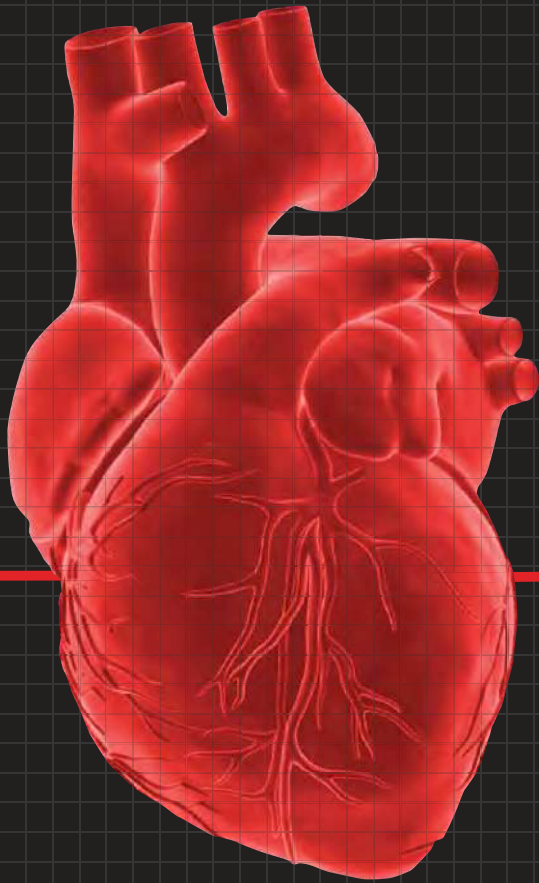


# KANSAS CITY HEART RHYTHM SYMPOSIUM 2021

August 21-22, 2021



**Free Admission**

**Overland Park Convention Center**

**Course Director:**

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**Kansas City Heart Rhythm Institute, Overland Park, KS**

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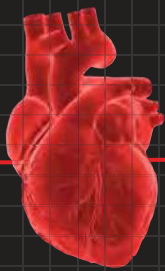
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# KANSAS CITY HEART RHYTHM SYMPOSIUM 2021

August 21-22, 2021 | Overland Park Convention Center | [www.kchrs.com](http://www.kchrs.com)

## PIONEER IN ELECTROPHYSIOLOGY AWARD RECIPIENT & KEYNOTE SPEAKER



### **Douglas L. Packer, MD**

**Professor of Medicine**

**John M. Nasseff, Sr., Professorship in Cardiology**

**Director, Interventional Cardiac Electrophysiology Research Laboratories**

**Mayo Clinic**

**Rochester, MN**

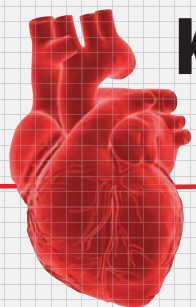
Douglas L. Packer, MD, is a Professor of Medicine, and the John M. Nasseff, Sr., Professor in Cardiovascular Diseases in the Department of Cardiovascular Diseases, Division of Cardiac Electrophysiology, at Mayo Clinic Rochester. He is Director of the Translational Electrophysiology Research Laboratory. Dr. Packer is internationally known in cardiac electrophysiology.

He received the MD degree at the University of Utah and completed an internship, residency and fellowship at Duke University, where he was on staff before coming to Mayo. His honors and awards include the ACC 2019 Distinguished Scientist Award (Translational) (2019), the Distinguished Service Award from Brigham Young University, the Haskell Schiff Award in Internal Medicine from Duke University, the Eric Prystowsky Advocate for Patients Award, and a variety of Visiting Professorship awards.

Dr. Packer is active in the Heart Rhythm Society where he is a past president and member of the Board of Trustees. He is also active in the American Heart Association and the American College of Cardiology. He has served/currently serves on editorial boards for the Circulation Arrhythmia & Electrophysiology, American Heart Journal, the Journal of Cardiovascular Electrophysiology, Heart Rhythm journal, and the (EP) Journal of the American College of Cardiology. He also has served on multiple National Heart, Lung, and Blood Institute work groups on atrial fibrillation, ablation and planning for future NIH studies.

