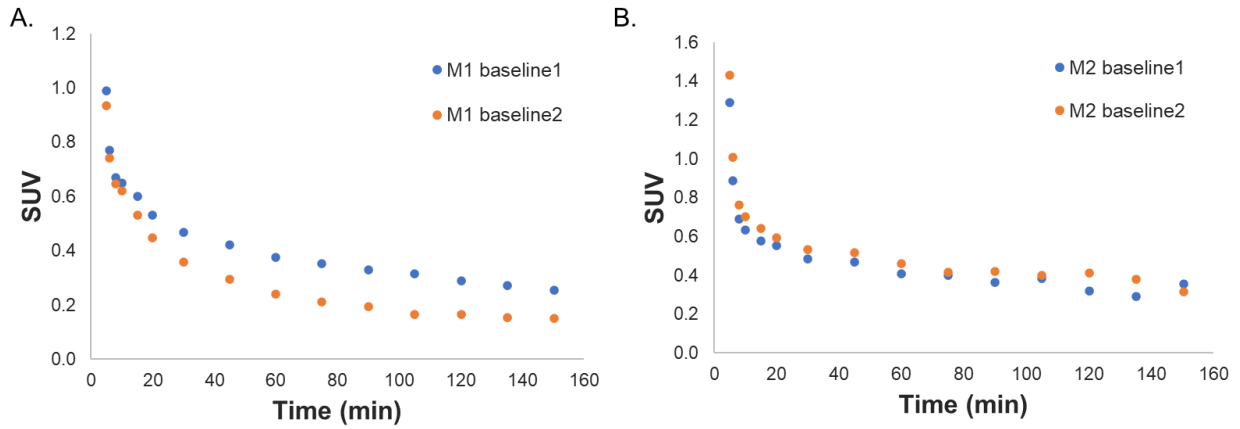


Figure S1. [^{11}C]3Me4AP concentration in plasma of monkey 1 and monkey 2: time–activity curves from 5 min to 150 min.

