# **Final Program**

# September 24-26, 2010 Newport, Rhode Island

Two Decades of Interventional EP



## **Program Chairs**

Sanjeev Saksena, MD, FACC, FESC, FHRS Thorsten Lewalter, MD, FESC, FHRS

## **Co-Directors**

N. Mark Estes III, MD, FACC, FHRS Andrea Natale, MD, FACC, FHRS Jasbir Sra, MD, FACC, FHRS

# Organized by

Electrophysiology Research Foundation

Endorsed by Heart Rhythm Society, Restoring the Rhythm of Life



Sixth International Symposium on Interventional Electrophysiology in the Management of Cardiac Arrhythmias

> Newport, Rhode Island September 24-26, 2010

# **Organized by**

The Electrophysiology Research Foundation

Warren, New Jersey

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Passaic, NJ

# INTERVENTIONAL CARDIAC ELECTROPHYSIOLOGY 2010

An International Symposium

Course Directors: Sanjeev Saksena & Thorsten Lewalter

Co-Directors: N. Mark Estes III, Andrea Natale, Jasbir Sra

## **US FACULTY**

Masood Akhtar, MD, Professor of Medicine, University of Wisconsin Medical School, Milwaukee, WI Sana Al-Khatib, MD, Assistant Professor of Medicine, Duke University, Durham, NC Penelope Boyden, PhD, Professor of Pharmacology, Columbia University Medical School, New York, NY Hugh Calkins, MD, Professor of Medicine, Johns Hopkins School of Medicine, Baltimore, MD James Coromilas, MD, Professor of Medicine, UMDNJ - Robert Wood Johnson School of Medicine, New Brunswick, NJ Ralph Damiano. MD. Professor of Surgery. University of Washington Medical School, St. Louis, MD N. A. Mark Estes III, MD, Professor of Medicine, Tufts University School of Medicine, New England Medical Center, Boston, MA Michael Ezekowitz, MD, Professor of Medicine, Jefferson Medical College, Philadelphia, PA John Fisher, MD, Professor of Medicine, Albert Einstein School of Medicine, Bronx, NY Jose Jalife. MD. Professor of Internal Medicine, Molecular and Integrative Physiology, University of Michigan, Ann Arbor, MI Bharat Kantharia, MD, Professor of Medicine, University of Texas Medical School, Houston, TX Rai Kaushik. MD. Director, Eastern Heart Institute, St. Marv's Hospital, Passaic, NJ Bruce Lindsay, MD, Professor of Medicine, Cleveland Clinic, Cleveland, OH Suneet Mittal, MD, Associate Professor of Medicine, Columbia University Medical School, New York, NY Robert J. Myerburg, MD, Professor of Medicine, University of Miami School of Medicine, Miami, FL Gerald V. Naccarelli, MD, Professor of Medicine, Milton S. Hershey Medical Center, Hershey, PA Rangadham Nagarakanti, MD, Senior Fellow, Division of Cardiology, Louisiana State University, New Orleans, LA Andrea Natale. MD. Consulting Professor Stanford University School of Medicine. Texas Cardiac Arrhythmia Institute. Austin. TX Dan Roden, MD, Professor of Pharmacology, Vanderbilt University Medical Center, Nashville, TN Michael Rosen, MD, Professor of Pharmacoloay, Columbia University Medical School, New York, NY Sanjeev Saksena, MD, Professor of Medicine, UMDNJ-Robert Wood Johnson School of Medicine, New Brunswick, NJ Deepak Saluja, MD, Assistant Professor of Medicine, UMDNJ-Robert Wood Johnson School of Medicine, New Brunswick, NJ Warren Sherman, MD, Associate Professor of Clinical Medicine, Columbia University Medical School, New York, NY Nick Skadsberg, PhD, Principal Research Scientist, Electrophysiology Research Foundation, Warren, NJ & Minneapolis, MN April Slee, MS, Project Director, Electrophysiology Research Foundation, Warren, NJ & Axio Research Corporation, Seattle, WA Jasbir Sra, MD, Professor of Medicine, University of Wisconsin Medical School, Milwaukee, WS Albert Waldo, MD, The Walter H. Pritchard Professor of Cardiology and Professor of Medicine, Case Western Reserve University, Cleveland, OH David Wilber, MD, Professor of Medicine, Loyola University Medical School, Maywood, IL Bruce Wilkoff. MD. Professor of Medicine. Cleveland Clinic. Cleveland. OH