Dr. Packer has been an active teacher and mentor, and also lectures widely on cardiac arrhythmias. He has written or co-authored more than 379 publications. He has lectured extensively in national and international meetings, giving over 1,872 invited lectures in 41 countries. He has served on the executive committee of a number of NIH multicenter randomized clinical trials, including the MUSTT, SCD-HeFT, and HAT Trials. Dr. Packer is also the International Principal Investigator of the recently reported NIH CABANA Trial. In this capacity he led the consortium of centers directing the trial. He is the PI of the Thermedical VT Needle Electrode study, and on the Executive Committee of the LESS VT Study.

Dr. Packer is a Mayo Clinician Investigator. His translational work focuses on the mechanisms and ablation of atrial fibrillation and other cardiac arrhythmias, autologous fibroblast modulation of electrical impulse propagation in the heart, and the development of carbon particle catheter-free ablation of arrhythmias. His clinical work investigates 4/5 dimensional integrated image-guided ablation, and the development of new energy sources for the modification of cardiac tissue. His work has been funded in part by private foundations, the American Heart Association, and the NIH. A key part of his research is the development of the US Catheter Free Particle Therapy Ablation Program. He is also the PI of the Extracorporeal Particle Therapy Ablation Using Proton and Carbon Beams, that is currently under way. Dr. Packer holds US and European patents in the development of intracardiac ultrasound and 4/5D imaging, and particle therapy ablation.



# KANSAS CITY HEART RHYTHM SYMPOSIUM 2021

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Austin, TX

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Los Angeles, CA

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Mayo Clinic  
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Kansas City Heart Rhythm Institute  
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Mayo Clinic  
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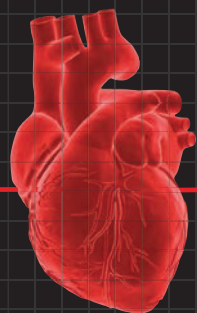
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**Richard Whitlock, MD**

Population Health Research  
Hamilton Ontario, Canada

# KANSAS CITY HEART RHYTHM SYMPOSIUM 2021

## SATURDAY & SUNDAY, AUGUST 21-22, 2021



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### COURSE PROGRAM

#### SATURDAY AUGUST 21, 2021

##### **Session I – COVID in Electrophysiology** (Moderators: Dr. Thomas Deering & Dr. Chandra Vasamreddy)

- 8:00 Welcome – Dr. Dhanunjaya Lakkireddy
- 8:10 The Big Bold Vision for Electrophysiology – A President's Perspective – Dr. Fred Kusumoto
- 8:20 COVID Related Cardiac Arrhythmias and Myocarditis – Diagnosis, Management and Risk Stratification – Dr. Rakesh Gopinathannair
- 8:30 Impact of COVID on Electrophysiology? The Ugly, Bad & Good – Dr. Andrea Russo
- 8:40 Panel Discussion

##### **Session II – Electrophysiology Pioneer Award Celebration** (Moderator: Dr. Thomas Deering & Dr. Fred Kusumoto)

- 9:00 Pioneer in Cardiovascular Electrophysiology Award Presentation – Keynote Speaker: Dr. Douglas Packer
- 9:30 What All Did We Learn from CABANA, EAST AF NET and EARLY AF? – Dr. Sanjeev Saxena
- 9:40 Panel Discussion

##### **Session III – Thinking Outside the Box for Heart Failure** (Moderators: Dr. Peter Park & Dr. Christine Albert)

- 9:50 Role of Cardiac Contractility and Baroflex Activation Therapy in Managing Patients with Heart Failure – Dr. Jodie Hurwitz
- 10:00 The AF-HFpEF Syndrome – Role of Rhythm Control Through Catheter Ablation – Dr. Sanjeev Saxena
- 10:10 Leadless Left Ventricular Pacing Using Transthoracic Ultrasound Stimulation – Dr. Vivek Reddy
- 10:20 Advances in His Bundle Pacing & Left Bundle Pacing – Tools, Techniques & Data – Dr. Parikshit Sharma
- 10:30 Panel Discussion

##### **Session IV – Prevention & Management of Cardiac Device Infection** (Moderators: Dr. Andrew Krahn & Dr. Jodie Hurwitz)

