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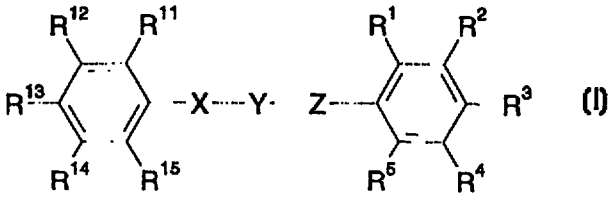
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(I)

(57) Abstract

A compound having formula (I) or a pharmaceutically acceptable salt thereof wherein one of R^1, R^2 and R^3 is a cyclic or heterocyclic acidic functional group having a pKa value below 8 or a group which is convertible in vivo to such a group; R^4, R^5 and the two other substitutents R^1, R^2 and R^3 are each independently selected from hydrogen; alkyl; alkoxy; hydroxy; halogen; trifluoromethyl; cyano; nitro; amino; alkylamino; $-COOR^7$; $-NHSO_2$–alkyl; $-SO_2N(R^7)_2$; $-SO_2OR^7$; $-CO-R^7$; aryl, biphenyl, phenylamino, phenoxy or heteroaryl, wherein the aryl, biphenyl, phenylamino, phenoxy or heteroaryl group may be substituted one or more times with substituents selected from alkyl, hydroxy, alkoxy, halogen, trifluoromethyl, cyano, nitro, amino and alkylamino; aryl and heteroaryl, or R^3 and R^4 or R^4 and R^5 together form a cyclic structure and the other substituents R^1, R^2, R^3, R^4 and R^5 is as defined above; and R^7 is hydrogen, alkyl, amino or phenyl; Y is –CO–, –CS–, $–SO_2$–, or $–C(=N–R^8)$–, wherein R^8 is hydrogen, alkyl, or cyano; X is –NH–, $–CH_2–NH$–, or $–SO_2–NH$–; Z is NR^6, O, –CH=CH–, –N=CH–, or –CH=N–; R^6 is hydrogen, or alkyl; R^{11}, R^{12}, R^{13}, R^{14} and R^{15} are each independently selected from hydrogen; alkyl; alkoxy; hydroxy; halogen; trifluoromethyl; cyano; nitro; amino; alkylamino; $-COOR^7$; $-NHSO_2$–alkyl; $-SO_2N(R^7)_2$; $-SO_2OR^7$; $-CO-R^7$; aryl, biphenyl, phenylamino, phenoxy or heteroaryl, wherein the aryl, biphenyl, phenylamino, phenoxy or heteroaryl group may be substituted one or more times with substituents selected from alkyl, hydroxy, alkoxy, halogen, trifluoromethyl, cyano, nitro, amino and alkylamino; aryl and heteroaryl, or one of R^{11} and R^{12}, R^{12} and R^{13}, R^{13} and R^{14} and R^{14} and R^{15} together form a cyclic structure and the other substituents R^{11}, R^{12}, R^{13}, R^{14} and R^{15} is as defined above and R^7 is as defined above; these compounds are particularly useful in the treatment of sickle–cell anaemia.