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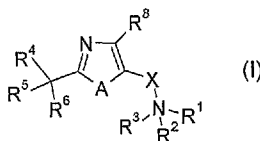
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(54) Title: AZOLE AND THIAZOLE DERIVATIVES AND THEIR USE



(57) Abstract: Compounds of formula (I) are useful in the treatment of diseases where enhanced M3 receptor activation is implicated, such as respiratory tract diseases: wherein (i) R¹ is C₁-C₆-alkyl or hydrogen; and R² is hydrogen or a group -R⁷, -Z-Y-R⁷, -Z-NR⁹R¹⁰, -Z-CO-NR⁹R¹⁰, -Z-NR⁹_[AE11]C(O)O-R⁷, or -Z-C(O)-R⁷; and R³ is a lone pair, or C₁-C₆-alkyl; or (ii) R¹ and R³ together with the nitrogen to which they are attached form a heterocycloalkyl ring, and R² is a lone pair or a group -R⁷, -Z-Y-R⁷, -Z-NR⁹R¹⁰, -Z-CO-NR⁹R¹⁰, -Z-NR⁹_[AE12]C(O)O-R⁷, or -Z-C(O)-R⁷; or (iii) R¹ and R² together with the nitrogen to which they are attached form a heterocycloalkyl ring, said ring being substituted by a group -Y-R⁷, -Z-Y-R⁷, -Z-NR⁹R¹⁰, -Z-CO-NR⁹R¹⁰, -Z-NR⁹_[AE13]C(O)O-R⁷, or -Z-C(O)-R⁷; and R³ is a lone pair, or C₁-C₆-alkyl; R⁴ and R⁵ are independently selected from the group consisting of aryl, aryl-fused-heterocycloalkyl, heteroaryl, C₁-C₆-alkyl, cycloalkyl; R⁶ is -OH, C₁-C₆-alkyl, C₁-C₆-alkoxy, hydroxy-C₁-C₆-alkyl, nitrile, a group CONR⁸ or a hydrogen atom; A is an oxygen or a sulfur atom; X is an alkylene, alkenylene or alkynylene group; R⁷ is an C₁-C₆-alkyl, aryl, aryl-fused-cycloalkyl, aryl-fused-heterocycloalkyl, heteroaryl, aryl(C₁-C₈-alkyl)-, heteroaryl(C₁-C₈-alkyl)-, cycloalkyl or heterocycloalkyl group; R⁸ is C₁-C₆-alkyl or a hydrogen atom; Z is a C₁-C₁₆-alkylene, C₂-C₁₆-alkenylene or C₂-C₁₆-alkynylene group; Y is a bond or oxygen atom; R⁹ and R¹⁰ are independently a hydrogen atom, C₁-C₆-alkyl, aryl, aryl-fused-heterocycloalkyl, aryl-fused-cycloalkyl, heteroaryl, aryl(C₁-C₆-alkyl)-, or heteroaryl(C₁-C₆-alkyl)- group; or R⁹ and R¹⁰ together with the nitrogen atom to which they are attached form a heterocyclic ring of 4-8 atoms, optionally containing a further nitrogen or oxygen atom.

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