



(51) International Patent Classification:

A61F 2/24 (2006.01) A61F 2/82 (2006.01)
A61F 2/04 (2006.01) A61L 27/04 (2006.01)
A61L 27/28 (2006.01) A61M 25/01 (2006.01)

(21) International Application Number:

PCT/US2011/053120

(22) International Filing Date:

23 September 2011 (23.09.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/385,867 23 September 2010 (23.09.2010) US
13/243,980 23 September 2011 (23.09.2011) US

(71) Applicant (for all designated States except US): **COLIB-RI HEART VALVE LLC** [US/US]; 2150 W. 6th Ave, Suite M, Broomfield, CO 80020 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FISH, R., David** [US/US]; 6349 Vanderbilt Street, Houston, TX 77005 (US). **PANIAGUA, David** [CR/US]; 3813 Drummond Street, Houston, TX 77025 (US). **INDUNI, Eduardo** [CR/CR]; Resi Alajuela H7, Alajuela, 906-4050 (CR).

(74) Agent: **YASKANIN, Mark**; Holme Roberts & Owen LLP, 1700 Lincoln Street, Suite 4100, Denver, CO 80203 (US).

(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, BR, BW, BY, BZ, CA, CH, CL, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: PERCUTANEOUSLY DELIVERABLE HEART OR BLOOD VESSEL VALVE WITH FRAME HAVING ABLUMINALLY SITUATED TISSUE MEMBRANE

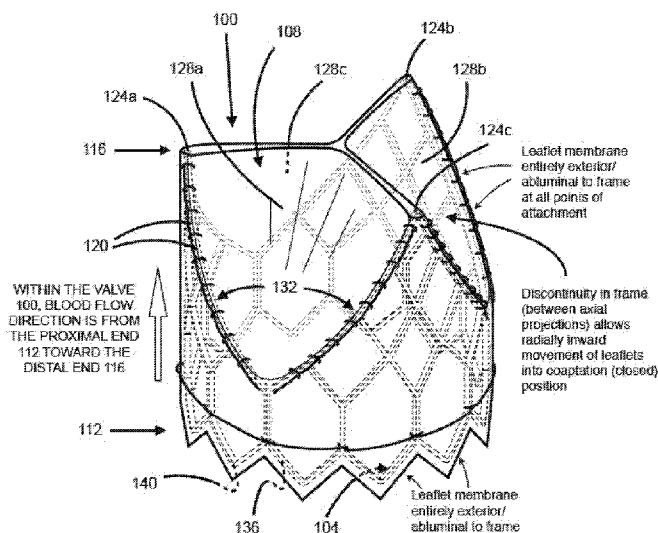


Figure 1A

(57) Abstract: A prosthetic valve implantable by catheter without surgery includes a frame with an abluminal surface extending between a proximal end of the frame and a distal end of the frame, and a single layer of a biocompatible membrane material mounted to the abluminal surface of the frame. The single layer of biocompatible membrane is located such that an interior surface of the membrane sheet extends between the proximal end of the frame and the distal end of the frame, and resides radially exterior the abluminal surface of the frame. In at least one embodiment, the disposition of membrane sheet at all points of attachment is entirely exterior/ab luminal to the frame, such that no part of the abluminal surface of the membrane sheet contacts the frame.



Published:

- *without international search report and to be republished
upon receipt of that report (Rule 48.2(g))*