Title (en)

BENZO¬A PHENAZIN-11-CARBOXAMIDE DERIVATIVES AND THEIR USE AS JOINT INHIBITORS OF TOPOMERASE I AND II

Title (de)

BENZO¬A PHENAZIN-11-CARBOXAMID DERIVATE UND IHRE VERWENDUNG ALS GLEICHZEITIGE INHIBITOREN DER TOPOMERASE I AND II

Title (fr)

DERIVES DE BENZO A PHENAZINE-11-CARBOXAMIDE ET LEUR UTILISATION COMME INHIBITEURS COMMUNS DE LA TOPOMERASE I ET II

Publication

EP 1240148 A1 20020918 (EN)

Application

EP 00979799 A 20001201

Priority

- GB 0004609 W 20001201
- GB 9928542 A 19991202

Abstract (en)

[origin: WO0146157A1] A compound which is a benzo[a]phenazine-11-carboxamide derivative of formula (I) wherein each of R<1> to R<4>, which are the same or different, is selected from hydrogen, halogen, hydroxyl, C1-C6 alkoxy which is unsubstituted or substituted, heteroaryloxy, C1-C6 alkyl which is unsubstituted or substituted, nitro, cyano, azido, amidoxime, CO2R<10>, CON(R<12>)2, OCON(R<12>), SR<10>, SOR<11>, SO2(R11), SO2N(R<12>)2, N(R<12>)2, NR<10>SO2R<11>, N(SO2R<11>)2NR<10>(CH2)nCN, NR<10>COR<11>, OCOR<11> or COR<10>; each of R<5> to R<7>, which are the same or different, is selected from hydrogen, halogen, hydroxy, C1-C6 alkoxy, C1-C6 alkyl, SR<10> and N(R<12>)2; Q is C1-C6 alkylene which is unsubstituted or substituted by (i) C1-C6 alkyl which is unsubstituted or substituted, (ii) hydroxy, provided that the hydroxy group is not alpha to either of the N atoms adjacent to Q in formula (I), (iii) CO2R<10>, or (iv) CON(R<12>); R<8> and R<9>, which are the same or different, are each hydrogen or C1-C6 alkyl, or R<8> and R<9> together with the nitrogen atom to which they are attached form a saturated 5- or 6-membered N-containing heterocyclic ring which may include one additional heteroatom selected from O, N and S, or one of R<8> and R<9> is an alkylene chain optionally interrupted by O, N or S, which is attached to a carbon atom on the alkylene chain represented by Q to complete a saturated 5- or 6-membered N-containing heterocyclic ring as defined above; or a pharmaceutically acceptable salt thereof; with the proviso that at least one R<1> to R<4> is other than hydrogen. These compounds are inhibitors of topoisomerase I and/or topoisomerase II and can be used to treat tumours, including tumours which express MDR.

IPC 1-7

C07D 241/46; C07D 403/12; A61K 31/498

IPC 8 full level

A61K 31/498 (2006.01); **A61P 31/04** (2006.01); **A61P 31/10** (2006.01); **A61P 31/12** (2006.01); **A61P 35/00** (2006.01); **A61P 43/00** (2006.01); **C07D 241/46** (2006.01); **C07D 403/12** (2006.01)

CPC (source: EP KR)

A61K 31/498 (2013.01 - KR); **A61P 31/04** (2018.01 - EP); **A61P 31/10** (2018.01 - EP); **A61P 31/12** (2018.01 - EP); **A61P 35/00** (2018.01 - EP); **A61P 43/00** (2018.01 - EP); **C07D 241/46** (2013.01 - EP KR); **C07D 401/12** (2013.01 - KR); **C07D 403/12** (2013.01 - EP)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

WO 0146157 A1 20010628; AU 1718401 A 20010703; AU 784397 B2 20060323; BR 0016093 A 20020820; CA 2392873 A1 20010628; CN 1304380 C 20070314; CN 1433406 A 20030730; EP 1240148 A1 20020918; GB 0215275 D0 20020814; GB 2373499 A 20020925; GB 2373499 B 20041117; GB 9928542 D0 20000202; HK 1046133 A1 20021227; HK 1046133 B 20050415; HU P0300392 A2 20030728; HU P0300392 A3 20030929; JP 2003518103 A 20030603; KR 100767613 B1 20071019; KR 20020070305 A 20020905; MX PA02005476 A 20030922; MY 136029 A 20080731; PL 356482 A1 20040628; TW I280242 B 20070501; ZA 200204296 B 20030529

DOCDB simple family (application)

GB 0004609 W 20001201; AU 1718401 A 20001201; BR 0016093 A 20001201; CA 2392873 A 20001201; CN 00818709 A 20001201; EP 00979799 A 20001201; GB 0215275 A 20001201; GB 9928542 A 19991202; HK 02107392 A 20021010; HU P0300392 A 20001201; JP 2001547068 A 20001201; KR 20027007033 A 20020531; MX PA02005476 A 20001201; MY PI20005670 A 20001201; PL 35648200 A 20001201; TW 89125715 A 20001202; ZA 200204296 A 20020529