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(21) International Application Number: PCT/US99/14165 (22) International Filing Date: 26 July 1999 (26.07.99) (30) Priority Data: 09/122,878 27 July 1998 (27.07.98) US (71) Applicant: SCHERING CORPORATION [US/US]; 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US). (72) Inventors: TULSHIAN, Deen; 4 Saddle Ridge Drive, Lebanon, NJ 08833 (US). HO, Ginny, D.; 42 Chestnut Hill Drive, Murray Hill, NJ 07974 (US). SILVERMAN, Lisa, S.; 214 Hana Road, Edison, NJ 08817 (US). MATASI, Julius, J.; 129 Spruce Mill Lane, Scotch Plains, NJ 07076 (US). McLEOD, Robbie, L.; 13 Creek Trail, Branchburg, NJ 08876 (US). HEY, John, A.; 122 Hopper Avenue, Nutley, NJ 07110 (US). CHAPMAN, Richard, W.; 30 Ditmars Circle, Somerville, NJ 08876 (US). BERCOVICI, Ana; 1 Howell Drive, West Orange, NJ 07052 (US). CUSS, Francis, M.; 14 Byrom Drive, Basking Ridge, NJ 07920 (US).		(74) Agents: MAGATTI, Anita, W. et al.; Schering-Plough Corporation, Patent Department, K-6-1 1990, 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US). (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GD, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LU, LV, MD, MG, MK, MN, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ZA, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, 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). Published <i>With international search report.</i>
(54) Title: HIGH AFFINITY LIGANDS FOR NOCICEPTIN RECEPTOR ORL-1 (I)		
(57) Abstract Compounds of formula (I) or a pharmaceutically acceptable salt or solvate thereof, wherein: the dotted line represents an optional double bond; X¹ is optionally substituted alkyl, cycloalkyl, aryl, heteroaryl or heterocycloalkyl; X² is -CHO, -CN, optionally substituted amino, alkyl, or aryl; or X¹ is optionally substituted benzofused heterocyclyl and X² is hydrogen; or X¹ and X² together form an optionally benzofused spiro heterocyclyl group; R¹, R², R³ and R⁴ are independently H and alkyl, or (R¹ and R⁴) or (R² and R³) or (R¹ and R³) or (R² and R⁴) together can form an alkylene bridge of 1 to 3 carbon atoms; Z¹ is optionally substituted alkyl, aryl, heteroaryl, cycloalkyl or heterocycloalkyl, or -CO₂(alkyl or substituted amino) or CN; Z² is H or Z¹; Z³ is H or alkyl; or Z¹, Z² and Z³, together with the carbon to which they are attached, form bicyclic saturated or unsaturated rings; pharmaceutical compositions therefore, and the use of said compounds as nociceptin receptor inhibitors useful in the treatment of pain, anxiety, cough, asthma, depression and alcohol abuse are disclosed.		