This document is scheduled to be published in the Federal Register on 2026-11-02 and available online at https://www.federalregister.gov/d/2026-22339, and on https://govinfo.gov

le 4167-05-P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Prospective Grant of Exclusive Patent License: Catheter-based intramyocardial ablation for treating ventricular arrhythmia in a human

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The National Heart, Lung and Blood Institute (NHLBI), National Institutes of Health, Department of Health and Human Services, is contemplating the grant of an exclusive patent license to AntaraCore, Systems, Inc., located in Dover, Delaware, to practice the inventions embodied in the patent applications listed in the Supplementary Information section of this notice.

DATES: Only written comments and/or applications for a license which are received by the NHLBI Office of Technology Transfer and Development [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] will be considered.

ADDRESSES: Requests for copies of the patent applications, inquiries, and comments relating to the contemplated exclusive patent license should be directed to: Michael Shmilovich, Esq., MS, CLP

Acting Director, phone number 301-435-5019 or shmilovm@nih.gov.

SUPPLEMENTARY INFORMATION:

The following and all continuing U.S. and foreign patents/patent applications thereof are the intellectual properties to be licensed under the prospective license to AntaraCore Systems, Inc.:

NIH REF NO.	PATENT No. or APPLICATION No.	FILING DATE	TITLE
E-017-2024-0-US-01	66/555,802	2/20/2024	Systems And Methods For Intramyocardial Ablation (VINTAGE)

E-017-2024-1-US-01	63/716,145	11/4/2024	SYSTEMS AND METHODS FOR AN ABLATION CATHETER FOR INTRAMYOCARDIAL ABLATION
E-017-2024-2-US-01	63/716,158	11/4/2024	SYSTEMS AND METHODS FOR A MYOCARDIAL ACCESSOR CATHETER FOR INTRAMYOCARDIAL ABLATION
E-017-2024-1-PC-01	PCT/US2025/053823	11/3/2025	SYSTEMS AND METHODS FOR AN ABLATION CATHETER FOR INTRAMYOCARDIAL ABLATION
E-017-2024-2-PC-01	PCT/US2025/053825	11/3/2025	SYSTEMS AND METHODS FOR A MYOCARDIAL ACCESSOR CATHETER FOR INTRAMYOCARDIAL ABLATION
E-017-2024-3-PC-01	PCT/US2025/016665	2/20/2025	SYSTEMS AND METHODS FOR INTRAMYOCARDIAL ABLATION (VINTAGE)
E-017-2024-3-US-01	19/616,776	8/19/2026	SYSTEMS AND METHODS INTROMYOCARDIAL ABLATION (VINTAGE)
E-017-2024-3-EP-01	25711938.8	8/6/2026	SYSTEMS AND METHODS FOR INTROMYOCARDIAL ABLATION
E-061-2022-0-PC-01	PCT/US2023/021238	5/5/2023	SYSTEMS AND METHOD FOR SYNCHRONOUS CIRCUMFERENTIAL INTRAMYOCARDIAL RESYNCHRONIZATION AND PACING
E-061-2022-0-US-02	18/863,596	11/6/2024	SYSTEMS AND METHOD FOR SYNCHRONOUS CIRCUMFERENTIAL INTRAMYOCARDIAL RESYNCHRONIZATION AND PACING

E-061-2022-0-IL-01	316835	11/5/2024	SYSTEMS AND METHOD FOR SYNCHRONOUS CIRCUMFERENTIAL INTRAMYOCARDIAL RESYNCHRONIZATION AND PACING
E-061-2022-0-EP-01	23729551.4	11/3/2024	SYSTEMS AND METHOD FOR SYNCHRONOUS CIRCUMFERENTIAL INTRAMYOCARDIAL RESYNCHRONIZATION AND PACING

The patent rights in these inventions have been assigned to the Government of the United States of America. The prospective exclusive patent license territory may be worldwide and in a field of use limited to catheter-based intramyocardial ablation, for treating ventricular arrhythmia in a human.

