The Cardiovascular Developmental Biology Center and The South Carolina COBRE for Developmentally Based Cardiovascular Diseases present the:

11th Annual CDBC/COBRE Spring Symposium

March 20-22, 2013

Cardiovascular Developmental Biology in the 21st Century; New Insights and New Challenges

TABER LECTURE by:
Dr. Simon Conway
Indiana University

CDBC/COBRE LECTURE by:
Dr. Andy Wessels
Medical University of South Carolina

Location:
Cardiovascular Developmental Biology Center
Department of Regenerative Medicine and Cell Biology
Medical University of South Carolina
Conference Room
6th floor Basic Science Building

Symposium information:
Evelyn Fabunan - fabunanemusc.edu
Paula Rossin - rossin@musc.edu
http://regmed.musc.edu/cdbc/workshop2013
Wednesday March 20

09:15am – 09:45am  REGISTRATION

09:45am – 10:00am  Andy Wessels Medical University of South Carolina
Welcome and Introduction

**Session I: Chair - Maurice van den Hoff/Mohamad Azhar**

10:00am – 10:30am  Corey Mjaatvedt Medical University of South Carolina
“Imbalance of Vcan Protein Expression Alters Collagen Deposition:
Consequence for Heart Development”

10:30am – 11:00am  Christi Kern Medical University of South Carolina
“Insufficient Versican Cleavage and Smad2 Phosphorylation Results in
Bicuspid Aortic And Pulmonary Valves”

11:00am – 11:30am  Sherine Chan Medical University of South Carolina
“OPA1-mediated Mitochondrial Function is Required for Proper Heart
Development in Zebrafish Embryos”

11:30am – 12:00pm  Mike Yost Medical University of South Carolina
“Purinergic Signaling in Early Wound Healing”

12:00pm – 01:00pm  LUNCH

01:00pm – 01:30pm  Laura Briggs Medical University of South Carolina
“Alk3 Expression in the Second Heart Field is Required for Atrioventricular
Septation”

01:30pm – 02:00pm  Chip Norris Medical University of South Carolina
“Genetic Determinants of Mitral Valve Prolapse in Humans”

02:00pm – 02:30pm  Patrick Jay Washington University
“Solving Congenital Heart Disease”

02:30pm – 03:00pm  BREAK

**Session II: Chairs - Rick Visconti / Mike Yost**

03:00pm – 03:30pm  Jonathan Butcher Cornell University
“Mechanical Programming of Fibroblast Differentiation and Tissue Remodeling
in Valvulogenesis”

03:30pm – 04:00pm  Rob Gourdie Virginia Tech
“The Perinexus: Signpost to a New Mechanism of Cardiac Conduction”

04:00pm – 04:30pm  Steve Dalton University of Georgia
“Using Pluripotent Cells to Model Development and Disease”

04:30pm – 05:00pm  BREAK

**TABER LECTURE**

05:00pm – 05:15pm  Introduction from Roger Markwald Medical University of South Carolina

05:30pm – 06:00pm  Simon Conway Indiana University
“Modeling CHDs via Transgenic Mouse Approaches”

06:00pm – 09:00pm  TABER RECESSION at Governor Thomas Bennett House, 69 Barre Street
(for all participants, faculty members and guests)
Thursday March 21
Session III: Chairs - Jay Potts / Christi Kern

08:30am – 09:00am Rich Goodwin University of South Carolina
“The Role of Flow on the Fibrous Development of Valves”

09:00am – 09:30am Yukiko Sugi Medical University of South Carolina
“Cell Autonomous Regulation of BMP in Endocardial Cushion Cells during AV Valvuloseptal Morphogenesis”

09:30am – 10:00am Michiko Watanabe Case Western Reserve University
“Probing the Progression of Alcohol-induced Heart Defects with Light”

10:00am – 10:30am BREAK

10:30am – 11:00am Bob Anderson Medical University of South Carolina
“Clarification of the Nature of the Aorto-pulmonary Septum”

11:00am – 11:30pm Kyu Ho Lee Medical University of South Carolina
“Nkx2.5 and the Discipling of Second Heart Field Progenitors”

11:30am – 12:00pm Hideko Kasahara University of Florida
“Cardiac Transcription Factor Nkx2-5: Regulation of Cardiac Function and Formation”

