

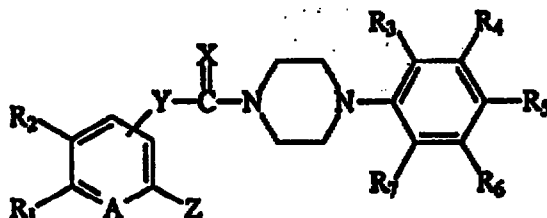


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(21) International Application Number: PCT/KR97/00128 (22) International Filing Date: 28 June 1997 (28.06.97) (30) Priority Data: <table><tr><td>1996/25825</td><td>29 June 1996 (29.06.96)</td><td>KR</td></tr><tr><td>1996/25826</td><td>29 June 1996 (29.06.96)</td><td>KR</td></tr><tr><td>1996/25827</td><td>29 June 1996 (29.06.96)</td><td>KR</td></tr><tr><td>1996/40596</td><td>18 September 1996 (18.09.96)</td><td>KR</td></tr><tr><td>1997/22984</td><td>3 June 1997 (03.06.97)</td><td>KR</td></tr><tr><td>1997/22985</td><td>3 June 1997 (03.06.97)</td><td>KR</td></tr><tr><td>1997/23192</td><td>4 June 1997 (04.06.97)</td><td>KR</td></tr><tr><td>1997/23193</td><td>4 June 1997 (04.06.97)</td><td>KR</td></tr></table> (71) Applicant (for all designated States except US): SAMIIN PHARMACEUTICAL CO., LTD. [KR/KR]; 338-8, Seokyo-dong, Mapo-ku, Seoul 121-739 (KR). (72) Inventors; and (75) Inventors/Applicants (for US only): CHO, Bui-Hwan [KR/KR]; #105-101, Hyndai 1st Apt., Kaepo-dong, Kangnam-ku, Seoul 135-240 (KR). CHUNG, Sun-Gan [KR/KR]; #131-904, Mokhwa Apt., 850, Keumjeong-dong, Kunpo, Kyungki-do 435-050 (KR). LEE, Sun-Hwan [KR/KR]; #105-403, Daclin Apt., Dokkok-dong, Pangtak, Kyungki-do 459-100 (KR). KWON, Ho-Seok [KR/KR];			1996/25825	29 June 1996 (29.06.96)	KR	1996/25826	29 June 1996 (29.06.96)	KR	1996/25827	29 June 1996 (29.06.96)	KR	1996/40596	18 September 1996 (18.09.96)	KR	1997/22984	3 June 1997 (03.06.97)	KR	1997/22985	3 June 1997 (03.06.97)	KR	1997/23192	4 June 1997 (04.06.97)	KR	1997/23193	4 June 1997 (04.06.97)	KR	#506-1105, Sinddong Apt., 1274, Kwonsun-dong, Kwonsun-ku, Suwon, Kyungki-do 441-390 (KR). LEE, Jae-Bung [KR/KR]; 390-3, Sinjang-dong, Hannam, Kyungki-do 465-032 (KR). KANG, Dong-Wook [KR/KR]; #268-203, Jookong Apt., Wonmoon-dong, Kwachon, Kyungki-do 465-032 (KR). JOO, Jeong-Ho [KR/KR]; 289-83, Noryangjin 2-dong, Dongjak-ku, Seoul 156-052 (KR). LEE, Young-Hee [KR/KR]; 866-5, Bono 1-dong, Ansan, Kyungki-do 425-181 (KR). (74) Agent: PARK, Sa-Ryong; 823-5, Yoksam-dong, Kangnam-ku, Seoul 135-080 (KR). (81) Designated States: AU, BG, BR, CA, CN, CZ, HU, JP, MX, NO, NZ, PL, RO, RU, SG, SK, TR, UA, US, VN, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
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(54) Title: PIPERAZINE DERIVATIVES AND PROCESS FOR THE PREPARATION THEREOF																											
(57) Abstract The present invention relates to novel compound having strong antitumor activities of general formula (I), wherein R₁ and R₂ are independently hydrogen, substituted or unsubstituted C₁-C₆ alkyl, substituted or unsubstituted C₃-C₆ cycloalkyl, substituted or unsubstituted C₂-C₆ unsaturated alkyl, ketone, substituted or unsubstituted aryl, substituted or unsubstituted C₁-C₄ alkoxy, substituted or unsubstituted arylhydroxy, substituted or unsubstituted amino, C₁-C₄ lower ester, C₁-C₄ lower thioester, thiol, substituted or unsubstituted carboxyl, epoxy, substituted or unsubstituted C₁-C₄ lower thioalkoxy; or R₁ and R₂ are fused to form C₃-C₄ saturated or unsaturated chain; R₃, R₄, R₅, R₆ and R₇ are independently hydrogen, halogen, hydroxy, nitro, C₁-C₄ lower ester, C₁-C₄ lower alkyl, C₁-C₄ lower thioalkyl, substituted or unsubstituted C₃-C₆ cycloalkyl, C₁-C₄ lower alkoxy, C₁-C₄ lower thioalkoxy, substituted or unsubstituted aryl, substituted or unsubstituted lower arylalkoxy, substituted or unsubstituted lower alkylamino, or lower alkyl substituted or unsubstituted carbamate; or among R₃, R₄, R₅, R₆ and R₇, two adjacent groups are bonded with each other to form 1,2-phenylene or 2,3-naphthylene; X is oxygen, sulfur, or substituted or unsubstituted imino; Y is bonded at the 3-position or 4-position of the aromatic ring part wherein Y is oxygen or -NR₈- (wherein, R₈ is the same with the above-mentioned R₃); Z is hydroxy, C₁-C₄ lower alkoxy, C₁-C₄ lower thioalkoxy, substituted or unsubstituted aryloxy, C₁-C₄ lower alkylamino, substituted or unsubstituted cycloamino containing 1-5 nitrogen atoms; A is nitrogen or -CH-; its pharmaceutically acceptable acid addition salts and process for the preparation thereof.																											



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