Frontiers in Science: Arrhythmia Research Summit
Monday, November 13, 2017
Chaired by: Kristen Patton, MD, University of Washington

Program Agenda

EA.FIS.101: Innovations in Therapy for Ventricular Arrhythmogenesis

Moderators: William G Stevenson, Brigham and Women’s Hospital
Derek J Dosdall, University of Utah

9:00 - 9:02 AM Introductions
Kristen Patton, University of Washington

9:03 - 9:09 AM Developing New Antiarrhythmic Agents
Dan Roden, Vanderbilt University School of Medicine

9:10 - 9:16 AM Noninvasive Radioablation of VT
Phillip S Cuculich, Washington University School of Medicine

9:17 - 9:23 AM What do KCNJ2 Mutations Tell Us About Mechanisms of Arrhythmias?
Lee Eckhardt, UW Hospital and Clinics

9:24 - 9:30 AM What Can Ontogenetics Teach Us About Reentry?
Daniel Pijnappels, Leids Universitair Medisch Centrum (Netherlands)

9:31 - 9:37 AM From GWAS to Molecular Action Potentials
David J Milan, Massachusetts General Hospital

9:37 - 9:45 AM Q&A Discussion

9:46 - 9:52 AM Sympathetic Denervation in Arrhythmogenesis
Crystal Ripplinger, University of California, Davis

9:53 - 9:59 AM Role of the Purkinje System in VF
Derek J Dosdall, University of Utah

10:00 - 10:06 AM Predicting and Preventing SCD
Larisa G. Tereshchenko, Oregon Health and Science University
10:07 - 10:13 AM   Novel VT Therapy: The Role of Scar Modification
Eduardo Marban, Cedars-Sinai Heart Institute

10:14 - 10:20 AM   Frontiers in Ablation
William G Stevenson, Brigham and Women's Hospital

10:20 - 10:30 AM   Q&A Discussion

**EA.FIS.102: Triggers, Remodeling, and Stressors**

**Moderators:** Rachel J Lampert, Yale University School of Medicine
Marco Perez, Stanford University

10:45 - 10:47 AM   Introduction
Kristen Patton, University of Washington

10:48 - 10:54 AM   Psychological Stress and Atrial Fibrillation
Rachel J Lampert, Yale University School of Medicine

10:55 - 11:01 AM   Amyloid and Atrial Fibrillation
Katherine Murray, Vanderbilt University School of Medicine

11:02 - 11:08 AM   Left Atrial Abnormality and Cognitive Impairment: Evidence and Possible Mechanisms
Lin Chen, University of Minnesota

11:09 - 11:15 AM   Transcriptional Regulation and Triggers of Arrhythmia
Isabelle Deschenes, Case Western Reserve University

11:16 - 11:22 AM   Exercise Restrictions in Athletes with Inherited Arrhythmia Syndromes
Aaron L Baggish, Massachusetts General Hospital

11:22 - 11:31 AM   Q&A Discussion

11:32 - 11:38 AM   Arrhythmogenic Cardiomyopathy: How Stress Impacts the System
Jeffrey A. Towbin, Le Bonheur Children's Hospital

11:39 - 11:45 AM   Identification of Athletes with Subclinical Arrhythmia Syndromes
Marco Perez, Stanford University

11:46 - 11:52 AM   Senescence and Arrhythmias: Lessons from Aging
Gideon Koren, Rhode Island Hospital
11:53 - 11:59 AM  Modeling Arrhythmias: What Can We Learn About Triggers?  
Eleonora Grandi, University of California, Davis

12:00 - 12:06 PM  Triggers for Arrhythmia in HCM  
Mark Link, UT Southwestern Medical Center

12:06 - 12:15 PM  Q&A Discussion

EA.FIS.103: Intervening on the System to Improve Care of Patients with Arrhythmia

Moderators:  
Stacey Rentschler, Washington University in Saint Louis  
Steven Lubitz, Massachusetts General Hospital

1:15 - 1:17 PM  Introduction  
Kristen Patton, University of Washington

1:18 - 1:24 PM  Programming and Reprogramming Cardiac Conduction  
Stacey Rentschler, Washington University in Saint Louis

1:25 - 1:31 PM  Mechanisms and Treatments for AV Nodal Reentry  
Igor Efimov, George Washington University

1:32 - 1:38 PM  Update on the Quest for a Biologic Pacemaker  
Udi Nussinovitch, Bruce Rappaport Faculty of Medicine and Technion-Israel Institute of Technology

1:39 - 1:45 PM  Smartphones and Health  
Gregory M Marcus, University of California San Francisco

1:46 - 1:52 PM  Interpreting the Evidence: How We Can Make Better Clinical Decisions  
Sana M Al-Khatib, Duke University

