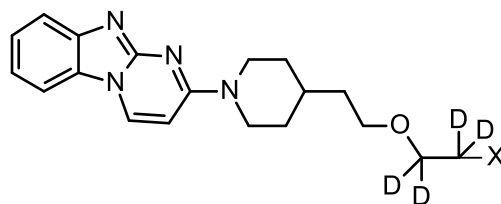
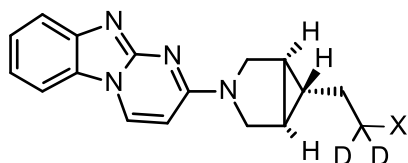
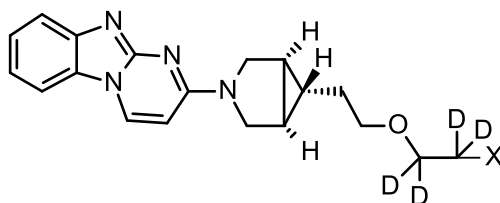
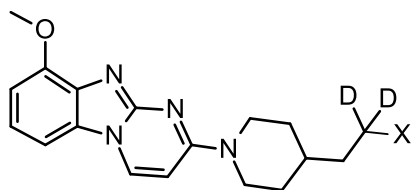
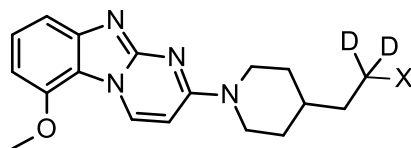
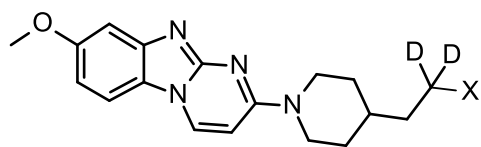
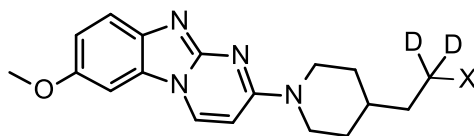
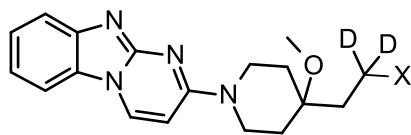
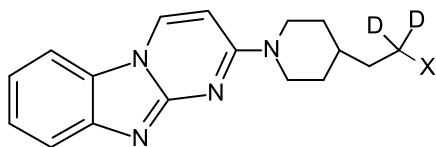


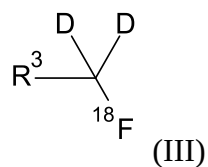
In one aspect, the disclosure includes a compound selected from:



