(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 6 July 2006 (06.07.2006)

(10) International Publication Number $WO\ 2006/071850\ A3$

- (51) International Patent Classification: *A61B 18/18* (2006.01)
- (21) International Application Number:

PCT/US2005/047028

(22) International Filing Date:

23 December 2005 (23.12.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/638,933 23 December 2004 (23.12.2004) US 11,318,372 22 December 2005 (22.12.2005) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

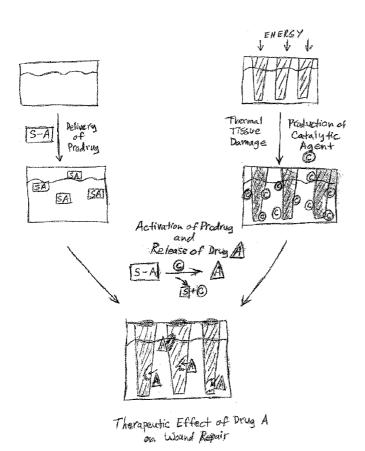
US 10/888,356 (CIP) Filed on 9 July 2004 (09.07.2004)

(71) Applicant (for all designated States except US): RE-LIANT TECHNOLOGIES, INC. [US/US]; 464 Ellis Street, Mountain View, CA 94043 (US).

- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HERRON, Scott, G. [US/US]; 200 Woodland Vista, La Honda, CA 94020 (US). BOMMANNAN, Bommi, D. [US/US]; 1977 Wimbledon Place, Los Altos, CA 94024 (US).
- (74) Agents: BANAIT, Narinder, S. et al.; Fenwick & West LLP, Silicon Valley Center, 801 California Street, Mountain View, CA 94041 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: METHOD OF USING LASER INDUCED INJURY TO ACTIVATE TOPICAL PRODRUGS



(57) Abstract: Methods and compositions are disclosed for improving the wound healing process and increasing collagen synthesis following laser induced thermal injury. The method comprises delivering prodrugs to a target site before the target site is injured and taking advantage of those enzymes that are physiologically-expressed to promote wound healing to convert the prodrugs to active drugs. The claimed invention has the advantage of the prodrugs being readily available to immediately participate in the wound healing process, but not have any negative side-effects of the active drug being present before injury occurs.

WO 2006/071850 A3

- | 1881 | 1888 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 | 1884 |

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with information concerning one or more priority claims considered void

(88) Date of publication of the international search report:

2 April 2009

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/47028	PCT	'/US	05/4	170)28
----------------	-----	------	------	-----	-----

A. CLAS	SIFICATION OF SUBJECT MATTER A61B 18/18(2006.01)				
USPC: According to	607/89 International Patent Classification (IPC) or to both nati	ional c	lassifi	cation and IPC	
B. FIELI	OS SEARCHED				
	cumentation searched (classification system followed by	v class	ificati	on symbols)	
U.S. : 60	7/88-93; 606/7, 10-17	y 01455	- Intout		
Documentation	on searched other than minimum documentation to the	extent	that s	uch documents are included in	n the fields searched
Electronic da	ta base consulted during the international search (name	of dat	a base	and, where practicable, searc	ch terms used)
C. DOC	JMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where a	ppropr	iate, o	f the relevant passages	Relevant to claim No.
X	X US 6,176,842 B1 (TACHIBANA et al) 23 January 20				1, 6-8, 19, 20, 22, 23, 26
Y		•			2-5, 9-18, 21, 24, 25, 27-36
				•	
İ					
Further	documents are listed in the continuation of Box C.			See patent family annex.	
* 5	pecial categories of cited documents:	"T"		later document published after the int date and not in conflict with the appli	cation but cited to understand the
"A" documen	t defining the general state of the art which is not considered to be of			principle or theory underlying the inv	ention
"E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		"X"		document of particular relevance; the considered novel or cannot be consid when the document is taken alone	claimed invention cannot be ered to involve an inventive step
		"Y"	-	document of particular relevance; the considered to involve an inventive ste	ep when the document is combined
"O" document referring to an oral disclosure, use, exhibition or other means				with one or more other such documer obvious to a person skilled in the art	ms, such combination being
"P" document published prior to the international filing date but later than the priority date claimed		"&"		document member of the same patent	
Date of the actual completion of the international search		Date	of m	ailing of the international sea	rch report
	3 (12.06.2008)	Auti	iorize	d officer	-(-)
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US			٠	mere Ce	
Commissioner for Patents			id sha	•	
P.O. Box 1450 Alexandria, Virginia 22313-1450			phone	e No. 571-272-3700	
Facsimile No	o. (571) 273-3201	1			

Form PCT/ISA/210 (second sheet) (April 2007)