- 10:50 What Are the Barriers to The Identification and Management of Cardiac Device Related Infections? – Dr. Jonathan Piccini
- 11:00 Role of Antibiotic Prophylaxis, Pouches, Rinses and Other Techniques in Preventing CIED Infections – Dr. Jayasree Pillariseti
- 11:10 Bacteremia and CIED - How Do You Manage an Infected CIED? – Dr. Andrew Krahn
- 11:20 Latest in Tools and Techniques for Extraction of Cardiac Devices – Dr. Matthew Reynolds
- 11:30 Panel Discussion
- 11:50 Break

12:00 Lunch: Non-CME Technology Theatre (Located in non-CME area) Impulse Dynamics, BioSig Technologies, Baylis Medical

##### **Session V – Innovations in AF Management** (Moderators: Dr. Andrea Natale & Dr. Samuel Asirvatham)

- 1:00 Role of Rapid Non-Contact Mapping in Understanding and Treating Atrial Arrhythmia – Dr. Dhanunjaya Lakkireddy
- 1:10 Insights into Atrial Substrate Through Cardiac MRI and Computational Modeling – A Recipe for Enhanced Success – Dr. Joseph Marine
- 1:20 What Is the Best Mapping & Ablation Approach for Long Standing Persistent AF? Cooking the Atrium In 3 Different Ways – Dr. Douglas Packer – Dr. Andrea Natale – Dr. James Cox
- 1:50 Panel Discussion

##### **Session VI – What Is the Buzz About Pulse Field Ablation?** (Moderators: Dr. Srijoy Mahapatra & Dr. Moussa Mansour)

- 2:10 How Exactly Is Pulse Field Ablation Different from Radiofrequency Ablation? – Dr. Samuel Asirvatham
- 2:20 What Have We Learnt About the Therapeutic Efficacy of PFA in AF? – Dr. Vivek Reddy
- 2:30 Can PFA Deliver on The High Promises of Safety – Hope or Hype? – Dr. Steve Mickelsen
- 2:40 Novel Technologies in PFA – Dr. Moussa Mansour
- 2:50 What Data Needs to Be Generated for PFA to Be Primetime? – Dr. Fred Kusumoto
- 3:00 Break



# KANSAS CITY HEART RHYTHM SYMPOSIUM 2021

## COURSE PROGRAM

### **Session VII – Improving the Efficiency of Ablation** (Moderators: Dr. Jayasree Pillarisetti & Dr. Christine Albert)

- 3:20 Catheter Tip Modification and Impact on Procedural Outcomes – QDOT and Flexibility – Dr. Andrea Natale
- 3:30 The Science Behind the Indices of Ablation – Ablation Index, Lesion Stability Index and AII – Dr. Tachapong Nagamukos
- 3:40 Left Atrial Scar and Ablation Strategy – Personalized Approach in AF Ablation – Dr. Nassir Marrouche
- 3:50 Hybrid Ablation – Who, When – Dr. Christopher Ellis
- 4:00 Role of IV Sotalol in Clinical EP Practice – Dr. Peter Park
- 4:10 Role of Focal Triggers and Strategies of Ablation – Dr. Usman Siddiqui
- 4:20 **Panel Discussion**

### **Session VIII – Myocardial Inflammation and Electrophysiology** (Moderators: Dr. Luis Leite & Dr. Pasquale Santangeli)

- 4:30 Myocarditis, Arrhythmias and Sudden Cardiac Death – Understanding the Connection – Dr. Dhanunjaya Lakkireddy
- 4:40 Non-Ischemic Cardiomyopathy and Myocardial Inflammation – An Evolving Paradigm – Dr. Jeanne Poole
- 4:50 Diagnostic and Management Strategies for Arrhythmogenic Myocarditis – Dr. Kalyanam Shivkumar
- 5:00 Risk Stratification for SCD in Patients with Infiltrative and Inflammatory Cardiomyopathies – Dr. William Sauer
- 5:10 Role of Pacing Therapies in Treating Central and Obstructive Sleep Apnea – Respicardia, Inspire & More – Dr. Sanjaya Gupta
- 5:20 **Panel Discussion**

## **SUNDAY, AUGUST 22, 2021**

### **Session IX – Stroke Prophylaxis and Left Atrial Appendage Management** (Moderators: Dr. Jonathan Piccini & Dr. Krishna Pothineni)

