## **Supporting Information**

# Synthesis and Evaluation in Monkey of [<sup>18</sup>F]4-Fluoro-*N*-methyl-*N*-(4-(6-(methylamino)pyrimidin-4-yl)thiazol-2-yl)benzamide ([<sup>18</sup>F]FIMX), a Promising Radioligand for PET Imaging of Brain Metabotropic Glutamate Receptor 1 (mGluR1)

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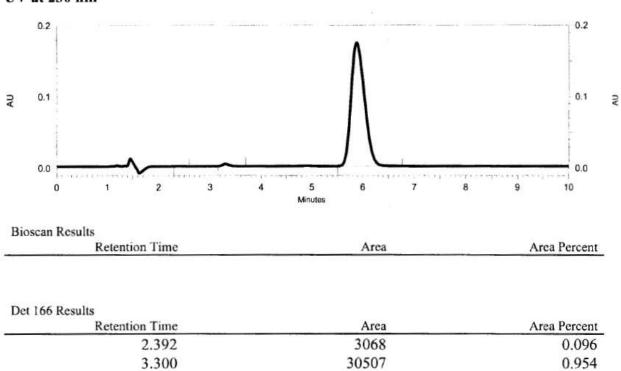
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1. HPLC chromatogram from the analysis of **11** 

5.875

HPLC Method:30% B (MeCN), 70% A (0.1%TFA), 2 ml/min, 15 min, at 230nm HPLC column: Phenomenex Luna, 250 mm x4.6 mm, 10 micron. Back pressure 1.8 kpsi



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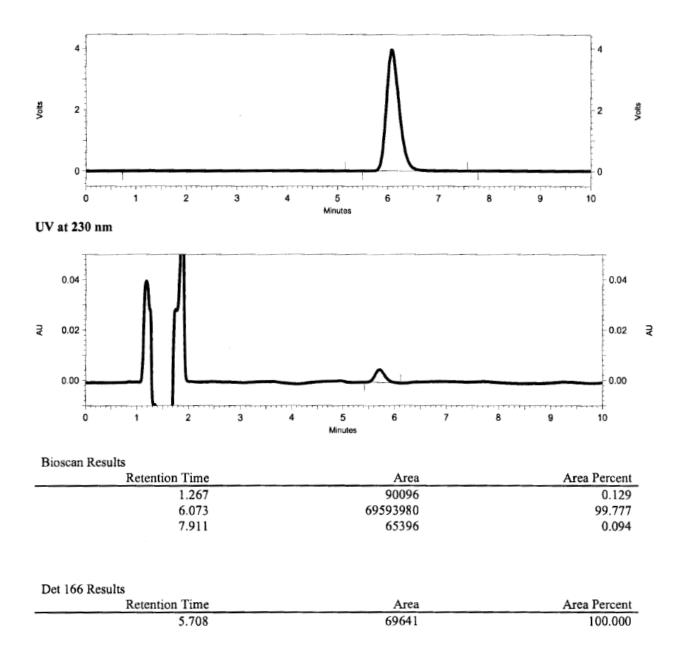
98.950

UV at 230 nm

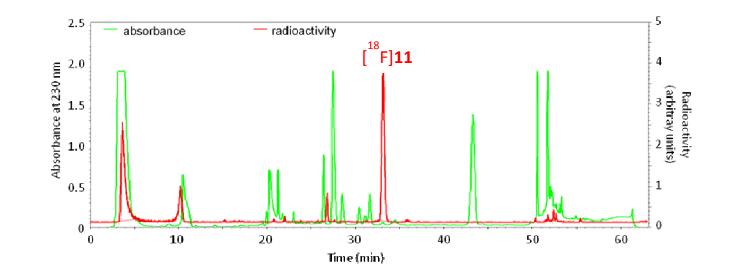
## 2. HPLC chromatograms from the analysis of $[^{18}F]$ **11**

HPLC Method:30% B (MeCN), 70% A (0.1%TFA), 2 ml/min, 15 min, at 230nm Phenomenex Luna, 250 mm x4.6 mm, 10 micron. Back pressure 1.8 kpsi

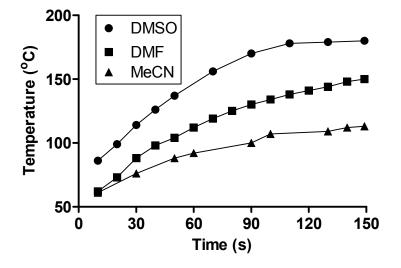
#### **Bioscan Radioactivity**



3. A typical chromatogram from the HPLC purification of  $[^{18}F]$ **11**.



4. Temperature time-courses for different reaction solvents under microwave irradiation.



The initial solvent volume was 0.6 m, and microwave power was 90 W. Temperature was read from the microwave apparatus from its integral infrared sensor.