1:52 - 2:00 PM  Q&A Discussion

2:01 - 2:07 PM  Genomics of AF and Etiology of Stroke: Are They Related?  
Steven Lubitz, Massachusetts General Hospital

2:08 - 2:14 PM  Harnessing the Power of System Change to Improve Care  
Calum A. MacRae, Brigham and Women's Hospital and Harvard Medical School
2:15 - 2:21 PM Anticoagulant Drugs: What New Evidence Should We Consider for Patient Care
Michael D Ezekowitz, Jefferson University

2:22 - 2:28 PM Population Genetic Approaches to Rare Arrhythmia Disorders
Najim Lahrouchi, Academic Medical Center Amsterdam

2:29 - 2:35 PM Mechanisms of AF: What is Computational Modeling Telling Us?
Dobromir Dobrev, Institute for Pharmacology, Essen University Hospital

2:35 - 2:45 PM Q&A Discussion

EA.FIS.104: Better Design for Arrhythmia Prevention and Treatment

Moderators: Charles Antzerelevitch, Masonic Medical Research Lab
Silvia G. Priori, University of Pavia

3:00 - 3:02 PM Introduction
Kristen Patton, University of Washington

3:03 - 3:09 PM Phase Mapping Explained
Ramya Vijayakumar, Washington University in St. Louis

3:10 - 3:16 PM Challenges and Opportunities with His-Bundle Pacing
Suraj Kapa, Mayo Clinic College of Medicine

3:17 - 3:23 PM Ethical Considerations Related to ICD Implantation
Daniel Kramer, Beth Israel Deaconess Medical Center

3:24 - 3:30 PM Gene Therapy of Arrhythmias
Michael R. Rosen, Columbia University Medical Center

3:31 - 3:37 PM Ablation of Disorganized Rhythms: Making Sense of Complex Reentry
Mélèze Hocini, Hôpital Cardiologique du Haut Leveque et Universite Bordeaux

3:37 - 3:45 PM Q&A Discussion

3:46 - 3:52 PM Mobile Technology for Arrhythmia Screening and Monitoring
David D McManus, University of Massachusetts Medical School

3:53 - 3:59 PM Balloon Ablation: Cryo, Laser, or Heat?
Paul Wang, Stanford University
4:00 - 4:06 PM  Using the Data We Have to Create Better Outcomes
Andrea M Russo, Cooper University Hospital

4:07 - 4:13 PM  Using What We've Learned About Depolarization and Repolarization to Design Arrhythmic Drug Therapy
Charles Antzelevitch, Masonic Medical Research Lab

4:14 - 4:20 PM  Genomic Hopes: Where Are We Going Next?
Silvia G. Priori, University of Pavia

4:20 - 4:30 PM  Q&A Discussion

EA.FIS.105: Targeting Atrial Fibrillation

Moderators:  Mina Chung, Cleveland Clinic
Stanley Nattel, Montreal Heart Institute

4:45 - 4:47 PM  Introduction
Kristen Patton, University of Washington

4:48 - 4:54 PM  Atrial Modeling: Advancing Towards Clinical Use
Natalia Trayanova, Institute for Computational Medicine, Johns Hopkins University

4:55 - 5:01 PM  Atrial Micro-domains in Atrial Fibrillation
Alexey V Glukhov, London, United Kingdom

5:02 - 5:08 PM  Post-GWAS Insights from Human Atrial Transcriptomics
Mina Chung, Cleveland Clinic

5:09 - 5:15 PM  What is Causing AF at Chromosome 4q25?
James F Martin, Baylor College of Medicine

5:16 - 5:22 PM  Targeting Proteostasis for AF Prevention
Bianca Brundel, VU Medical Center Amsterdam

5:22 - 5:31 PM  Q&A Discussion

5:32 - 5:38 PM  Large-scale Genome Sequencing for AF
Patrick T. Ellinor, Massachusetts General Hospital

5:39 - 5:45 PM  Registries, Outcomes, and Improving Care of AF Patients
Jonathan Piccini, Duke Clinical Research Institute
5:46 - 5:52 PM  Can Mapping Allow Us a Better Understanding of AF?
Vadim Fedorov, Ohio State University

5:53 - 5:59 PM  Of Mice and Men: What Optical Mapping in the Mouse Can Teach Us About Clinical AF
Elaine Wan, Columbia University

6:00 - 6:06 PM  JAK-Stat and Fibrosis: New Targets for Prevention or New Cellular Targets in AF
Stanley Nattel, Montreal Heart Institute

6:06 - 6:15 PM  Q&A Discussion

Networking Reception
6:30 – 7:30 PM  Sponsored by Circulation: Arrhythmia and Electrophysiology