- 8:00 Heart Rhythm Society – Navigating a Global Pandemic and Serving the Needs of the Members – Ms. Patricia Blake
- 8:10 What Did We Learn from LAAOS-3? Role of LAA Exclusion in Stroke Prophylaxis – Dr. Richard Whitlock
- 8:20 Stroke Prophylaxis and LAA Endocardial Occluders – Where Are We Today? – Dr. Jared Bunch
- 8:30 Role of LAA in Arrhythmogenesis and Management Strategies and Pitfalls – Dr. Suneet Mittal
- 8:40 LAA Closure After Successful AF Ablation – Can It Mitigate the Need for Continued Oral Anticoagulation? – Dr. Oussama Wazni
- 8:50 Closure Options for Unusual LAA Anatomies – Dr. Luigi Di Biase

### **Session X – Digital Health in Electrophysiology** (Moderators: Dr. Jeanne Poole & Dr. Scott Koerber)

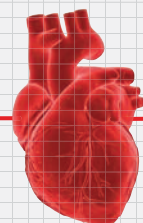
- 9:00 Define AF – Managing AF Through Implantable Cardiac Monitors in The Digital Playground – Dr. Andrea Russo
- 9:10 Smart Watches and Wearable External Heart Rhythm Monitors – Where Do They Fit in The EP Practice? – Dr. Christine Albert
- 9:20 Machine Learning in Optimizing Electrophysiology Procedures – How Far Have We Come? – Dr. Suraj Kapa
- 9:30 Digital Health Tools That Can Optimize the Care of Patients in The Outpatient Setting – Dr. Thomas Deering
- 9:40 **Panel Discussion**
- 10:00 **Break**

### **Session XI – Managing Ventricular Arrhythmias** (Moderators: Dr. Benhur Henz & Dr. Sanjeev Saxena)

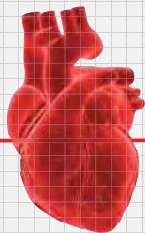
- 10:10 What Is the Most Practical Approach to Performing VT Ablation? – Dr. Kalyanam Shivkumar
- 10:20 Role of Remote Magnetic Navigation in VT Ablation – Dr. Peter Weiss
- 10:30 Bipolar ablation for difficult PVC/VT ablation? – Dr. Piotr Futyma
- 10:40 How to Improve Success Rates of a Summit and Papillary Muscle PVC Ablation? – Dr. Pasquale Santangeli
- 10:50 **Panel Discussion**

### **Session XII – What Is the Incremental Benefit of Additional Tools** (Moderators: Drs Luigi Di Biase & Dr. Poojitha Shivamurthy)

- 11:10 Vascular Closure Devices for EP Procedures – Clinical & Cost Effectiveness Data – Dr. Amin Al-Ahmad
- 11:20 Esophageal Temperature Monitoring – Stethoscope, Circa, Infrared or Single Tip Thermocouple Probe? – Dr. William Sauer
- 11:30 Safety and Efficacy of Esophageal Deviation During AF Ablation – Dr. Jie Cheng
- 11:40 RF Transseptal Needle in EP and Structural Procedures – Varied Choices and Applications – Dr. Amin Al-Ahmad
- 11:50 Pacing in Vasovagal Syncope – Dr. Brian Olshansky
- 12:00 **Panel Discussion**
- 12:20 **Closing Remarks** – Dr. Dhanunjaya Lakkireddy



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# KANSAS CITY HEART RHYTHM SYMPOSIUM 2021

## LEARNING OBJECTIVES

At the conclusion of this activity, participants should be able to:

- Discuss types of devices used for monitoring and treating arrhythmias
- Demonstrate the use of imaging techniques to improve procedural outcomes
- Apply guideline-endorsed, clinically applicable strategies to help resolve device-related issues
- Summarize clinical trial results that can be applied to improving the safety and efficacy of electrophysiology (EP) procedures
- Explain anticoagulation treatment and stroke prophylaxis options for cardiac patients
- Examine clinical evidence for the latest trends in LAA treatments

## METHOD OF PARTICIPATION

How to obtain CME credit:

1. Go to [www.ACHLcme.org](http://www.ACHLcme.org)
2. Click on "Use Certificate Code"
3. Enter the Certificate Code **4408907**
4. Complete the evaluation, and your certificate will be immediately available to you.

