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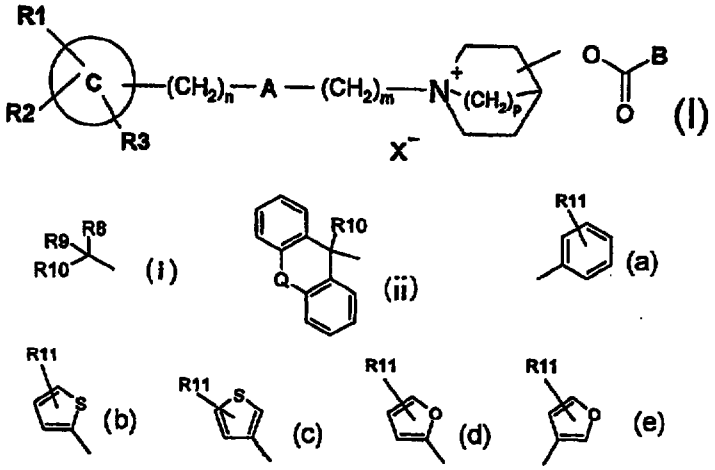
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(54) Title: NOVEL QUINUCLIDINE DERIVATIVES AND MEDICINAL COMPOSITIONS CONTAINING THE SAME




(57) Abstract: A compound according to formula (I) wherein z© is a phenyl ring, a $C_4$ to $C_9$ heteroaromatic compound containing one or more heteroatoms, or a naphthalenyl, 5,6,7,8-tetrahydronaphthalenyl or biphenyl group; $R^1$, $R^2$ and $R^3$ each independently represent a hydrogen or halogen atom, or a hydroxy group, or a phenyl, $-OR^4$, $-SR^4$, $-NR^4R^5$, $-NHCOR^4$, $-CONR^4R^5$, -CN, $-NO_2$, $-COOR^4$ or $-CF_3$ group, or a straight or branched lower alkyl group which may optionally be substituted, for example, with a hydroxy or alcoxy group, wherein $R^4$ and $R^5$ each independently represent a hydrogen atom, straight or branched lower alkyl group, or together form an alicyclic ring; or $R^1$ and $R^2$ together form an aromatic, alicyclic or heterocyclic ring; n is an integer from 0 to 4; A represents a $-CH_2-$, $-CH=CR^6-$, $-CR^6=CH-$, $-CR^6R^7-$, -CO-, -O-, -S-, -S(O)-, $SO_2$ or $NR^6$- group, wherein $R^6$ and $R^7$ each independently represent a hydrogen atom, straight or branched lower alkyl group, or $R^6$ and $R^7$ together form an alicyclic ring; m is an integer from 0 to 8; provided that when m = 0, A is not $-CH_2-$; p is an integer from 1 to 2 and the substitution in the azoniabicyclic ring may be in the 2,3 or 4 position including all possible configurations of the asymmetric carbons; B represents a group of formula (i) or (ii), wherein $R^{10}$ represents a hydrogen atom, a hydroxy or methyl group; and $R^8$ and $R^9$ each independently represents formulae (a), (b), (c), (d) and wherein $R^{11}$ represents a hydrogen or halogen atom, or a straight or branched lower alkyl group and Q represents a single bond, $-CH_2-$, $-CH_2-CH_2$, -O-, $-O-CH_2-$, -S-, $-S-CH_2-$ or -CH=CH-, and when (i) or (ii) contain a chiral centre they may represent either configuration; X represents a pharmaceutically acceptable anion of a mono or polyvalent acid, which shows high affinity for muscarinic $M_3$ receptors (Hm3).

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