(19) World Intellectual Property Organization International Bureau



) | 1881 | 1888 | 1 1888 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 | 188 |

(43) International Publication Date 12 June 2008 (12.06.2008)

(10) International Publication Number WO 2008/070345 A3

(51) International Patent Classification: *A61K 9/14* (2006.01) *A61K 9/16* (2006.01)

(21) International Application Number:

PCT/US2007/082690

- (22) International Filing Date: 26 October 2007 (26.10.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

60/855,061 27 October 2006 (27.10.2006) U

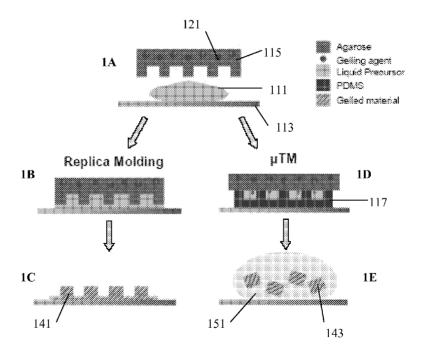
- (71) Applicant (for all designated States except US): THE BRIGHAM AND WOMEN'S HOSPITAL, INC. [US/US]; 75 Francis Street, Boston, MA 02115 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KHADEMHOS-SEINI, Ali [CA/US]; 16 Trowbridge Street #32, Cambridge, MA 02138 (US). FRANZESI, Giovanni, Talei [US/US]; 99 Hancock St. Apt. #10, Cambridge, MA 02139 (US). NI, Bin [US/US]; 4934 Hilliard Drive, Columbus, OH 43026 (US). LING, Yibo [US/US]; 474 Highlands, Canton, MI 48188 (US).
- (74) Agents: QUICK, Gary, L. et al.; Fish & Richardson P.C., P.O. Box 1022, Minneapolis, MN 55402-1022 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, 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, MT, 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
- (88) Date of publication of the international search report: 31 July 2008

(54) Title: CONTROLLED RELEASE OF A CURING AGENT FOR THE GENERATION OF MICROPARTICULATE PHARMACEUTICALS



(57) **Abstract:** A controlled release fabrication process includes shaping a precursor material into a desired configuration with a mold, supplying a curing agent from the mold to the precursor material, curing the precursor material to form a mechanically stable structure, and releasing the mechanically stable structure from the mold. Mechanically stable structures including microfabrication articles produced using the process are also described.





INTERNATIONAL SEARCH REPORT

International application No. PCT/US 07/82690

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - A61K 9/14, 9/16 (2008.04) USPC - 424/489, 490, 493 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols)			
USPC- 424/489, 490, 493			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
USPC- 424/489, 490, 493 (text search-see search terms below)			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			
PubWEST (USPT, PGPB, EPAB, JPAB) and Google Patent/Scholar Search terms: mold, micropattern, hydrogel, microparticle, microtransfer molding, replica molding, agarose			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
X	WO 2005/030476 A1 (Tien et al.) 07 April 2005 (07.04.2005) p3, ln 33 to p4, ln 3, p4, ln 5-8, p4, ln 14-16, p4, ln 22-24, p7, ln 8-13, p14, ln 33 to p15, ln 2, p16, ln 18-31, p17, ln 24-26, p29, ln 2-14, Fig. 3, Fig. 4, Fig. 16		12-14, 16-20
Υ .			1-11, 15
Υ	US 2006/0019361 A1 (Ng et al.) 26 January 2006 (26.01.2006) para [0009]-[0011], [0042]		1-10, 15
Y	US 6,365,082 B1 (Walls et al.) 02 April 2002 (02.04.2002) col 2, ln 32-39, col 6, ln 12		11
	·		
	<u> </u>		
Further documents are listed in the continuation of Box C.			
"A" docume	pecial categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention		
"E" earlier a filing d	application or patent but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive		
cited to	sument which may throw doubts on priority claim(s) or which is do establish the publication date of another citation or other "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is		claimed invention cannot be
means	nt referring to an oral disclosure, use, exhibition or other combined with one or more other such documents, such combination being obvious to a person skilled in the art		
"P" document published prior to the international-filing date but later than "&" document member of the same patent family the priority date claimed			
Date of the actual completion of the international search Date of mailing of the international search report			•
09 April 2008 (09.04.2008)		0 1 MAY 2008	
	nailing address of the ISA/US	Authorized officer:	
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents		Lee W. Young	
P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201 PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774			