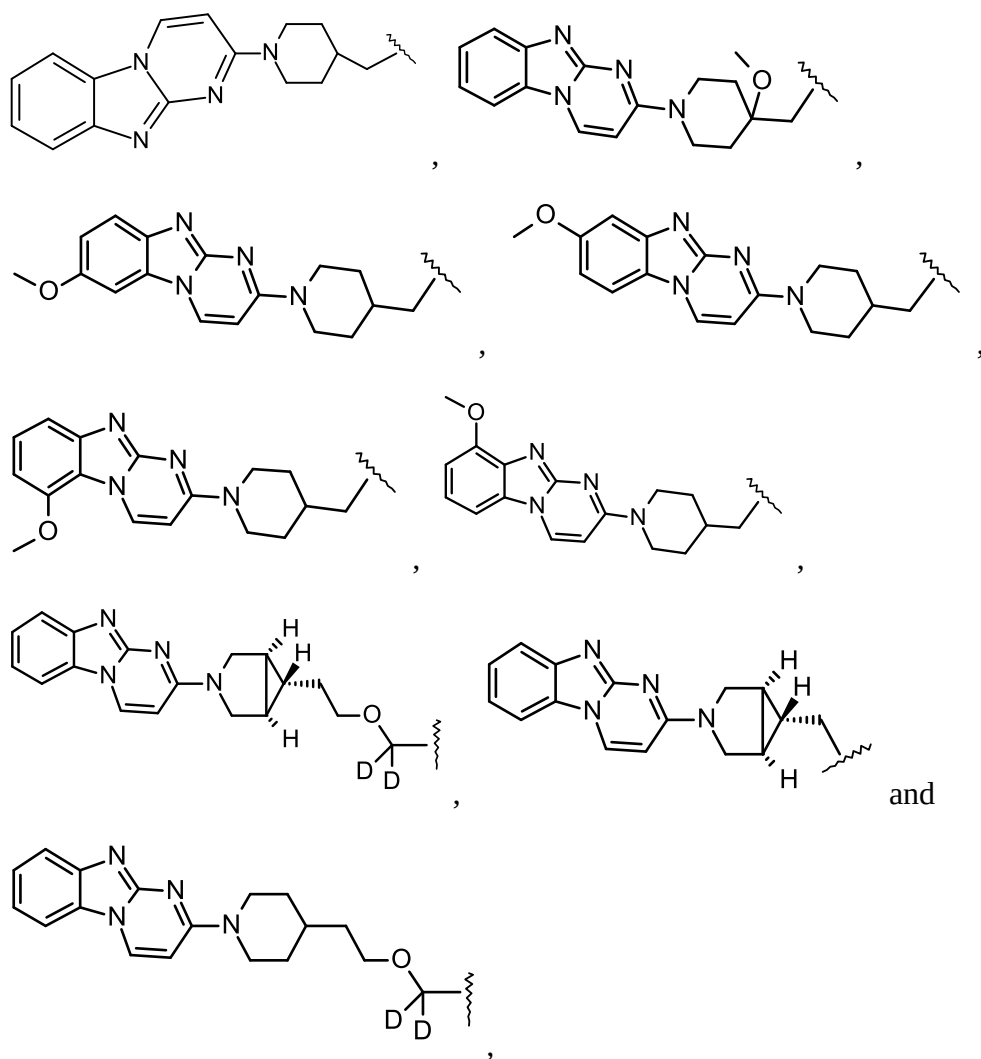
5

wherein X is bromine, hydroxy or a toluenesulfonyl group, ~~and salts thereof.~~

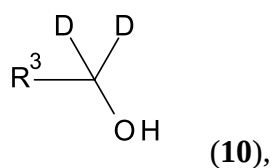
In another aspect, the disclosure includes a method for the preparation of a compound of formula (III)



10 wherein R^3 is a group selected from



the method comprising the bromination, followed by ^{18}F fluorination, of a compound of formula (10)



and optionally converting the compound obtained into a salt thereof.

BRIEF DESCRIPTION OF THE FIGURES

Figure 1: Autoradiographic evaluation of binding properties of [A] and [A]-d2 using human brain tissues.

