9700539-9

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 :
A61K 31/535, 31/505, 31/47, 31/445, 31/40, C07D 403/14, 403/12, 403/06, 403/04, 403/02, 401/14, 401/12, 401/06, 401/04, 401/02

A1

(11) International Publication Number: WO 98/05336

(43) International Publication Date: 12 February 1998 (12.02.98)

(21) International Application Number: PCT/US97/13875

(22) International Filing Date: 7 August 1997 (07.08.97)

(30) Priority Data:
60/023,742 8 August 1996 (08.08.96) US
60/046,867 8 May 1997 (08.05.97) US

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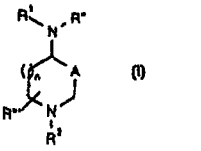
(81) Designated States: AL, AM, AU, BB, BG, BR, CA, CN, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

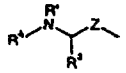
Published
With international search report.

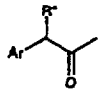
(54) Title: INHIBITORS OF CYSTEINE PROTEASE

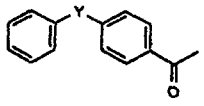
(57) Abstract

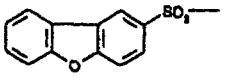
This invention relates to compounds of formula (I), wherein A is C(O) or CH(OH); R^1 is (1), (2), (3) or (4); R^2 is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, $R^5C(O)$-, $R^5C(S)$-, R^5SO_2-, $R^5OC(O)$-, $R^5R'NC(O)$-, $R^5R'NC(S)$-, adamantyl-C(O)-, or (5); R'' is H, C_{1-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl; R''' is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl; each R^3 independently is H, C_{2-6}alkenyl, C_{2-6}alkynyl, Het, Ar or C_{1-6}alkyl optionally substituted by OR', SR', NR'_2, $R'NC(O)OR^5$, CO_2R', $CO_2NR'_2$, $N(C{=}NH)NH_2$, Het or Ar; R^4 is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, $R^5C(O)$-, $R^5C(S)$-, R^5SO_2-, $R^5OC(O)$-, $R^5R'NC(O)$-, $R^5R'NC(S)$-, $R'HNCH(R')C(O)$-, or $R^5OC(O)NR'CH(R')C(O)$-; each R^5 independently is C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, Ar-C_{0-6}alkoxy, Het-C_{0-6}alkoxy, or C_{1-6}alkyl optionally substituted by OR', SR', NR'_2, $R'NC(O)OR^5$, CO_2R', $CO_2NR'_2$, $N(C{=}NH)NH_2$, Het or Ar; R^6 is H, C_{1-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl and R^7 is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, Het-C_{0-6}alkyl, $R^5C(O)$-, $R^5C(S)$-, R^5SO_2-, $R^5OC(O)$-, $R^5R'NC(O)$-, $R^5R'NC(S)$-, $R'HNCH(R')C(O)$-, or $R^5OC(O)NR'CH(R')C(O)$-; or R^6 and R^7 are connected to form a pyrrolidine, a piperidine, or a morpholine ring; each R' independently is H, C_{1-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl; R* is H, C_{1-6}alkyl, C_{3-6}cycloalkyl-C_{0-6}alkyl, Ar-C_{0-6}alkyl, or Het-C_{0-6}alkyl; Y is a single bond or O; each Z independently is CO or CH_2; and n is 0, 1, or 2; or a pharmaceutically acceptable salt thereof, which are inhibitors of cysteine proteases, particularly cathepsin K, and are useful in the treatment of diseases in which inhibition of bone loss is a factor.

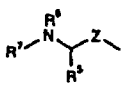

(I)


(1)


(2)


(3)


(4)


(5)