Participants will receive an automated certificate. You may print or save this record for your files. It will also be sent to you via email to the address provided in your profile on [www.ACHLcme.org](http://www.ACHLcme.org). There is no fee for the generation of the certificate.

Inquiries may be directed to ACHL at (877) 444-8435, ext. 160.

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## CREDIT DESIGNATION

**Physicians:** ACHL designates this live activity for a maximum of 13.00 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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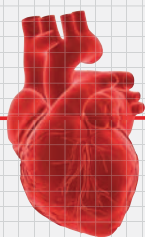
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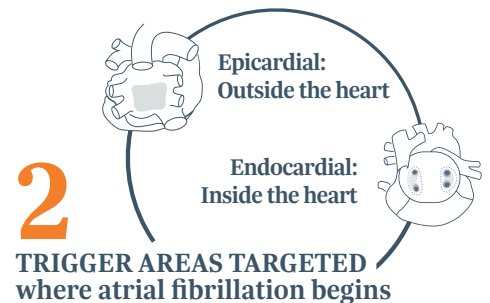
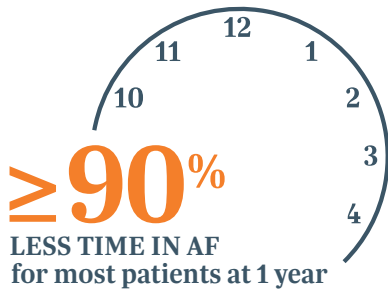
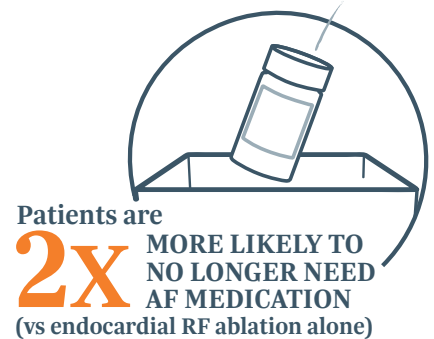
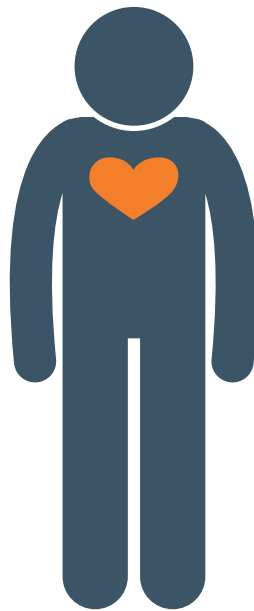


**KANSAS CITY HEART RHYTHM SYMPOSIUM 2021**

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Based on 7-day continuous rhythm monitoring at 18-months post procedure



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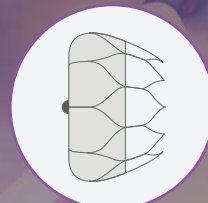
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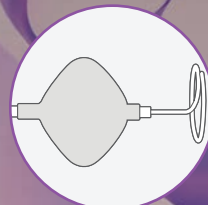


FAST TRACK  
access-to-delivery  
of left heart therapy devices

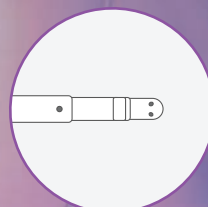
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Left atrial  
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CE 1639

# EARLIER ABLATION FOR ATRIAL FIBRILLATION

**EARLIER RESTORATION OF SINUS RHYTHM BY CATHETER ABLATION IN PATIENTS WITH ATRIAL FIBRILLATION (AFIB) MAY REDUCE PATIENT MORBIDITY AND DISEASE PROGRESSION, IMPROVE LONG-TERM PROCEDURAL SUCCESS, AND LOWER OVERALL PATIENT MORTALITY.<sup>1-3</sup>**

Patients who have longer diagnosis-to-ablation times (DAT) experience higher rates of transient ischemic attacks, stroke and heart failure, as compared to patients who receive ablation earlier.<sup>4,5</sup>



**UP TO 60%**  
LOWER RATE OF  
TIA/CVA EVENTS

In a prospective registry of 1000 AFib patients, patients receiving ablation with a shorter DAT had a 60% lower rate of TIA/CVA events compared to patients with a longer DAT.<sup>5</sup>

\*Relative reduction from the comparison of 244 patients with DAT of  $\leq 11$  months versus 250 patients with a DAT of  $\geq 71$  months at 5 year follow-up. TIA/CVA were defined as a transient or persistent neurological deficit diagnosed by a neurologist. Differences were significant where  $p < 0.001$ .



