



PCT

(10) International Publication Number
WO 00/71506 A3

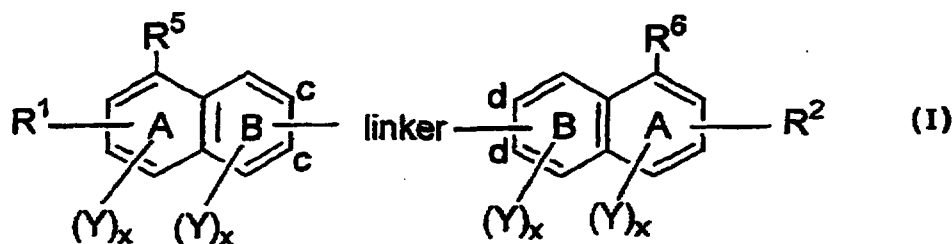
- (51) **International Patent Classification⁷:** C07C 311/47, 309/51, C07D 257/04, 213/76, 233/32, 335/18, C07C 335/32, C07D 211/96, A61K 31/18, 31/395
- (21) **International Application Number:** PCT/US00/14644
- (22) **International Filing Date:** 25 May 2000 (25.05.2000)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
60/136,128 26 May 1999 (26.05.1999) US
- (71) **Applicant:** TELIK, INC. [US/US]; 750 Gateway Boulevard, South San Francisco, CA 94080 (US).
- (72) **Inventors:** SPEVAK, Wayne; 555 Pierce Street #1533D, Albany, CA 94706 (US). LUM, Robert, T.; 781 Barron Avenue, Palo Alto, CA 94306 (US). SHI, Songyuan; 11 Village Drive #14, Belmont, CA 94002 (US). MANCHEM, Prasad; 849 West Orange Avenue #3025, South San Francisco, CA 94080 (US). KOZLOWSKI, Michael, R.; 1634 Edgewood Drive, Palo Alto, CA 94303 (US). SCHOW, Steven, R.; 127 Mendocino Way, Redwood Shores, CA 94065 (US).
- (74) **Agents:** VON MORZE, Herwig et al.; Heller Ehrman White & McAuliffe, Suite 1100, 525 University Avenue, Palo Alto, CA 94301-1900 (US).
- (81) **Designated States (national):** AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, 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:**
— with international search report
- (88) **Date of publication of the international search report:**
9 August 2001

Published:
— *with international search report*

(88) Date of publication of the international search report:
9 August 2001

[Continued on next page]

- (54) Title: NAPHTHALENE UREAS AS GLUCOSE UPTAKE ENHANCERS**



WO 00/71506 A3

(57) Abstract: Compounds of formula (I), wherein R¹ and R² are substituents on the A rings and are, independently, -SO₂NR⁷, -C(O)NR⁷, -NR⁷SO₂R⁷, -NR⁷C(O)R⁷, -SO₂OR⁷, -C(O)OR⁷, -OSO₂R⁷, or -OC(O)R⁷, R³ and R⁴ are, independently, hydrogen or lower alkyl, or R³ and R⁴ together are -(CH₂)₂-, -(CH₂)₃-, or -(CH₂)₄-, or R³ or R⁴ may be an electron pair, R⁵ and R⁶ are, independently, hydrogen, alkyl, substituted alkyl, cyano, halo, nitro, -SR⁸, -C(O)R⁸, -SO₂OR⁸, -OSO₂R⁸, -SO₂NR⁸, -NR⁸SO₂R⁸, -OC(O)R⁸, -C(O)OR⁸, -C(O)NR⁸, -NR⁸C(O)R⁸, -OR⁸, or -NR⁸, each R⁷ and R⁸ is, independently, hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, aryl(lower)alkyl, substituted aryl(lower)alkyl, heteroaryl(lower)alkyl, substituted heteroaryl(lower)alkyl, heterocyclyl, substituted heterocyclyl, heteroaryl, or substituted heteroaryl, each Y is, independently, a non-interfering substituent which is not linked to the naphthalene ring via an azo or amide linkage, each x is independently, 0, 1 or 2, and the linker connects a carbon designated as c to a carbon designated as d, or a pharmaceutically acceptable salt thereof, as a single stereoisomer or mixture of stereoisomers, are useful for treating conditions associated with hyperglycemia, especially Type II diabetes, with dinaphthylureas. These compounds are useful in stimulating the kinase activity of the insulin receptor, activating the insulin receptor, and stimulating the uptake of glucose. Pharmaceutical compositions comprising the antidiabetic compounds are also disclosed.



(48) Date of publication of this corrected version:
20 September 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(15) Information about Correction:
see PCT Gazette No. 38/2001 of 20 September 2001, Section II