## **EUROPEAN FACULTY**

Johannes Brachmann, MD, Professor of Medicine, Klinikum Coburg, Coburg, Germany A. John Camm, MD, Professor of Medicine, St. George's Hospital Medical School, London, United Kingdom Riccardo Cappato, MD, Associate Professor of Medicine, San Donato Hospital, Milan, Italy Gerhard Hindricks, MD, Professor of Medicine, University of Leipzig, Leipzig Germany Ellen Hoffmann, MD, Professor of Medicine, Klinikum Bogenhausen, Munich, Germany Werner Jung, MD, Professor of Medicine, Academic Hospital, Villingen, Germany David Keane, MD, Professor of Medicine, St. Vincent's University Hospital, Dublin, Ireland Samuel Levy, MD, Emeritus Professor of Cardiology, University of Marseille, Marseille, France Thorsten Lewalter, MD, Professor of Medicine, University of Bonn, Bonn, Germany Berndt Luderitz, MD, Emeritus Professor, University of Bonn, Bonn, Germany Ernst Vester, MD, Professor of Medicine, University of Duesseldorf, Germany

# FRIDAY, SEPTEMBER 24

#### 7:00 A.M. - 8:00 A.M. Breakfast in Brenton Hall

Workshop 1: Imaging and Mapping in the EP Lab – New Techniques and How to Apply Them

Location: Rose Island II

8:00 а.м 10:00 а.м.	Co-Chairs: Jasbir Sra & Hugh Calkins
8:00 a.m 8:20 a.m.	Intracardiac Echocardiography: How to perform a comprehensive anatomic and physiologic study: Sanjeev Saksena
8:20 a.m 8:40 a.m.	Cardiac MRI and Cardiac CT: Anatomic fundamentals: Jasbir Sra
8:40 a.m 9:00 a.m.	3D Echo – Applications in EP Laboratory Procedures: Ellen Hoffman
9:00 a.m 10:00 a.m.	PANEL DISCUSSION & CASE DEMONSTRATIONS
9:00 а.м 9:15 а.м.	<b>CASE DEMONSTRATION:</b> MRI/CT Images and Interpretation: Jasbir Sra & Johannes Brachmann
9:15 a.m 9:30 a.m.	<b>CASE DEMONSTRATION:</b> 3D & Catheter Mapping Fusion Techniques <i>Hugh Calkins</i>
9:30 a.m 10:00 a.m.	PANEL DISCUSSION
10:00 а.м 10:30 а.м.	Coffee Break Visit Exhibits
10:30 а.м 12:30 р.м.	Co-Chairs: David Keane & John Fisher
10:30 a.m 10:50 a.m.	Fusion of Imaging Technologies: How, When & For Whom: Hugh Calkins
10:50 a.m 11:10 a.m.	Robotic Navigation in AF: Andrea Natale
11:10 а.м 11:30 а.м.	Mapping and Ablation of VF: How and For Whom: David Wilber
11:30 a.m 12:30 p.m.	PANEL DISCUSION & CASE DEMONSTRATIONS
11:30 a.m 11:45 a.m.	Case Demonstration: VF Ablation: Ernst Vester
11:45 a.m 12:00 p.m.	CASE DEMONSTRATION: The "Mediguide" Mapping & Ablation Experience – Gerhard Hindricks
12:00 р.м 12:15 р.м.	PANEL DISCUSSION

Workshop 2: New Drug and Device Therapy in Atrial Fibrillation Location: Rose Island I

