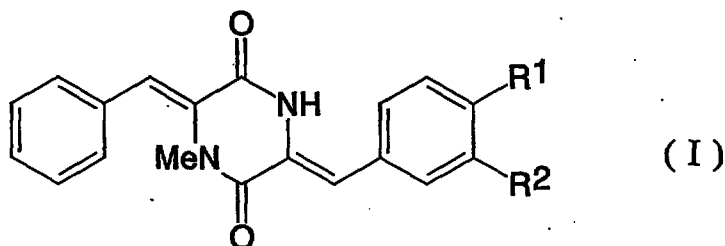


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ABSTRACTPHARMACEUTICAL COMPOUNDS

A piperazinedione of general formula (I):

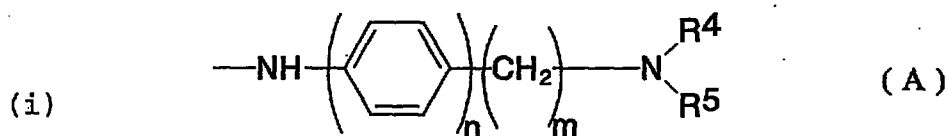


wherein R¹ is selected from:

- hydrogen;

- a group of formula -COR³ - (NH)_t - COR³ wherein t is 0 or 1

and R³ is selected from:



wherein v is 0 or 1 when t is 1 and v is 1 when t is 0; and

wherein n is 0, 1, 2, or 3 at least one of n and m being other than 0, and either:

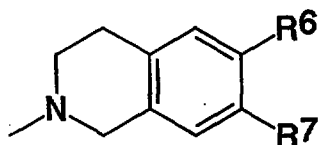
(a) R⁴ is H or C₁-C₆ alkyl and R⁵ is C₁-C₆ alkyl optionally substituted by one or two phenyl groups, the phenyl group or groups being optionally substituted by one or two C₁-C₆ alkoxy groups; or

(b) R⁴ and R⁵, together with the nitrogen atom to which

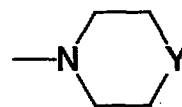
they are attached, form a heterocyclic group selected from (1) to (4):



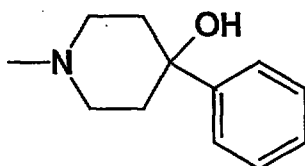
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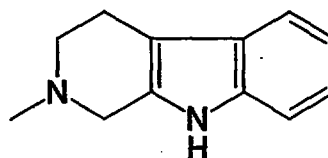
(1)



(2)

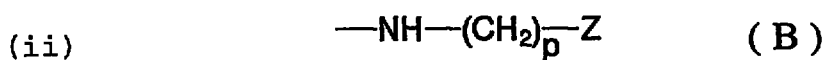


(3)

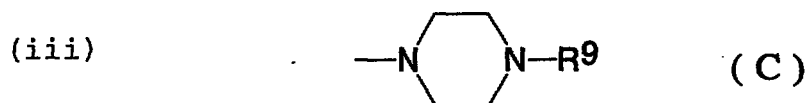


(4)

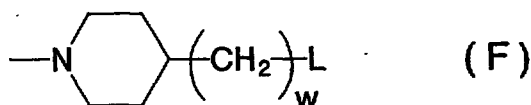
wherein R^6 and R^7 , which are the same or different, are H or C_1-C_6 alkoxy, or R^6 and R^7 together form a methylenedioxy group; Y is O or $-NR^8$ wherein R^8 is C_1-C_6 alkyl or a phenyl group optionally substituted by CF_3 ;



wherein p is 1 or 2 and Z is C_2-C_6 alkenyl or a phenyl group optionally substituted by C_1-C_6 alkoxy; and



wherein R^9 is C_1-C_6 alkyl, pyrimidinyl or a phenyl group optionally substituted by C_1-C_6 alkoxy; and



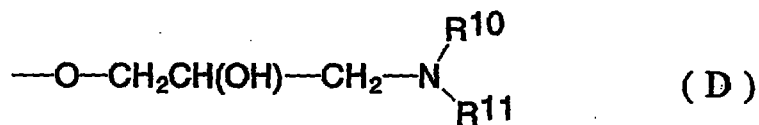
wherein w is 1, 2 or 3 and L is a heterocyclic group of



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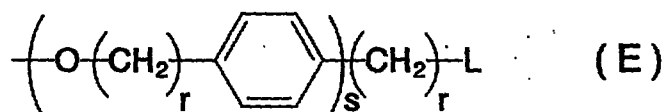
formula (1) as defined above;

- a group of the formula (D):



wherein each of R^{10} and R^{11} , which may be the same or different, is $\text{C}_1\text{--C}_6$ alkyl; and

- a group of formula (E):



wherein s is 0 or 1 and each r , which may be the same or different, is 1, 2 or 3 and L is a heterocyclic group of formula (1) as defined above;

and R^2 is hydrogen or a group of formula ---COR^3 as defined above, provided that one of R^1 and R^2 is hydrogen and the other is not hydrogen; and the pharmaceutically acceptable salts thereof have activity as modulators of multi-drug resistance.