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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 May 2012 (18.05.2012)

PCT

(10) International Publication Number
WO 2012/063085 A2

(51) International Patent Classification:
C07D 205/08 (2006.01)

(21) International Application Number:
PCT/GB2011/052211

(22) International Filing Date:
11 November 2011 (11.11.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1019078.3 11 November 2010 (11.11.2010) GB
1019527.9 18 November 2010 (18.11.2010) GB

(71) Applicant *(for all designated States except US)*: **REDX PHARMA LIMITED** [GB/GB]; Merseybio Incubator, Crown Street, Liverpool L69 7ZD (GB).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **CRAIGHEAD, Mark** [GB/GB]; c/o Redx Pharma Limited, Douglas Bank House, Wigan Lane, Wigan WN1 2TB (GB). **PALIN, Ronald** [GB/GB]; c/o Redx Pharma Limited, Douglas Bank House, Wigan Lane, Wigan WN1 2TB (GB). **MURRAY, Neil** [GB/GB]; Redx Pharma Limited, Douglas Bank House, Wigan Lane, Wigan WN1 2TB (GB). **LINDSAY, Derek** [GB/GB]; c/o Redx Pharma Limited, Douglas Bank House, Wigan Lane, Wigan WN1 2TB (GB).

(74) Agent: **HARRISON GODDARD FOOTE**; Belgrave Hall, Belgrave Street, Leeds, Yorkshire LS2 8DD (GB).

(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, 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, 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).

Declarations under Rule 4.17:

[Continued on next page]

(54) **Title**: DRUG DERIVATIVES

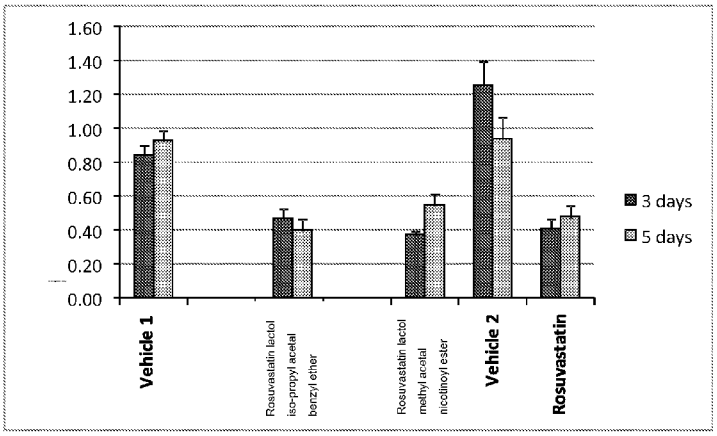


Figure 1

(57) **Abstract**: The present invention relates to derivatives of known active pharmaceutical compounds. These derivatives are differentiated from the parent active compound by virtue of being redox derivatives of the active compound. This means that one or more of the functional groups in the active compound has been converted to another group in one or more reactions which may be considered to represent a change of oxidation state. We refer to these compounds generally as redox derivatives. The derivatives of the invention may be related to the original parent active pharmaceutical compound by only a single step transformation, or may be related via several synthetic steps including one or more changes of oxidation state. In certain cases, the functional group obtained after two or more transformations may be in the same oxidation state as the parent active compound (and we include these compounds in our definition of redox derivatives). In other cases, the oxidation state of the derivative of the invention may be regarded as being different from that of the parent compound. In many cases, the compounds of the invention have inherent therapeutic activity on their own account. In some cases, this activity relative to the same target or targets of the parent compound is as good as or better than the activity which the parent compound has against the target or targets.

WO 2012/063085 A2

— *of inventorship (Rule 4.17(iv))*

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*