

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 September 2022 (22.09.2022)



(10) International Publication Number
WO 2022/197725 A1

(51) International Patent Classification:

A61M 60/863 (2021.01) A61M 60/148 (2021.01)
A61M 60/00 (2021.01) A61M 60/859 (2021.01)

(21) International Application Number:

PCT/US2022/020414

(22) International Filing Date:

15 March 2022 (15.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/162,086 17 March 2021 (17.03.2021) US
63/162,098 17 March 2021 (17.03.2021) US

(71) Applicant: **3R LIFE SCIENCES CORPORATION**
[US/US]; 1500 East Hamilton Ave., Ste 211-A, Campbell,
California 95008 (US).

(72) Inventors: **TSUI, Steven Shi Lap**; 1F, No. 90, Luke 5th
Rd., Luzhu Dist., Kaohsiung City, 821 (TW). **LU, Pong-**

Jeu; 1F, No. 90, Luke 5th Rd., Luzhu Dist., Kaohsiung City,
821 (TW).

(74) Agent: **ZHANG, Hui**; RABIN & BERDO, P.C., 2650 Park
Tower Drive, Suite 800, Vienna, Virginia 22180 (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, 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, IT, JM, 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,

(54) Title: SUTURELESS INFLOW CANNULA ASSEMBLY FOR CONNECTING VENTRICULAR ASSIST DEVICES TO HUMAN CIRCULATION

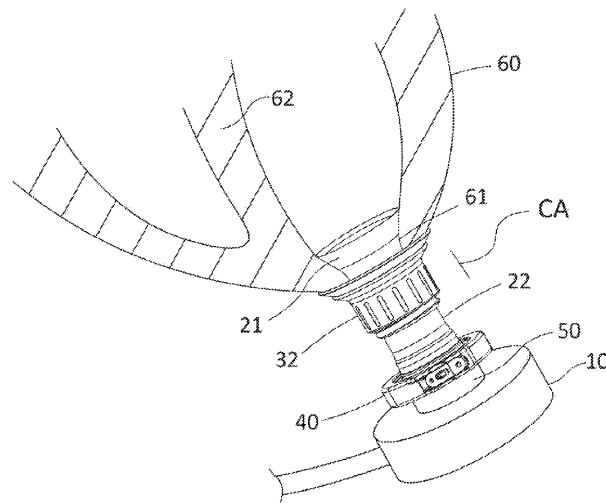


FIG. 2A

(57) Abstract: An inflow cannula assembly intended for connecting a ventricular assist device (VAD) to a heart chamber without suturing anastomosis is provided. The inflow cannula assembly includes a deformable flow cannula with funnel-shaped bellmouth intake at a first end and a second end interfaced to the inlet of a VAD with minimal interface discontinuity; also includes is a pair of male and female fasteners that can be screw locked to fix and seal the cannula bellmouth against the endocardium for hemostasis purpose; as well as a VAD coupler and a VAD inlet adapter that enable a quick connection of the cannula with the VAD.

[Continued on next page]

WO 2022/197725 A1

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).

Published:

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