12:00pm – 01:30pm LUNCH

Session IV: Chairs - Scott Argraves / Chip Norris

01:30pm – 02:00pm Sigolene Meilhac Institut Pasteur
“Cell Coordination Underlying the Growth of the Myocardium”

02:00pm – 02:30pm Felix Engel Friedrich Alexander University Erlangen – Nurnberg
“GRR 126 Function During Development Reveals a Novel Signaling Mechanism for Adhesion G Protein-coupled Receptors”

02:30pm – 03:00pm Mohamad Azhar Indiana University
“Mutational Analysis of TGFB Ligands Function in Heart Valve Development”

03:00pm – 03:30pm BREAK

03:30pm – 04:00pm Maurice van den Hoff Academic Medical Center
“The Role of Follistatin-like 1 in Cardiac Development”

04:00pm – 04:30pm Yu Liu University of Houston
“Program and Reprogram toward Cardiac Progenitor Cells”

CDBC LECTURE

04:45pm – 05:00pm Introduction from Roger Markwald Medical University of South Carolina

05:00pm – 05:45pm Andy Wessels Medical University of South Carolina
“Emerging Insights into the Development of the AV junction”

06:00pm – 09:30pm CDBC SPEAKER’S DINNER at 82 Queen, 82 Queen Street

Friday March 22
Session V: Moderators - Simon Conway / Patrick Jay

10:00am – 12:00pm Cardiovascular Developmental Biology in the 21st Century: A Round Table Discussion

12:00pm ADJOURN
Dr. Elsie Taber (1915-2000) graduated from the University of South Carolina and obtained her master’s degree from Stanford University. After teaching biology at Greenwood High School and Lander College, she undertook advanced studies at the University of Chicago where she received the Doctor of Philosophy degree and served on the faculty. In 1948, she joined the Anatomy Department of the (then) Medical College of South Carolina, the first woman to hold a full-time appointment in the medical school. Her career included pioneering research in the field of growth and development and endocrinology, her contributions to teaching included the introduction of human genetics into the basic embryology course for first year medical students at the College of Medicine. Elsie Taber made numerous contributions to biomedical literature and participated in many professional societies, including the American Association of Anatomists and the American Society of Zoologists. She is listed in Who’s Who of American Women, Outstanding Educators of America, and American Men and Women of Science. She received many awards including the coveted Golden Apple Award, given by medical students for excellence in teaching. The high point came in 1991 when she was awarded the Degree of Doctor of Humane Letters. Her former students honored her with a portrait which hangs in the main lobby of the Department of Regenerative Medicine and Cell Biology (formerly known as Cell Biology and Anatomy) at MUSC, and The Elsie Taber Lectureship in Human Development. This lecture has been presented by several distinguished scientists, including Dr. E. Hay (1983), Dr. B. Mintz (1985), Dr. J. Fallon (1996), Dr. D. Fischman (1999), Dr. A. Moorman (2000), Dr. N. Brown (2001), Dr. R. H. Anderson (2002), Dr. S. Baldwin (2003), Dr. P. Antin (2005), Dr. Ray Runyan (2007), Dr. Cliff Tabin (2008), Dr. Adriana Gittenberger-de Groot (2011), and Dr. Shoumo Bhattacharya (2012).

The Taber Lecturer this year is Dr. Simon Conway, Professor at the Herman B. Wells Center for Pediatric Research at Indiana University. Dr. Conway is an internationally renowned scientist with specific expertise in research on elucidating the mechanisms underlying the pathogenesis of congenital heart disease, the most common birth defect in the U.S. found in 1 in every 100 births. The majority of the projects in the Conway lab focus on neural crest-related heart defects at the arterial pole of the heart. In his studies, Dr. Conway uses state-of-the-art transgenic mouse models of human congenital heart malformations. Using these models, Dr. Conway and his colleagues determine the developmental stages in which the malformations first present and identify, as well as the cell lineages and mechanisms responsible for the perturbed development and leading to the specific defects. With this knowledge, the Conway lab then designs strategies to transgenically and/or pharmacologically prevent or correct the birth defects. Dr. Conway’s Taber Lecture is entitled: “Modeling CHDs via Transgenic Mouse Approaches”.

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