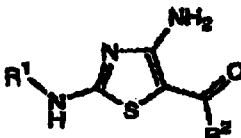


PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C07D 277/42, A61K 31/425, C07D 417/12, A61K 31/44, C07D 277/56, 417/06, 417/14, A61K 31/47, 31/50		A2	(11) International Publication Number: WO 99/21845
			(43) International Publication Date: 6 May 1999 (06.05.99)
(21) International Application Number: PCT/US98/22809		Diego, CA 92122 (US). XIAO, Wei [CN/US]; 4043 Carmel Springs Way, San Diego, CA 92130 (US). YANG, Yi [CN/US]; 8976 Gainsborough Avenue, San Diego, CA 92129 (US).	
(22) International Filing Date: 27 October 1998 (27.10.98)			
(30) Priority Data: 60/063,634 27 October 1997 (27.10.97) US 60/063,666 28 October 1997 (28.10.97) US		(74) Agents: EVANS, Linda, S. et al.; Agouron Pharmaceuticals, Inc., 10350 North Torrey Pines Road, La Jolla, CA 92037 (US).	
(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US Not furnished (CIP) Filed on Not furnished		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(71) Applicant (for all designated States except US): AGOURON PHARMACEUTICALS, INC. [US/US]; 10350 North Torrey Pines Road, La Jolla, CA 92037 (US).		Published Without international search report and to be republished upon receipt of that report.	
(72) Inventors; and (75) Inventors/Applicants (for US only): CHONG, Wesley, K., M. [US/US]; 134 Honeycomb Court, Encinitas, CA 92024 (US). CHU, Shao, Song [CN/US]; 1604 Jerrilynn Place, Encinitas, CA 92024 (US). DUVADIE, Rohit, R. [NP/US]; 10320 Maya Linda Road #A-316, San Diego, CA 92024 (US). LI, Lin [CN/US]; 3950 Mahaffa Avenue #H-36, San			
(54) Title: 4-AMINOTHIAZOLE DERIVATIVES, THEIR PREPARATION AND THEIR USE AS INHIBITORS OF CYCLIN-DEPENDENT KINASES			
 (I)			
(57) Abstract			
This invention is directed to aminothiazole compounds of formula (I) wherein R¹ is a substituted or unsubstituted group selected from: C₁₋₆-alkyl; C₁₋₆-alkenyl; C₁₋₆-alkynyl; C₁₋₆-alkoxy; C₁₋₆-alcohol; carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, cycloalkyl; carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, aryl; carbonyl; ether; (C₁₋₆-alkyl)-carbonyl; (C₁₋₆-alkyl)-aryl; (C₁₋₆-alkyl)-cycloalkyl; (C₁₋₆-alkyl)-(C₁₋₆-alkoxy); aryl-(C₁₋₆-alkoxy); thioether; thiol; and sulfonyl; wherein when R¹ is substituted, each substituent independently is a halogen; haloalkyl; C₁₋₆-alkyl; C₁₋₆-alkenyl; C₁₋₆-alkynyl; hydroxyl; C₁₋₆-alkoxy; amino; nitro; thiol; thioether; imine; cyano; amido; phosphonato; phosphine; carboxyl; thiocarbonyl; sulfonyl; sulfonamide; ketone; aldehyde; ester; oxygen; carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, cycloalkyl; or carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, aryl; and R² is a carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, ring structure having a substituent at the position adjacent to the point of attachment, which ring structure is optionally further substituted, where each substituent of R² independently is a halogen; haloalkyl; C₁₋₆-alkyl; C₁₋₆-alkenyl; C₁₋₆-alkynyl; hydroxyl; C₁₋₆-alkoxy; amino; nitro; thiol; thioether; imine; cyano; amido; phosphonato; phosphine; carboxyl; thiocarbonyl; sulfonyl; sulfonamide; ketone; aldehyde; ester; oxygen; carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, cycloalkyl; or carbocyclic or heterocyclic, monocyclic or fused or non-fused polycyclic, aryl; or a pharmaceutically acceptable salt of a compound of formula (I), or a prodrug or pharmaceutically active metabolite of a compound of formula (I) or pharmaceutically acceptable salt thereof, for inhibiting cyclin-dependent kinases (CDKs), such as CDK1, CDK2, CDK4, and CDK6. The invention is also directed to the therapeutic or prophylactic use of pharmaceutical compositions containing such compounds and to methods of treating malignancies and other disorders by administering effective amounts of such compounds.			