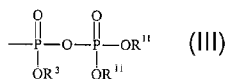
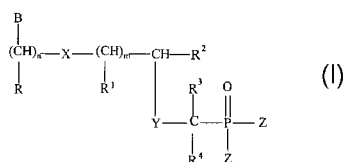


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(54) Title: NUCLEOSIDES PREPARATION THEREOF AND USE AS INHIBITORS OF RNA VIRAL POLYMERASES



(57) Abstract: Compounds represented by the formula (I) R is H, OH, alkyl, O-alkyl, CH₂-O-alkyl, (CH₂)_nOH, (CH₂)_nNH₂, (CH₂)_nCONH₂, (CH₂)_nOOH; R¹ is H, OH, alkyl, O-alkyl, CH₂-O-alkyl, C₆H₁₁, CH₂OH; R² is H, alkyl, OH, CH₂OH, CH₂-O-alkyl, CH(OH)-alkyl, CH(OH)CH₂OH, CH₂-halogen; R³ and R⁴ independently is H, OH, alkyl; Z is OR⁵, OR⁶, or aminoacids and esters thereof R⁵ and R⁶ independently is H, alkyl, aryl, pivaloyloxymethyl, C(R⁷)₂OC(O) X (R⁸)_a formula (I I), R⁷ independently is -H, C₁-C₁₂ alkyl, C₅C₁₂ aryl, C₂-C₁₂ alkenyl, C₂-C₁₂ alkynyl, C₇-C₁₂ alkenylaryl, C₇-C₁₂ alkynylaryl, or C₆-C₁₂ alkaryl, any of which is unsubstituted or is substituted with 1 or 2 halo, cyano, azido, nitro, or -OR⁹; R⁹ is C₁-C₁₂ alkyl, C₂-C₁₂ alkenyl, C₂-C₁₂ alkynyl or C₅-C₁₂ aryl; provided that at least one R⁸ is not H; and a is 1 when X is CH₂, or direct bond, or 1 or

2 when X is N with the proviso that when a is 2 and X is N, (a) two N-linked R groups can be taken together to form a carbocyclic or oxygen containing heterocycle, (b) one N-linked R⁸ additionally can be -OR⁹ or (c) both N-linked R⁸ groups can be -H; R¹⁰ is H or C₁-C₈ alkyl; R¹¹ is selected from H, alkyl, alkenyl, alkynyl, aryl, acyloxyalkyl, and pivaloyloxyalkyl n is 1-5 m is 0 to 5 X is S, N(R⁸) or direct bond Y is O, S, N (R⁸), and CHR¹ B is selected from the group consisting of adenine, guanine, cytosine, uracil, thymine, modified purines and pyrimidines such as inosin-9-yl, 2-amino-purin-9-yl, 2-amino-6-chloro-purin-9-yl, 2-6-diamino-purin-9-yl, 3-carboxamido-1, 2, 4-triazol-1-yl, 3-deaza-adenin-9-yl, 3-deaza-guanin-9-yl, 3-deaza-inosin-9-yl, 3-deaza-2-amino-purin-9-yl, 3-deaza-2-amino-6-chloro-purin-9-yl, 3-deaza-2, 6-diamino-purin-9-yl, 7-deaza-adenin-9-yl, 7-deaza-guanin-9-yl, 7-deaza-inosin-9-yl, 7-deaza-2-amino-purin-9-yl, 7-deaza-2-amino-6-chloro-purin-9-yl, 7-deaza-2-6-diamino-purin-9-yl, 7-deaza-8-aza-adenin-9-yl, 7-deaza-8-aza-guanin-9-yl, 7-deaza-8-aza-inosin-9-yl, 7-deaza-8-aza-2-amino-purin-9-yl, 7-deaza-8-aza-2-amino-6-chloro-purin-9-yl, 7-deaza-8-aza-2-6-diamino-purin-9-yl, -8-aza-adenin-9-yl, -8-aza-guanin-9-yl, -8-aza-inosin-9-yl, -8-aza-2-amino-purin-9-yl, -8-aza-2-amino-6-chloro-purin-9-yl, -8-aza-2-6-diamino-purin-9-yl, 5-aza-thymin-1-yl, 5-aza-cytosin-1-yl, 5-aza-uracil-1-yl, 6-aza-thymin-1-yl, 6-aza-cytosin-1-yl, 6-aza-uracil-1-yl, 2-thiouracil-1-yl, 4-thiouracil-1-yl, 2-thiocytosine-1-yl, uracil-5-yl, 2-thiouracil-5-yl, 4-thiouracil-5-yl, substituted pyridine derivatives such as 6-azauracil, and azacytosine. In general, attachment may be at different positions in the ring at nitrogen or carbon. These B ring systems may be substituted with halo, alkyl, substituted alkyl (F, Cl, Br, I, OH), NH₂, N₃, aryl, substituted aryl (F, Cl, Br, I, OH, NH₂), aralkyl; and pharmaceutically acceptable salts thereof and prodrugs thereof are provided.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.