8:00 а.м 10:00 а.м.	Co-Chairs: Michael Rosen & Albert Waldo New Concepts in Understanding and Modulating Cardiac Repolarization
8:00 a.m 8:20 a.m.	New Targets for Antiarrhythmic Drug Therapy: Atrial specific agents and substrate modifiers: James Coromilas
8:20 a.m 8:40 a.m.	Methods Used in Studying Arrhythmias Today: Penelope Boyden
8:40 a.m 9:00 a.m.	Principles of Stem Cell Therapy: A primer for clinicians: Michael Rosen
9:00 a.m 9:30 a.m.	Delivering a Stem Cell Line with Three Dimensional Navigation: Warren Sherman
9:30 a.m 10:00 a.m.	PANEL DISCUSSION
10:00 а.м 10:30 а.м.	Coffee Break Visit Exhibits
10:00 а.м 10:30 а.м. 10:30 а.м 12:30 р.м.	
	Visit Exhibits
10:30 a.m 12:30 p.m.	Visit Exhibits Co-Chairs: Michael Ezekowitz & Warren Sherman Dabigtran: Pharmacology and Clinical Trials:
<b>10:30 а.м 12:30 р.м.</b> 10:30 а.м 10:50 а.м.	Visit Exhibits Co-Chairs: Michael Ezekowitz & Warren Sherman Dabigtran: Pharmacology and Clinical Trials: Michael Ezekowitz Cardioversion of Atrial Fibrillation: Is Dabigatran preferable to Warfarin – The RE-LY Experience:
<b>10:30 а.м 12:30 р.м.</b> 10:30 а.м 10:50 а.м. 10:50 а.м 11:10 а.м.	Visit Exhibits Co-Chairs: Michael Ezekowitz & Warren Sherman Dabigtran: Pharmacology and Clinical Trials: Michael Ezekowitz Cardioversion of Atrial Fibrillation: Is Dabigatran preferable to Warfarin – The RE-LY Experience: Rangadham Nagarakanti

12:15 P.M. - 1:15 P.M. LUNCH- Brenton Hall

#### Workshop 3: New Antiarrhythmic Drug Therapy: Clinical Practice and Changing Guidelines Location: Rose Island I

1:30 р.м 3:15 р.м.	Co-Chairs: Gerald Naccarelli & Ernst Vester
1:30 p.m 1:50 p.m.	Dronedarone: Clinical Pharmacology & Efficacy – Safety: Albert Waldo
1:50 p.m 2:10 p.m.	Dronedarone: Interpreting the Clinical Trials Data: Gerald Naccarelli

2:10 p.m 2:30 p.m.	Dronedarone: Applications to New and Existing Patients and the ESC Practice Guidelines: <i>Samuel Levy</i>
2:30 р.м 3:15 р.м.	PANEL DISCUSSION & CASE STUDIES
	<ul> <li>CASE STUDIES: Gerald Naccarelli</li> <li>Lone AF</li> <li>AF with CAD and Hypertension</li> <li>AF with Heart Failure</li> </ul>
3:15 р.м 3:45 р.м.	Coffee Break Visit Exhibits

## Workshop 4: Advanced Catheter Ablation - New Technologies and Intervention Targets Location: Rose Island II

1:30 р.м 2:30 р.м.	Co-Chairs: Andrea Natale & Ralph Damiano
1:30 p.m 1:45 p.m.	Surgical Advances in AF Ablation: Ralph Damiano
1:45 p.m 2:00 p.m.	Using a Toolbox Approach to AF Ablation: Linear, Focal, Septal and Biatrial Lesions: <i>David Keane</i>
2:00 p.m 2:15 p.m.	Pulmonary Vein Electrophysiology During Cryo-Balloon- Ablation as a Predictor for Procedural Success: Ellen Hoffman
2:15 p.m 3:15 p.m.	PANEL DISCUSSION & CASE DEMONSTRATIONS
2:15 p.m 2:30 p.m.	CASE DEMONSTRATION: Multi-electrode Catheter Technology for AF Ablation: David Keane
2:30 p.m 2:45 p.m.	Case Demonstration: Biatrial Mapping of Human AF Rotors: Randy Nagarakanti
2:45 p.m 3:00 p.m.	CASE DEMONSTRATION: Mapping CFAE Sites: David Wilber
3:00 р.м 3:15 р.м.	PANEL DISCUSSION
3:15 р.м 3:45 р.м.	Coffee Break Visit Exhibits
3:45 р.м 5:30 р.м.	Co-Chairs: Raj Kaushik & John Fisher
3:45 p.m 4:05 p.m.	Advanced Mapping and Navigation Techniques in AF: Bruce Lindsay
4:05 p.m 4:25 p.m.	Epicardial and Substrate Ablation Techniques in Ventricular Tachycardia: <i>Bruce Lindsay</i>
4:30 p.m 5:30 p.m.	PANEL DISCUSSION & CASE DEMONSTRATIONS
4:30 p.m 4:45 p.m.	CASE DEMONSTRATION: Surgical AF Ablation: Ralph Damiano
4:45 p.m 5:00 p.m.	<b>CASE DEMONSTRATION:</b> Linear and Focal Biatrial Ablation in Persistent AF: Jasbir Sra

