



(43) International Publication Date
27 June 2013 (27.06.2013)

(10) International Publication Number
WO 2013/092974 A1

(51) International Patent Classification:
C07D 471/04 (2006.01)

(21) International Application Number:
PCT/EP2012/076590

(22) International Filing Date:
21 December 2012 (21.12.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PA 2011 00990 21 December 2011 (21.12.2011) DK
61/578,320 21 December 2011 (21.12.2011) US

(71) Applicant: H. LUNDBECK A/S [DK/DK]; Ottiliavej 9,
DK-2500 Valby (DK).

(72) Inventors: KEHLER, Jan; Nymøllevej 28, DK-2800 Lyn-
gby (DK). NIELSEN, Jacob; Bodilsgade 2, 4.th., DK-
1732 København V (DK). PÜSCHL, Ask; Aksel Møllers
Have 2, 4.th., DK-2000 Frederiksberg (DK). KILBURN,
John Paul; Kærsgårdvej 7, DK-4690 Haslev (DK).
LANGGÅRD, Morten; Rågevej 20, DK-2600 Glostrup
(DK).

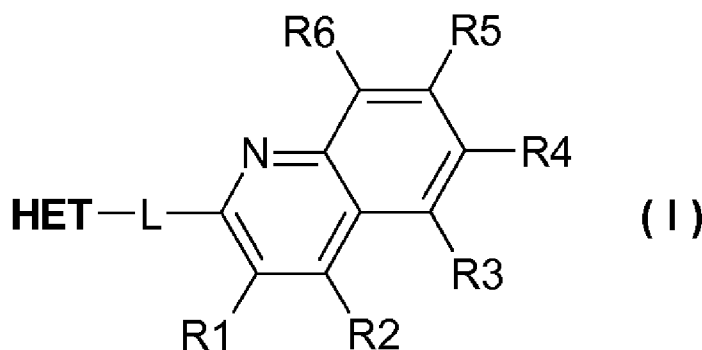
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU,
RW, 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, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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))

(54) Title: QUINOLINE DERIVATIVES AS PDE10A ENZYME INHIBITORS



(57) Abstract: The present invention provides quinoline derivatives of formula (I) that are PDE10A enzyme inhibitors, and as such are useful to treat neurodegenerative and psychiatric disorders. Especially, the invention provides compounds that are highly selective for PDE10 over other PDE subtypes. The present invention also provides pharmaceutical compositions comprising compounds of the invention and methods of treating disorders using the compounds of the invention.

WO 2013/092974 A1