This patent license covers two patent estates as shown above, namely the invention described in the E-017-2024 estate, and the invention described in the E-061-2022 estate. “Intramural substrates” are the crux of the clinical challenge addressed by the subject patent estates and the proposed field of use. Specifically, these intramural substrates are the electrically conducting and hard-to-reach arrhythmogenic tissue located within the depth of the myocardial wall—the mid-myocardium—rather than on the endocardial (inner) or epicardial (outer) surfaces. The inventions being exclusively licensed herein provide a catheter-based system and method to access these intramyocardium tissues, and a synchronous circumferential intramyocardial resynchronization and pacing (SCIRP) system intended to improve cardiac resynchronization therapy. Both of these inventions together provide a new and improved device, system and method to enable electrophysiologists to access and treat arrhythmogenic intramural substrates located within the ventricular myocardial wall, which currently is not systematized.

The invention described in E-017-2024, for which we have 3 provisional applications, 3 PCT applications, a pending U.S. national stage application and a pending European national stage

application, covers a catheter-based system and method for performing ablation directly within the intramyocardium and particularly targeting ventricular tachycardia that is otherwise difficult to reach using existing ablation devices and methods. The system, referred to as VINTAGE (Ventricular Intramyocardial Navigation for Tachycardia Ablation Guided by Electrograms), principally uses a small flexible ablation microcatheter that tracks coaxially over a steerable, electrically insulated guidewire. Proximal to the catheter tip are mapping electrodes and a conductive ablation electrodes with perforations that can elute irrigants directly into the surrounding myocardial tissue. The physician navigates to the desired deep target using fluoroscopy, ultrasound, electroanatomic mapping and/or electrogram-based depth navigation (EDEN); once the ablation electrode reaches the target, irrigant is delivered through its openings and radiofrequency energy applied while irrigation continues, producing a controlled lesion in the abnormal tissue responsible for the arrhythmia. The irrigant may be an electrolyte acting to alter the electrical and/or physicochemical characteristics of the target myocardial substrate (such as increasing ionic conductivity), act as a thermo-conductive “virtual ablation electrode”, or may alternatively be a caustic agent intended to effect adjunctive chemoablation.

The invention described in E-061-2022, for which we have a PCT application, a pending U.S. national stage application, a pending Isreali national stage application and a pending European application, covers a synchronous circumferential intramyocardial resynchronization and pacing (SCIRP) system intended to improve cardiac resynchronization therapy by placing a flexible, multi-electrode pacing lead inside the ventricular myocardium rather than on an endocardial or epicardial surface. The lead contains multiple small ring electrodes and is implanted along a curved trajectory that can extend at least 180 degrees—and potentially substantially around the circumference—of the left ventricle, including through the interventricular septum near the His bundle or left bundle branch. Of particular import is the ability to introduce these electrodes into the ventricular intramural spaces through a navigated guidewire introduced through the myocardium using electrograms or pace mapping, and leaving the electrode-bearing lead

embedded in the heart muscle. A multichannel pulse generator then energizes selected myocardium implanted electrodes in unipolar or bipolar configurations directly stimulate ventricular muscle and, where appropriately positioned, the native His/LBB conduction system. In essence, instead of trying to resynchronize the ventricle from a few conventional surface pacing sites, the invention creates an intramyocardial array of pacing sites distributed around the ventricle, intended to re homogenize synchronization.

This notice is made in accordance with 35 U.S.C. 209 and 37 CFR Part 404. The prospective exclusive patent license will be royalty bearing and may be granted unless within thirty (30) days from the date of this published notice, the NHLBI receives written evidence and argument that establishes that the grant of the license would not be consistent with the requirements of 35 U.S.C. 209 and 37 CFR Part 404.

Complete applications for a license in the prospective field of use that are timely filed in response to this notice will be treated as objections to the grant of the contemplated exclusive patent license. Comments and objections submitted to this notice will not be made available for public inspection and, to the extent permitted by law, will not be released under the *Freedom of Information Act*, 5 U.S.C. 552.

Dated: October 28, 2026

Michael Shmilovich,

Acting Director,

National Heart, Lung, and Blood Institute,

Office of Technology Transfer and Development,

National Institutes of Health.

[FR Doc. 2026-22339 Filed: 10/30/2026 8:45 am; Publication Date: 11/2/2026]