5:00 p.m 5:15 p.m.	<b>CASE DEMONSTRATION:</b> Interventional Pericardial
	Technique in Ablation Procedures: Bruce Lindsay

5:15P.M. - 5:30 P.M. PANEL DISCUSSION

#### Workshop 5: New Techniques for Device System Implantation, Monitoring and Implementing Hybrid Therapy Location: Vanderbilt Room

1:30 р.м 3:30 р.м.	Co-Chairs: Werner Jung & Deepak Saluja
1:30 p.m 1:50 p.m.	Initial Experience with MRI Safe Devices: Werner Jung
1:50 р.м 2:10 р.м.	Initial Clinical Experience with Extrathoracic Defibrillation Using Temporary and Implanted Systems: <i>Riccardo Cappato</i>
2:10 р.м 2:30 р.м.	Wireless Telemetry and Remote Monitoring of ICDs: Practical implementation and environmental interactions: Bruce Wilkoff
2:30 p.m 3:15 p.m.	PANEL DISCUSSION & CASE DEMONSTRATIONS
2:30 p.m 2:50 p.m.	CASE DEMONSTRATION: Extraction of Pacemaker & ICD Leads: Raj Kaushik & Bharat Kantharia
2:50 p.m 3:00 p.m.	<b>CASE DEMONSTRATION:</b> Intraoperative Optimisation of CRT with ICE: Sanjeev Saksena
3:00 p.m 3:15 p.m.	<b>CASE DEMONSTRATION:</b> Implantation and Extraction of New Coronary Sinus Leads: <i>Bruce Wilkoff</i>
3:15 р.м 3:45 р.м.	Coffee Break Visit Exhibits
3:15 p.m 3:45 p.m. 3:45 p.m 4:45 p.m.	
	Visit Exhibits
3:45 p.m 4:45 p.m.	Visit Exhibits Co-Chairs: David Keane & Bruce Wilkoff Optimising Device and Ablation Therapy, How to use
<b>3:45 р.м 4:45 р.м.</b> 3:45 р.м 4:05 р.м.	Visit Exhibits Co-Chairs: David Keane & Bruce Wilkoff Optimising Device and Ablation Therapy, How to use Hybrid therapy: Drugs and ablation: Suneet Mittal
<b>3:45 P.M 4:45 P.M.</b> 3:45 P.M 4:05 P.M. 4:05 P.M 4:25 P.M.	Visit Exhibits Co-Chairs: David Keane & Bruce Wilkoff Optimising Device and Ablation Therapy, How to use Hybrid therapy: Drugs and ablation: Suneet Mittal Clinical Trials in Hybrid Therapy: Nicholas Skadsberg How to use Implantable Loop Recorders in Clinical Trials &
<b>3:45 P.M 4:45 P.M.</b> 3:45 P.M 4:05 P.M. 4:05 P.M 4:25 P.M. 4:25 P.M 4:45 P.M.	Visit Exhibits Co-Chairs: David Keane & Bruce Wilkoff Optimising Device and Ablation Therapy, How to use Hybrid therapy: Drugs and ablation: Suneet Mittal Clinical Trials in Hybrid Therapy: Nicholas Skadsberg How to use Implantable Loop Recorders in Clinical Trials & Hybrid Therapy: Werner Jung
<b>3:45 P.M 4:45 P.M.</b> 3:45 P.M 4:05 P.M. 4:05 P.M 4:25 P.M. 4:25 P.M 4:45 P.M. 4:45 P.M 5:30 P.M.	<ul> <li>Visit Exhibits</li> <li><i>Co-Chairs: David Keane &amp; Bruce Wilkoff</i></li> <li>Optimising Device and Ablation Therapy, How to use Hybrid therapy: Drugs and ablation: <i>Suneet Mittal</i></li> <li>Clinical Trials in Hybrid Therapy: <i>Nicholas Skadsberg</i></li> <li>How to use Implantable Loop Recorders in Clinical Trials &amp; Hybrid Therapy: <i>Werner Jung</i></li> <li>PANEL DISCUSSION &amp; CASE DEMONSTRATIONS</li> <li>CASE DEMONSTRATION: Rhythm Control with an "Ablate</li> </ul>

