

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 October 2020 (22.10.2020)



(10) International Publication Number
WO 2020/214096 A1

(51) International Patent Classification:
A61F 2/24 (2006.01)

(21) International Application Number:
PCT/SG2020/050237

(22) International Filing Date:
15 April 2020 (15.04.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10201903404Q 16 April 2019 (16.04.2019) SG

(71) Applicants: NATIONAL UNIVERSITY OF SINGAPORE [SG/SG]; 21 Lower Kent Ridge Road, Singapore 119077 (SG). NATIONAL UNIVERSITY HOSPITAL (SINGAPORE) PTE LTD [SG/SG]; 1E Kent Ridge Road, #13-00, Singapore 119228 (SG).

(72) Inventor: KOFIDIS, Theodoros; c/o National University of Singapore, Yong Loo Lin School of Medicine / Department of Surgery, 1E Kent Ridge Road, Level 8, NUHS Tower Block, Singapore 119228 (SG).

(74) Agent: SOROKER AGMON NORDMAN PTE LTD; 111 Somerset Road, #09-14, Singapore 238164 (SG).

(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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: A NATURALLY DESIGNED MITRAL PROSTHESIS

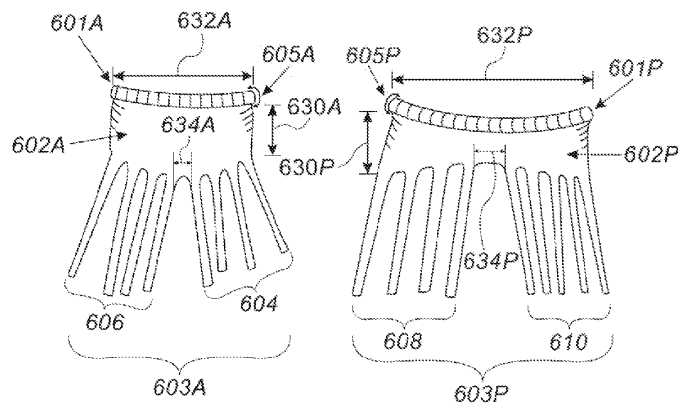


FIG. 6A

(57) Abstract: A mitral valve prosthesis to be implanted in a heart, comprises an asymmetrical ring, the asymmetrical ring is dimensioned to mimic a native mitral annulus of a patient and is constructed from a flexible material rolled onto itself towards an outer side of the valve; an anterior flexible leaflet and a posterior flexible leaflet, said leaflets suspended from the asymmetrical ring and configured to substantially coapt with each other; and at least two sets of cords, each set of cords attached to the anterior or posterior leaflet on a first end and attached into a cap on a second end, the cap is configured to be attached onto papillary muscles of the heart on another end of the cap.

[Continued on next page]

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*