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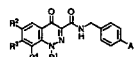
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(54) Title: 4-OXO-1,4-DIHYDRO-3-CINNOLINECARBOXAMIDES AS ANTIVIRAL AGENTS



(57) Abstract: A compound of formula (I) or a pharmaceutically acceptable salt thereof wherein, A is (a) Cl, (b) Br, (c) CN, (d) NO₂, or (e) F; R¹, is (a) R⁵, or (b) SO₂R⁹ R², R³ and R⁴ may be the same or different and are selected from the group consisting of: (a) H, (b) halo, (c) aryl, (d) S(O)_mR⁶, (e) (C=O)R⁶, (f) (C=O)OR⁹, (g) cyano, (h) het, wherein said het is bound via a carbon atom, (i) OR¹⁰, (j) Ohet, (k) NR⁷R⁸, (l) SR¹⁰, (m) Shet, (n) NHCOR¹², (o) NHSO₂R¹², (p) C₁₋₇alkyl which may be partially unsaturated and optionally substituted by one or more substituents of the group R¹¹, OR¹³, SR¹⁰, SR¹³, NR⁷R⁸, halo, (C=O)C₁₋₇alkyl, or SO_mR⁹; and (q) R³ together with R² or R⁴ form a carbocyclic or het which may be optionally substituted by NR⁷R⁸, or C₁₋₇alkyl which may be optionally substituted by OR¹⁴; R⁵ is (a) (CH₂CH₂O)_iR¹⁰, (b) C₁₋₇alkyl which may be partially unsaturated and is optionally substituted by one or more substituents selected from a group consisting of NR⁷R⁸, R¹¹, SO_mR⁹, or OC₂₋₄alkyl which may be further substituted by het, OR¹⁰, or NR⁷R⁸, or (c) C₃₋₈cycloalkyl which may be partially unsaturated and optionally substituted by one or more substituents selected from a group consisting of R¹¹, NR⁷R⁸, SO_mR⁹, or C₁₋₇alkyl optionally substituted by R¹¹, NR⁷R⁸, or SO_mR⁹; R⁶ is (a) C₁₋₇alkyl, (b) NR⁷R⁸, (c) aryl, or (d) het, wherein said het is bound via a carbon atom; R⁷ and R⁸ are independently (a) H, (b) aryl, (c) C₁₋₇alkyl which may be partially unsaturated and is optionally substituted by one or more substituents selected from a group consisting of aryl, NR¹⁰R¹⁰, R¹¹, SO_mR⁹, CONR¹⁰R¹⁰, or halo, or; (d) C₃₋₈cycloalkyl which may be partially unsaturated and optionally substituted by one or more substituents selected from a group consisting of R¹¹, NR⁷R⁸, SO_mR⁹, or C₁₋₇alkyl optionally substituted by R¹¹, NR⁷R⁸, or SO_mR⁹, or (e) R⁷ and R⁸ together with the nitrogen to which they are attached form a het; R⁹ is (a) aryl, (b) het, (c) C₃₋₈cycloalkyl, (d) methyl, or (e) (C₂₋₇alkyl which may be partially unsaturated and is optionally substituted by one or more substituents selected from a group consisting of NR¹⁰R¹⁰, R¹¹, SH, CONR¹⁰R¹⁰, or halo; R¹⁰ is (a) H, (b) methyl, or (c) C₂₋₇alkyl optionally substituted by OH; R¹¹ is (a) OR¹⁰, (b) Ohet, (c) Oaryl, (d) CO₂R¹⁰, (e) het, (f) aryl, (g) CN, or (h) C₃₋₈cycloalkyl which may be partially unsaturated and optionally substituted by one or more substituents selected from a group consisting of R¹¹, NR⁷R⁸, SO_mR⁹, or C₁₋₇alkyl optionally substituted by R¹¹, NR⁷R⁸, or SO_mR⁹; R¹² is (a) H, (b) het, (c) aryl, (d) C₃₋₈cycloalkyl, (e) methyl, or (f) C₃₋₇alkyl optionally substituted by NR⁷R⁸ or R¹¹; R¹³ is (a) (P=O)(OR¹⁴)₂, (b) CO(CH₂)_nCON(CH₃)-(CH₂)_nSO₃M⁺, (c) an amino acid, (d) C(=O)aryl, or (e) C(=O)C₁₋₇alkyl optionally substituted by NR⁷R⁸, aryl, het, CO₂H, or O(CH₂)_nCO₂R¹⁴; R¹⁴ is (a) H, or (b) C₁₋₇alkyl; each i is independently 2, 3 or 4; each n is independently 1, 2, 3, 4 or 5; each m is independently 0, 1, or 2; M is sodium, potassium, or lithium; aryl is a phenyl radical or an ortho-fused bicyclic carbocyclic radical wherein at least one ring is aromatic; wherein any aryl is optionally substituted with one or more substituents selected from the group consisting of halo, OH, cyano, CO₂R¹⁴, CF₃, C₁₋₆alkoxy, and C₁₋₆alkyl which may be further substituted by one to three SR¹⁴, NR¹⁴R¹⁴, OR¹⁴, or CO₂R¹⁴; het is a four- (4), five- (5), six- (6), or seven- (7) membered saturated or unsaturated heterocyclic ring having 1, 2, or 3 heteroatoms selected from the group consisting of oxygen, sulfur, an

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