



A Novel Method and Apparatus to Access the Left Heart for Cardiac Interventions

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SUMMARY

UCLA researchers in the Division of Cardiology at the Geffen School of Medicine have developed novel devices and methods for allowing entirely intravascular access to the left ventricle, thereby precluding access via the apex of the heart percutaneously or by surgery.

BACKGROUND

Many cardiac and vascular interventions, such as transapical aortic valve replacement, mitral valve repair and replacement, and retrograde aortic root endograft procedures require safe and reliable direct percutaneous access and closure of access to the left ventricle. Direct left ventricular (LV) access involving trans-atrial or trans-septal surgery risks injury to critical structures, including the ventricular septum or coronary arteries, and requires immediate recognition of procedural complications, including pericardial tamponade or hemothorax.

INNOVATION

Researchers at UCLA have developed a novel device that allows access of therapeutic and diagnostic devices into the left ventricle from the venous side. This device will create a platform for accessing left sided structures including the aortic and mitral valves.

APPLICATIONS

Left ventricular access in the field of cardiac electrophysiology and cardiac surgery

ADVANTAGES

- ▶ No longer requires trans-apical surgery or crossing the aortic or mitral valves via arterial approach or trans-atrial septal approach
- ▶ Minimizes injury to ventricular septum or coronary arteries

PATENT STATUS

| Country | Type | Number | Dated | Case |
|--------------------------|---------------|----------|------------|----------|
| United States Of America | Issued Patent | 10426515 | 10/01/2019 | 2008-788 |

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ [A Method to Protect the Esophagus and Other Mediastinal Structures During Cardiac and Thoracic Interventions](#)

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OTHER INFORMATION

KEYWORDS

Cardiovascular, left ventricle access, medical device

CATEGORIZED AS

- ▶ **Medical**
 - ▶ Devices
 - ▶ Disease: Cardiovascular and Circulatory System

RELATED CASES

2008-788-0