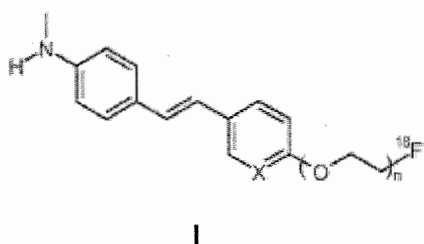


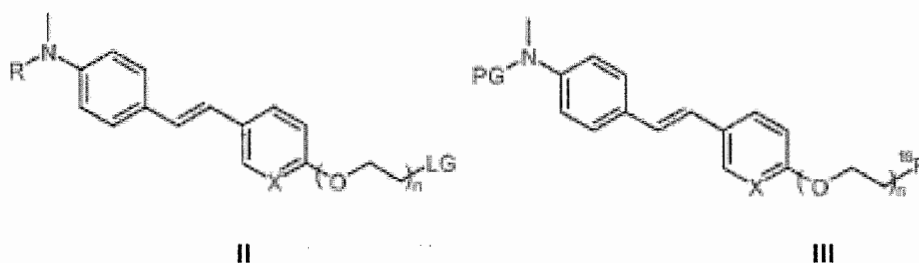
CLAIMS

1. A Method for producing a compound of Formula I



5 comprising the steps of:

Step 1: Radiolabeling compound of Formula II with a F-18 fluorinating agent, to obtain compound of Formula I, if **R = H** or to obtain compound of Formula III, if **R = PG**



10 _____ wherein radiolabeling is carried out in a non-protic solvent or a mixture of a
_____ non-protic solvents,

Step 2: If **R = PG**, cleavage of the protecting group **PG** to obtain a compound of Formula I

Step 3: Purification and Formulation of a compound of Formula I

15 wherein:

n = 1-63,

X is selected from the group consisting of

a) CH,

b) N,

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R is selected from the group consisting of

a) H,

b) **PG**,

PG is an "Amine-protecting group",

5 **LG** is a leaving group,

wherein at least 7.5 or more μmol of a compound of formula **II** are used.

2. A method according to claim 1, wherein **PG** is selected from the group consisting of:

a) Boc,

10 b) Trityl and

c) 4-Methoxytrityl.

3. A method according to claim 1 or 2, wherein **LG** is selected from the group consisting of:

a) Halogen and

15 b) Sulfonyloxy,

Halogen is chloro, bromo or iodo.

4. A method according to claim 3, wherein Sulfonyloxy is selected from the group comprising:

20 a) Methanesulfonyloxy,

b) *p*-Toluenesulfonyloxy,

c) (4-Nitrophenyl)sulfonyloxy,

d) (4-Bromophenyl)sulfonyloxy.

5. A method according to claim 1, wherein $n = 3$ and $X = \text{CH}$.

6. A method according to claim 1, wherein $n = 3$, $X = \text{CH}$, $R = \text{Boc}$, and $\text{LG} = \text{Methanesulfonyloxy}$.

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7. A method according to claims 1 - 6, wherein 10-50 μmol of a compound of formula II is used.

8. A method according to claim 7, wherein 10-30 μmol of a compound of formula II is used.

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9. A method according to claims 1 - 6, wherein at least 10 ~~or more~~ μmol of a compound of formula II is used.

10. A method according to claims 1 - 9, wherein the method is performed as a fully automated process.

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