

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 May 2018 (17.05.2018)



(10) International Publication Number
WO 2018/089399 A1

(51) International Patent Classification:

A61L 27/16 (2006.01) *A61M 31/00* (2006.01)
A61L 27/36 (2006.01) *A61M 37/00* (2006.01)
A61F 2/02 (2006.01) *C12N 5/00* (2006.01)
A61M 5/00 (2006.01)

DE 19711 (US). **DRUMHELLER, Paul, D.**; 3217 Debbie Street, Flagstaff, AZ 86001 (US).

(74) Agent: **MILLER, Amy** et al.; W. L. Gore & Associates, Inc., 551 Paper Mill Road, P.O. Box 9206, Newark, DE 19714-9206 (US).

(21) International Application Number:

PCT/US2017/060497

(22) International Filing Date:

08 November 2017 (08.11.2017)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/419,148 08 November 2016 (08.11.2016) US
15/806,099 07 November 2017 (07.11.2017) US

(71) Applicants: **W. L. GORE & ASSOCIATES, INC.** [US/US]; 555 Paper Mill Road, Newark, DE 19711 (US). **W. L. GORE & ASSOCIATES GMBH** [DE/DE]; Hermann-Oberth-Strasse 22, 85639 Putzbrunn (DE).

(72) Inventors: **CULLY, Edward, H.**; 940 N. Sinagua Heights Drive, Flagstaff, AZ 86004 (US). **ZAMBOTTI, Lauren**; 400 Greenwood Drive, Wilmington, DE 19808 (US). **PARSONS, Bernadette**; 307 Winterthur Lane, Newark,

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

(54) Title: CELL ENCAPSULATION DEVICES CONTAINING STRUCTURAL SPACERS

(57) Abstract: An implantable containment apparatus for receiving and retaining a plurality of cells for insertion into a patient, such as into a tissue bed, is disclosed. The device includes a chamber having structural spacers therein to maintain an average distance between the first interior surface and the second interior surface of the chamber and to define at least one reservoir space for the placement of cells within the chamber.

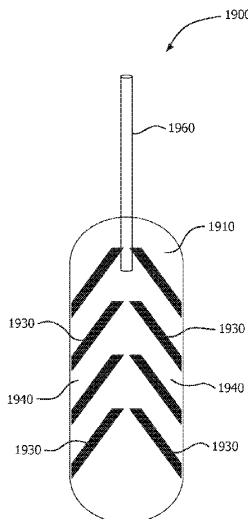


FIG. 19

WO 2018/089399 A1

[Continued on next page]

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))