(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 April 2011 (14.04.2011)

PCT

(10) International Publication Number
WO 2011/042529 A1

(51) **International Patent Classification**:
C07D 487/04 (2006.01)

(21) **International Application Number**:
PCT/EP2010/065077

(22) **International Filing Date**:
8 October 2010 (08.10.2010)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:

0917611.6	8 October 2009 (08.10.2009)	GB
61/250,892	13 October 2009 (13.10.2009)	US

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(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

WO 2011/042529 A1

(54) **Title**: AUTOMATED RADIOSYNTHESIS

(57) **Abstract**: The present invention provides a method to obtain radiofluorinated compounds useful for in vivo imaging $GABA_A$ receptors. The method of the invention is high-yielding and may conveniently be carried out on an automated synthesizer such as Fastlab™. A further aspect of the invention is a cassette suitable for carrying out the automated method of synthesis of the invention. Novel precursor compounds useful in the method of the invention are also provided, as are a number of novel compounds obtained by the method of the invention.