# SATURDAY, SEPTEMBER 25, 2010

7:00 A.M. - 8:00 A.M. BREAKFAST - Brenton Hall

#### **Opening Plenary Session:** Interventional EP: Past, Present and Future Location: Grand Ballroom

8:00 A.M 8:35 A.M.	WELCOME: S. Saksena / Th. Lewalter
8:10 a.m 8:15 a.m.	Video Introduction: 20 <sup>th</sup> Anniversary of the Symposium on Interventional Electrophysiology: <i>Thorsten Lewalter &amp;</i> Berndt Luderitz
8:15 a.m 8:35 a.m.	<b>Keynote Lecture:</b> Clinical Trials in Interventional Electrophysiology: Lessons From our Past & Implications For The Future: <i>R. J. Myerburg</i>

#### Session I: Advances in Basic Science and Regenerative Medicine Location: Grand Ballroom

8:40 а.м 10:30 а.м.	Co-Chairs: Mark Estes & Dan Roden
8:40 a.m 9:00 a.m.	Subcellular and Extracellular Targets for Intervention: Jose Jalife
9:00 a.m 9:20 a.m.	Genomics and Antiarrhythmic Drugs: Dan Roden
9:20 a.m 9:50 a.m.	<b>KEYNOTE LECTURE:</b> Regenerative Therapies in Electrophysiology and Pacing: Introducing the next steps: <i>Michael Rosen</i>
9:50 a.m 10:10 a.m.	Personalized Medicine and the Genotype-Phenotype Dilemma: Dan Roden
10:10 a.m 10:30 a.m.	PANEL DISCUSSION
10:40 а.м 11:00 а.м.	Coffee Break

Visit Exhibits

#### Session II: New Sudden Death Syndromes: Concepts and Clinical Management Location: Grand Ballroom

11:00 р.м 12:00 р.м.	Co-Chairs: R. J. Myerburg & Samuel Levy
	Idiopathic Ventricular Fibrillation Revisited: Masood Akhtar
	Sudden Death and Repolarization Syndromes: Epidemiology and Clinical Evaluation: <i>R.J. Myerburg</i>
	The Short QT Syndrome: New approaches in Management: Mark Estes
	Cardiac Inward Rectifier Potassium Channels: A New Antifibrillatory Target: Jose Jalife

12:00 p.m 12:30 p.m.	KEYNOTE LECTURE: ECG Repolarization Abnormalities
	(J-wave syndromes) and Idiopathic Ventricular Fibrillation:
	Diagnosis and Management: Sam Levy
12:30 р.м 12:45 р.м.	Panel Discussion

12:45 P.M. - 1:45 P.M. LUNCH - Brenton Hall

Session III: Taking New Therapies From Bench to Bedside Location: Grand Ballroom

2:00 p.m 3:00 p.m.	Co-Chairs: John Camm & Gerhard Hindricks
2:00 p.m 2:15 p.m.	Clinical Outcome Trials with Second Generation Multichannel Antiarrhythmics: Dronedarone beyond ATHENA: Gerald Naccarelli
2:15 p.m 2:30 p.m.	Clinical Trials with Atrial Specific Agents: Ranolazine and Vernakalant: John Camm
2:30 p.m 2:45 p.m.	Device Based Monitoring for Efficacy of Interventions and Cryptogenic Stroke: Gerhard Hindricks
2:45 p.m 3:00 p.m.	An update on Pivotal AF trials – CASTLE – AF, RAAFT – 2, Cryo-balloon Ablation, CABANA: <i>David Wilber</i>
3:00 р.м 3:20 р.м.	PANEL DISCUSSION
3:20 р.м 3:40 р.м.	Coffee Break Visit Exhibits