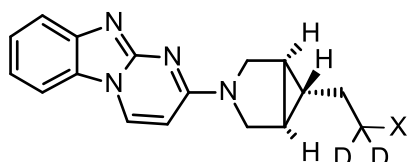
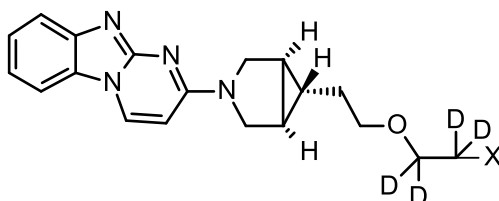
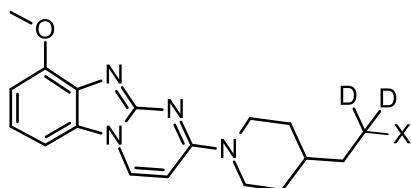
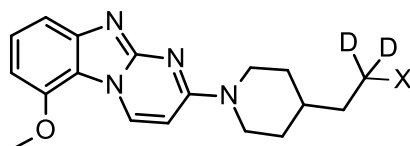
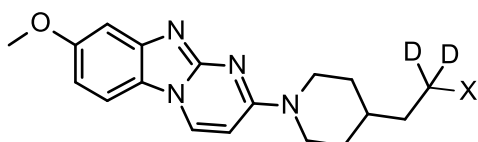
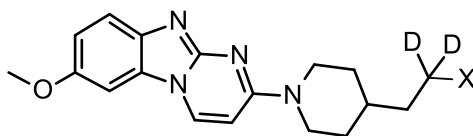
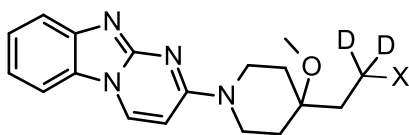
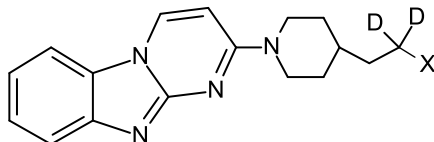
Figure 2: In vitro assessment of metabolic stability of [^{18}F][A]-d2 and [^{18}F][A] using mouse and human liver microsomes. The formation of [^{18}F]fluoride (2A and 2B) and amount of remaining parent compound were measured (2C and 2D) at 5, 15 and 45 min.

Figure 3: Human and mouse liver microsome assay performed with non-radiolabeled [A] and [A]-d2 showed higher stability of [A]-d2 and slower metabolism of both compounds in presence of human liver microsomes.

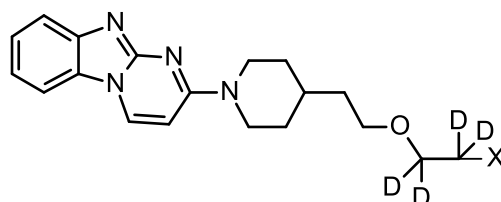
CLAIMS

We claim:

1. A compound selected from:



and

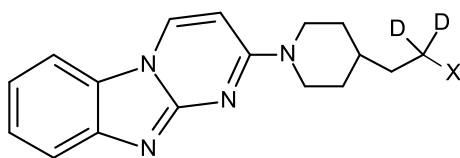


wherein X is bromine, hydroxy or a toluenesulfonyl group, ~~and salts thereof~~.

2. ~~A-The~~ compound according to claim 1, wherein X is bromine or hydroxy, ~~and salts thereof~~.

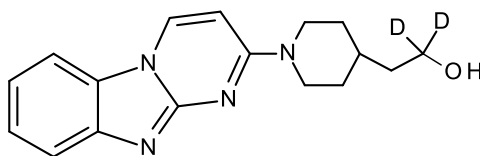
3. ~~A-The~~ compound according to claim 1, wherein X is hydroxy, ~~and salts thereof~~.

4. ~~A-The~~ compound according to claim 1, which is



wherein X is bromine or hydroxy, ~~and salts thereof.~~

5. ~~A~~ The compound according to claim 1, which is



~~and salts thereof.~~

6. The compound according to any one of claims 1 to 5, wherein each deuterated carbon atom has an deuterium isotopic enrichment factor of at least 3500.

7. The compound according to any one of claims 1 to 5, wherein each deuterated carbon atom has an deuterium isotopic enrichment factor of at least 4000.

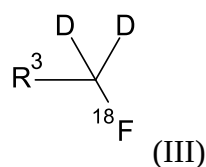
8. The compound according to any one of claims 1 to 5, wherein each deuterated carbon atom has an deuterium isotopic enrichment factor of at least 4500.

9. The compound according to any one of claims 1 to 5, wherein each deuterated carbon atom has an deuterium isotopic enrichment factor of at least 5000.