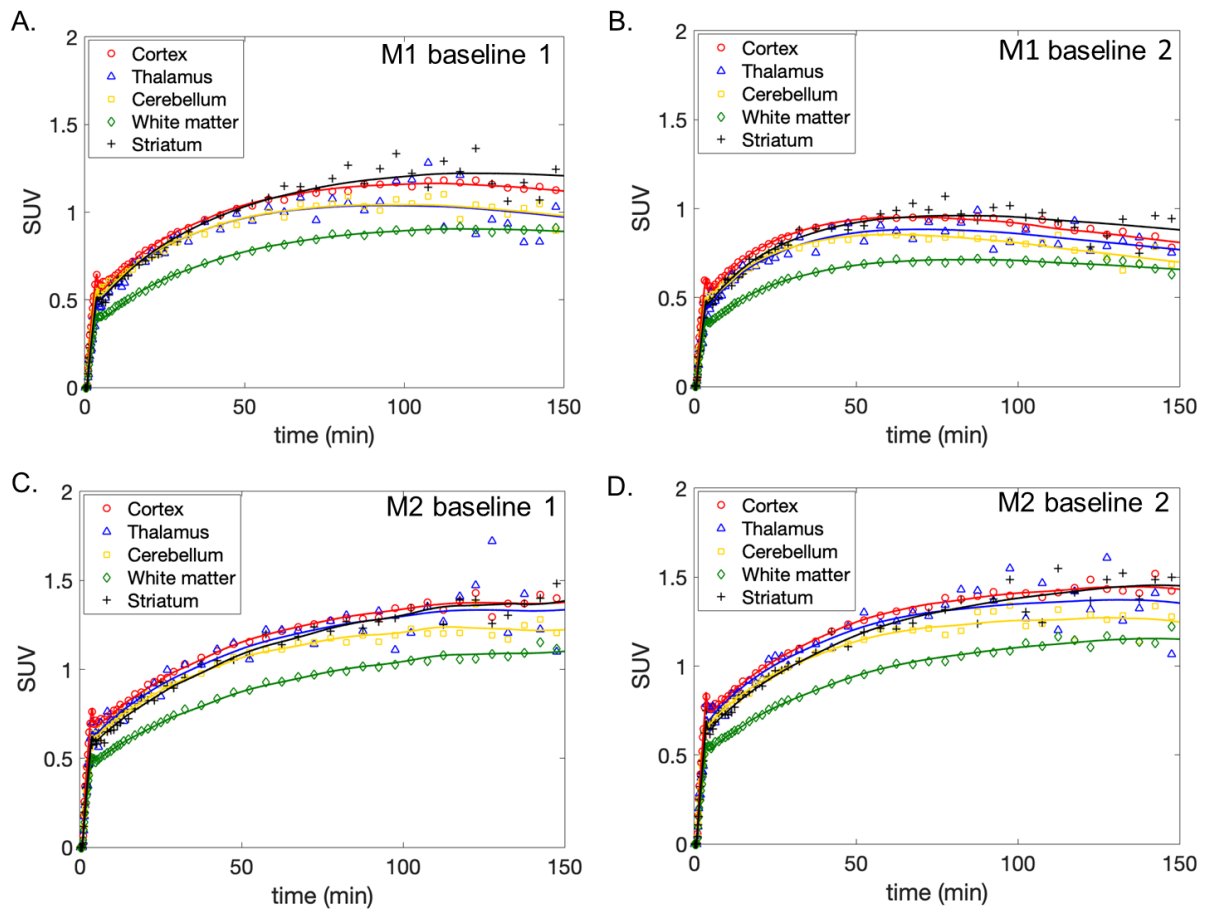


Figure S2. NHP time–activity curves of selected brain regions in monkey 1 and monkey 2 with two replicated baseline scans.

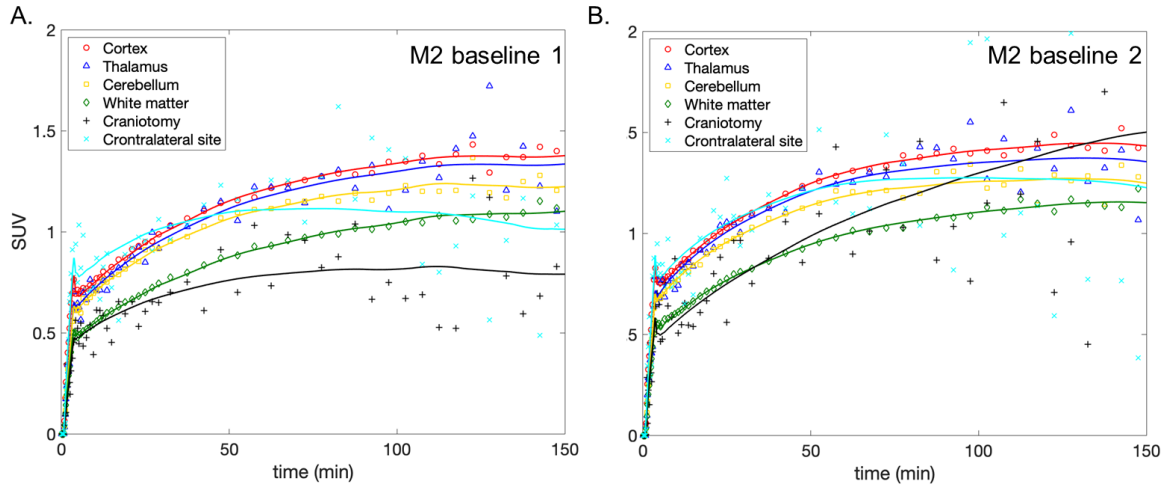


Figure S3. NHP time–activity curves including the lesion in light blue of monkey 2 with two replicated baseline scans.