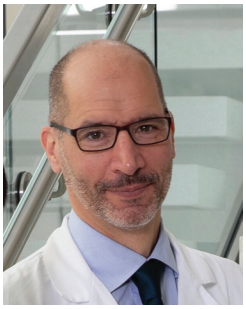
Dr. Miguel Valderrábano Leads New Issue on Cardiac Electrophysiology

The editors of the *Methodist DeBakey Cardiovascular Journal* thank Miguel Valderrábano, MD, for his leadership as guest editor of this issue on cardiac electrophysiology, an update to the electrophysiology issue he spearheaded for this publication in 2015.



Miguel Valderrábano, MD

Dr. Valderrábano is the Lois and Carl Davis Centennial Chair and chief of cardiac electrophysiology at the Houston Methodist DeBakey Heart & Vascular Center and professor of cardiology at the Houston Methodist Academic Institute. He also leads a basic research laboratory focused on finding new and more effective treatments for atrial fibrillation, including epicardial mapping and ablation. His research team uses optical mapping techniques in cell cultures and other models to explore mechanisms of ventricular fibrillation and sudden cardiac death.

The Valderrábano Lab has received grant funding from the American Heart Association and the National Institutes of Health (NIH), including an NIH-funded study evaluating the efficacy and safety of an alcohol infusion treatment for patients with persistent atrial fibrillation.

Dr. Valderrábano earned his medical degree from the Universidad Autónoma De Madrid in Madrid, Spain, then went on to complete his internal medicine training at the UCLA-West Los Angeles VA Medical Center in California. From there, he completed fellowships in cardiology and clinical cardiac electrophysiology at Cedars-Sinai Medical Center in Los Angeles, where he was named chief cardiology fellow in 2002. His first faculty position was at the David Geffen School of Medicine at UCLA, where he was named director of the Implanted Devices Clinic at UCLA's Cardiac Arrhythmia Center and assistant professor of medicine at UCLA Medical Center. Dr. Valderrábano holds memberships in the American Heart Association, American College of Cardiology, and the Heart Rhythm Society.

Exploring New Frontiers in Cardiac Electrophysiology

Miguel Valderrábano, MD

Since the birth of cardiac electrophysiology at the dawn of the 20th century, when Einthoven devised the first electrocardiographic machine, technology has been a fundamental pillar of clinical electrophysiology. Without the ability to sample, process, and display electrical signals from the heart, the field would simply not exist. From the surface electrogram, constructed by sampling voltage differences between electrodes in the skin of the chest and limbs, a whole scientific discipline evolved as a diagnostic tool to interpret cardiac electrical signals in health and disease by combining technology with anatomy and physiology.

With the advent of cardiac catheterization, electrical signals sampled from different portions of the heart introduced a new level of sophistication in the mechanistic understanding of arrhythmia. Even with the added mechanistic insights, electrophysiology remained a purely diagnostic discipline. It was only after another technology was incorporated—