

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
14 May 2009 (14.05.2009)

PCT

(10) International Publication Number
WO 2009/060197 A8(51) International Patent Classification:
C07D 487/04 (2006.01) A61P 35/00 (2006.01)
A61K 31/519 (2006.01)E-28029 Madrid (ES). OYARZABAL SANTAMARI-
NA, Julen [ES/ES]; Centro Nacional de Investigaciones
Oncologicas (CN, IO), Melchor Fernandez, Almagro 3,
E-28029 Madrid (ES).(21) International Application Number:
PCT/GB2008/003744(74) Agent: MCNEENEY, Stephen; Potter Clarkson LLP,
Park View House, 58 The Ropewalk, Nottingham NG1
5DD (GB).(22) International Filing Date:
10 November 2008 (10.11.2008)

(25) Filing Language: English

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG,
SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
07380308.2 8 November 2007 (08.11.2007) EP
0810792.2 12 June 2008 (12.06.2008) GB(71) Applicant (for all designated States except US): CEN-
TRO NACIONAL DE INVESTIGACIONES ONCO-
LOGICAS (CNIO) [ES/ES]; Melchor Fernández, Alma-
gro 3, E-28029 Madrid (ES).

(72) Inventors; and

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).(75) Inventors/Applicants (for US only): PEVARELLO,
Paolo [IT/IT]; Newron Pharmaceuticals, Via Ariosto 21,
I-20091 Bresso(MI) (IT). GARCIA COLLAZO, Ana
Maria [ES/ES]; Centro Nacional de Investigaciones On-
cologicas (CNIO), Melchor Fernandez, Almagro 3,
E-28029 Madrid (ES). RODRIGUEZ HERGUETA,
Antonio [ES/ES]; Centro Nacional de Investigaciones
Oncologicas (CN, IO), Melchor Fernandez, Almagro 3,
E-28029 Madrid (ES). SALUSTE, Carl-Gustaf Pierre
[SE/ES]; Centro Nacional de Investigaciones Oncologicas
(CN, IO), Melchor Fernandez, Almagro 3, E-28029
Madrid (ES). RAMOS LIMA, Francisco Javier
[ES/ES]; Centro Nacional de Investigaciones Oncologicas
(CN, IO), Melchor Fernandez, Almagro 3, E-28029
Madrid (ES). GONZALEZ CANTALAPIEDRA, Es-
ther [ES/ES]; Centro Nacional de Investigaciones Onco-
logicas (CN, IO), Melchor Fernandez, Almagro 3,

Published:

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

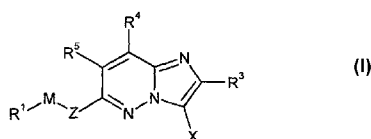
(48) Date of publication of this corrected version:

17 June 2010

(15) Information about Correction:

see Notice of 17 June 2010

(54) Title: IMIDAZOPYRIDAZINES FOR USE AS PROTEIN KINASE INHIBITORS

(57) Abstract: There is provided compounds of formula (I): wherein Z, M, R¹, X, R³, R⁴ and R⁵ have meanings given in the
description, an pharmaceutically-acceptable esters, amides, solvates or salts thereof, which compounds are useful in the treatment of
diseases in which inhibition of a protein kinase (e.g. a PIM family kinase or PI3-K) is desired and/or required, an particularly in
the treatment of cancer.

WO 2009/060197 A8