**UP TO 41%**  
LOWER RATE OF  
HEART FAILURE  
HOSPITALIZATION

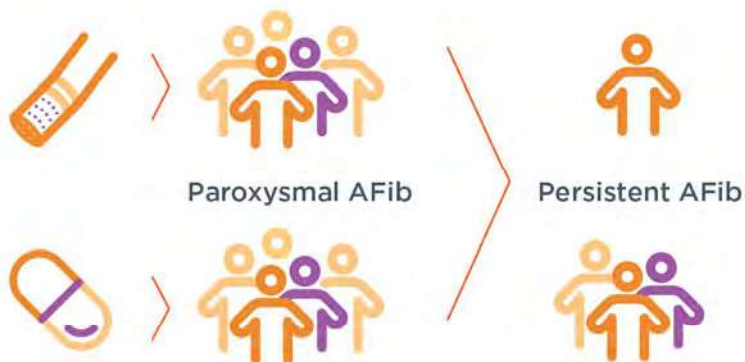
In registry study of 4535 AFib patients, patients with the shortest DAT had 41% lower rates of heart failure hospitalization at one year as compared to patients with the longest DAT.<sup>4</sup>

\*Relative reduction from the comparison of 1152 patients with a DAT of 1-6 months versus 1201 patients with a DAT of  $\geq 5$  years at a mean follow-up for 3.2 years. Heart failure hospitalization defined as ICD-9 code 428 within patient EMR. Differences were significant where  $p\text{-trend} = 0.009$ .

Early treatment of AFib with catheter ablation substantially reduces the rate of AFib progression from paroxysmal AFib to persistent AFib, a more complex and difficult to treat disease state.<sup>2</sup>

The ATTEST randomized controlled trial found that paroxysmal AFib patients receiving ablation are up to **10 times less likely to progress to persistent AFib**, compared to those treated with anti-arrhythmic drugs.<sup>2</sup>

Difference statistically significant (HR: 0.114)



# BIOTRONIK

## Premium Product Portfolio



**Pacemakers**



**Defibrillators**



**CRT-Ds**



**CRT-PS**



**Diagnostics**

<b>MRI Capabilities</b>	Full body 1.5/3.0 T Single/Dual	Full body 1.5/3.0 T DX/Dual DF1 & DF4	Full body 1.5/3.0 T DF1 & DF4	Full body 1.5/3.0 T IS1/IS4	Full body 1.5/3.0 T
<b>Home Monitoring</b>	Automatic, daily, including HF trends, online alert programmability.	Automatic, daily, including HF trends, online alert programmability.	Automatic, daily, including HF trends, online alert programmability.	Automatic, daily, including HF trends, online alert programmability.	Automatic, daily, including HF trends, online alert programmability.
<b>Rate Response</b>	Accelerometer Closed Loop Stimulation	Accelerometer Closed Loop Stimulation	Accelerometer Closed Loop Stimulation	Accelerometer Closed Loop Stimulation	
<b>Effective Therapies</b>	I-Opt; Vp Suppression	DX Technology Ultra High Energy	CRT AutoAdapt, LV Polarities Management with 20 polarities, IN-TIME Template, Quick Check	I-Opt; Vp Suppression	

## Vascular Intervention



**Orsiro Drug-Eluting Stent System**

- Improved patient outcomes<sup>1</sup>
- Only ultrathin DES in the US<sup>2</sup>
- Excellent deliverability, with lowest crossing profile<sup>3</sup> and up to 72% more force from hub to tip<sup>3</sup>



**PK Papyrus\*\***

- The only 5 F compatible<sup>4</sup> covered coronary stent available in the US
- First FDA approved 2.5 mm diameter covered coronary stent<sup>5</sup>
- Designed to deliver more like a conventional stent<sup>6,7</sup>