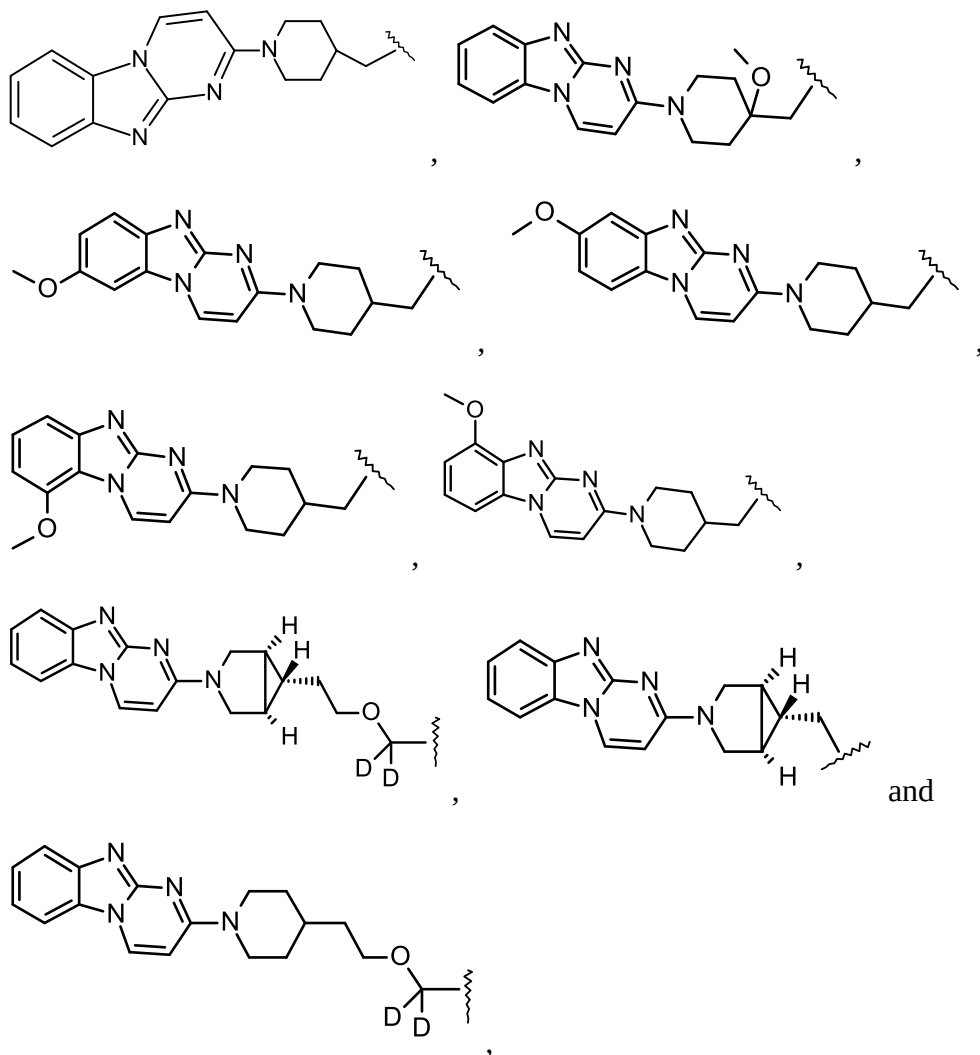
10. The compound according to any one of claims 1 to 5, wherein each deuterated carbon atom has an deuterium isotopic enrichment factor of at least 5500.

11. The compound according to any one of claims 1 to 5, wherein each deuterated carbon atom has an deuterium isotopic enrichment factor of at least 6000.

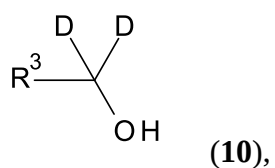
12. A method for the preparation of a compound of formula (III)



wherein R³ is a group selected from



the method comprising ~~the~~bromination, followed by ¹⁸F fluorination, of a compound of formula (10)



10 and optionally converting the compound obtained into a salt thereof.

~~713.~~ The method according to claim ~~612~~, wherein R³ is