#### Session IV: New Technologies and Therapies Location: Grand Ballroom

3:45 р.м 5:45 р.м.	Co-Chairs: John Fisher and James Coromilas
3:45 p.m 4:05 p.m.	Advances in Syncope: John Fisher
4:05 p.m 4:25 p.m.	New Approaches to Left Ventricular Pacing: The endocardial route: Johannes Brachmann
4:25 p.m 4:45 p.m.	Wireless and Leadless Defibrillation: Riccardo Cappato
4:45 p.m 5:05 p.m.	Remote Patient Management Using Implantable Devices: Suneet Mittal
5:05 p.m 5:30 p.m.	PANEL DISCUSSION
6:30 p.m 8:30 p.m.	SYMPOSIUM RECEPTION & MUSEUM TOUR - Tennis Hall of Fame, Bellevue Avenue, Newport

# SUNDAY, SEPTEMBER 26, 2010

#### 7:00-8:00

#### Breakfast (Ballroom C/D)

Session V: New Standards and Novel Directions in Cardiac Arrhythmia Research Assessment and Program Development

#### Location: Grand Ballroom

8:00 а.м 9:45 а.м.	Co-Chairs: Ralph Damiano & Mark Estes
8:00 a.m 8:30 a.m.	<b>Keynote Lecture:</b> Design and Execution of Clinical Outcome Trials in Atrial Fibrillation: <i>Albert Waldo</i>
8:30 a.m 8:50 a.m.	New Directions in Clinical Outcomes Assessment: Sana M. Al-Khatib
8:50 a.m 9:05 a.m.	New Clinical Outcomes from Revisiting AFFIRM: April Slee
9:05 a.m 9:25 a.m.	What Can We Learn from National Device Registries: The European and North American Experiences: Johannes Brachmann
9:25 a.m 9:45 a.m.	Interdisciplinary Strategies for Arrhythmia Program Development: A new opportunity?: <i>Mark Estes</i>

Session VI: Advances in AF Therapy: A critical reassessment

#### Location: Grand Ballroom

9:45 a.m 11:00 a.m.	Co-Chairs: Ellen Hoffman & Sana Al-Khatib
9:45 a.m 10:05 a.m.	Catheter Ablation of Paroxysmal AF: Ernst Vester
10:05 a.m 10:25 a.m.	Catheter Ablation of Persistent and Permanent AF: Thorsten Lewalter
10:25 а.м 10:45 а.м.	Hybrid AF Strategies in An Evidence-Based Milieu: How can we design and execute hybrid clinical trials: Sanjeev Saksena
10:45 a.m 11:00 a.m.	PANEL DISCUSSION
11:00 а.м 11:15 а.м.	Coffee Break Visit Exhibits

# **INTERVENTIONAL CARDIAC ELECTROPHYSIOLOGY 2010 – PROGRAM**

## Session VII: Clinical Trials

## Location: Grand Ballroom

11:15 а.м 1:00 р.м.	Co-Chairs: Thorsten Lewalter & Andrea Natale
11:15 а.м 11:35 а.м.	<b>KEYNOTE LECTURE:</b> After ATHENA: Simplifying Clinical Trials for Antiarrhythmic Drug Therapies With New Methodologies and Standardized Outcomes? Is it feasible?: <i>John Camm</i>
11:35 а.м 11:55 а.м.	New Insights from Pivotal Antiarrhythmic and Heart Failure Drug Trials: AFFIRM, ATHENA & TOPCAT: Sanjeev Saksena
11:55 а.м 12:15 р.м.	Pivotal CRT Trials in Heart Failure: MADIT-CRT, REVERSE: Bruce Wilkoff
12:15 р.м 12:35 р.м.	Cellular Replacement Therapy for Arrhythmia Treatment: Thorsten Lewalter
12:35 р.м 12:55 р.м.	Randomized Controlled Trials and Registries for AF: A look back and the view forward: Andrea Natale
12:55 р.м 1:00 р.м.	CLOSING REMARKS: Germany 2014: Thorsten Lewalter













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