**PRO-Kinetic Energy**

- Thinnest struts—pericard
- Exceptional deliverability
- Best-in-class clinical data



**Pantera Pro & Pantera LEO**

- Workhorse and Non-Compliant Balloons



**Galeo Pro**

- Family of high-tensile stainless steel Guide Wires

## Partner Alliances



**Zero-Gravity®**

Suspended radiation protection system designed to increase the level of radiation protection while at the same time eliminating the weight burden for the operator

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6024 Jean Road  
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(800) 291-0470 (fax)  
www.biotronik.com  
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BR263r11 11/15/19

\*Animal model. \*\*Humanitarian Device. Authorized by Federal law for use in the treatment of acute perforations of native coronary arteries and coronary bypass grafts in vessels 2.5 to 5.0 mm in diameter. The effectiveness of this device for this use has not been demonstrated.  
1. Kandzari D et al. *J Am Coll Cardiol*, 2018, 72(25). 2. When compared to FDA approved Drug Eluting Stents. BIOTRONIK data on file. 3. BIOTRONIK data on file; IIB[P]24/2018. 4. For 2.5-4.0 mm diameter compared to Graftmaster; 6F compatible for 4.5-5.0 mm 5. FDA Humanitarian Device Exemption [HDE] Database: <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfHDE/hde.cfm>; last accessed September 14, 2018 6. Compared to Graftmaster 2.8/16 [BIOTRONIK data on file] 7. Compared to Jostent Graftmaster 3.0/16 [BIOTRONIK data on file]

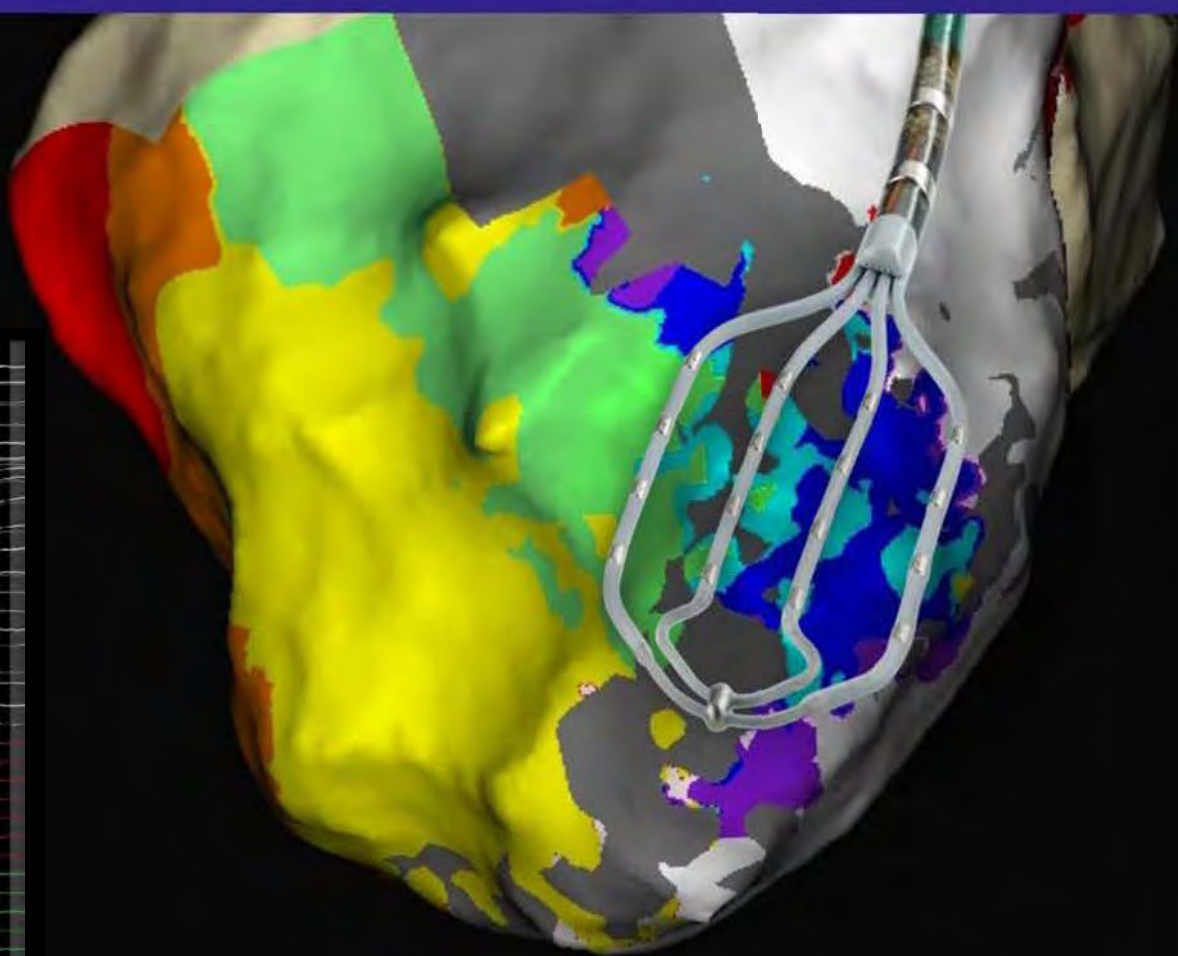




# ACCURACY MATTERS SEE THINGS DIFFERENTLY

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FAST.<sup>1</sup> ACCURATE.<sup>2</sup> EASY-TO-USE.<sup>3</sup>

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HD Grid Mapping Catheter,  
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LEFT ATRIAL APPENDAGE CLOSURE DEVICE

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# THEY SAY PROBLEMS ARE JUST OPPORTUNITIES IN DISGUISE

That's why we work tirelessly  
to find solutions.

More than 60 years ago, our founder created the first battery-operated pacemaker, so cardiac patients wouldn't have to depend on electricity. And recently, we developed the first hybrid closed-loop insulin pump to help people with diabetes gain greater freedom while managing their glucose levels.

**Problem solving. It's what we do.**

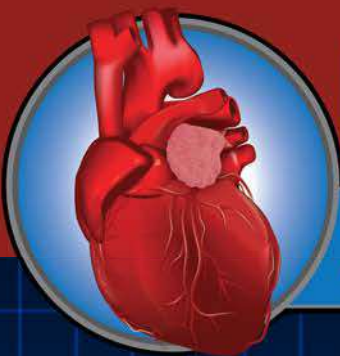
That's why, in addition to devices, our work today includes things like:

- Enabling the early detection and treatment of a variety of conditions
- Lowering post-hospitalization complication rates
- Optimizing hospital and clinic efficiency

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OPPORTUNITIES —  
TOGETHER.

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# 10th Annual **ISLAA**

International Symposium  
on Left Atrial Appendage

**March 4 - 5, 2022**  
**Los Angeles, CA**

## **COURSE DIRECTORS**

**Dhanunjaya Lakkireddy, MD, FACC, FHRS**

Kansas City Heart Rhythm Institute - Overland Park, KS

**Andrea Natale, MD, FACC, FHRS, FESC**

Texas Cardiac Arrhythmia Institute - Austin, TX

**David R. Holmes, MD, FACC, FSCAI**

Mayo Clinic, Rochester, MN

**Vivek Reddy, MD**

Mount Sinai Hospital - New York, NY

**Saibal Kar, MD, FACC, FHRS, FESC**

Los Robles Medical Center - Los Robles, CA

## **TARGET AUDIENCE**

The 10th International Symposium on Left Atrial Appendage strives to serve as the premier educational event for electrophysiologists, interventional cardiologists, neurologists and stroke specialists, internal and family medicine physicians and associated professionals dedicated to the management of patients with arrhythmias.

## **COURSE OVERVIEW**

This symposium updates you on everything you need to understand about stroke prevention and Left Atrial Appendage (LAA) exclusion procedures.

### **Highlights Include:**

- Anatomy and physiology of LAA
- Stroke pathophysiology and the role of LAA
- Clinical issues related to LAA exclusion
- Clinical trials on LAA exclusion devices
- Anticoagulation strategies

- Live Case Telecast
- Interesting cases
- Panel discussions
- Debates by experts in the field

**[www.islaasympposium.com](http://www.islaasympposium.com)**