12 Annual CDBC Spring Symposium
March 18-20, 2014

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

present:

“Cardiovascular Development and Disease at Bench and Bedside”

TABER LECTURE by:
Dr. Cecilia Lo, Ph.D.
Professor and Chair
F. Sargent Cheever Chair
Department of Developmental Biology
University of Pittsburgh

CDBC/COBRE LECTURE by:
Dr. Paul Grossfeld, M.D.
Associate Clinical Professor
Director of Pediatric Cardiology
Fellowship program,
University of California - San Diego

location:
Medical University of South Carolina
Cardiovascular Developmental Biology Center
Department of Regenerative Medicine and Cell Biology
Conference Room BSB611
6th floor Basic Science Building

Symposium Information:
Dr. Andy Wessels: wesselsa@musc.edu
Ms. Evelyn Fabunan: fabunane@musc.edu
http://regmed.musc.edu/cdbc/workshop2014
“Cardiovascular Development and Disease at Bench and Bedside”

**Tuesday, March 18**

07:00pm – 09:30pm  
CDBC/COBRE Welcome Reception at Renaissance Hotel

**Wednesday, March 19**

09:15am – 09:45am  
REGISTRATION

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

10:00am – 10:30am  
**Sue Lessner**  
University of South Carolina  
*Atherosclerotic plaque failure: What can we learn from mice?*

10:30am – 11:00am  
**Jeroen Bakkers**  
Hubrecht Institute  
*The Dally-like glypican Knypek promotes cardiomyocyte differentiation of second hearts field cells*

11:00am – 11:30am  
**Caitlin Czajka**  
Medical University of South Carolina  
*Bioengineering vascular networks in vitro: lessons from vasculogenesis*

11:30am – 12:00pm  
**Rolf Bodmer**  
Sanford-Burnham Medical Research Institute  
*Congenital and diabetic cardiomyopathy models in Drosophila*

12:00pm – 01:00pm  
LUNCH

**Session II: Chairs - Jay Potts / Joey Barnett**

01:00pm – 01:30pm  
**Kristi Red-Horse**  
Stanford University  
*Assembling coronary arteries during heart development*

01:30pm – 02:00pm  
**Marie Lockhart**  
Medical University of South Carolina  
*Epicardial BMP signaling and the development of the AV junction*

02:00pm – 02:30pm  
**Maurice van den Hoff**  
University of Amsterdam  
*Contribution of endocardial and epicardial derived cells to the fibrous insulation*

02:30pm – 03:00pm  
BREAK

**Session III: Chairs - Kristi Red-Horse / Maurice van den Hoff**

03:00pm – 03:30pm  
**Courtney Haycraft**  
Medical University of South Carolina  
*Primary cilia and hedgehog signaling in mammalian patterning*

03:30pm – 04:00pm  
**Martina Brueckner**  
Yale School of Medicine  
*The many roles of cilia in heart development*

04:00pm – 04:30pm  
**John Ikonomidis**  
Medical University of South Carolina  
*Development of a large animal model of thoracic aortic aneurysm*

04:30pm – 05:00pm  
Wine and Snacks

**TABER LECTURE**

05:00pm – 05:15pm  
*Introduction from Roger Markwald / Andy Wessels*  
Medical University of South Carolina

05:15pm – 06:00pm  
**Cecilia Lo**  
University of Pittsburgh  
*Dissecting the genetic etiology of congenital heart disease in a large scale mouse forward genetic screen*

06:30pm – 09:00pm  
DINNER at 82 Queen, 82 Queen Street
Thursday, March 20

Session IV: Chairs: Rob Gourdie / Yukiko Sugi

09:00am - 09:30am  Rick Visconti  Medical University of South Carolina
“CD45 cells in cardiovascular development and disease”

09:30am - 10:00am  Chip Norris  Medical University of South Carolina
“From mutations to therapeutic opportunities in mitral valve disease”

10:00am - 10:30am  Joey Barnett  Vanderbilt University
“Atypical TGFβ signaling: Surprising roles in embryos and adults”

10:30am - 11:00am  Coffee Break

Session V: Chairs: Cecilia Lo / Jeroen Bakkers

11:00am - 11:30am  Martin Morad  University of South Carolina
“Mechanisms of spontaneous rhythmic beating in developing cardiomyocytes”

11:30am - 12:00pm  Naohiro Yamaguchi  Medical University of South Carolina
“Calcium dependent feedback regulation of cardiac and skeletal muscle calcium channels”

12:00pm - 12:30pm  Rob Gourdie  Virginia Tech Carilion Research Institute
“Druggable connexin43: The tale of an unexpected journey to clinical trials”

12:30pm - 01:30pm  LUNCH

Session VI: Chairs: Rolf Bodmer / Martina Brueckner

01:30pm - 02:00pm  Ann Foley  Clemson University
“Bioengineering the pacemaker”

02:00pm - 02:30pm  John Eberth  University of South Carolina
“Cardiovascular engineering and the influence of hemodynamics on growth and remodeling”

02:30pm - 03:00pm  Jeremy Barth  Medical University of South Carolina
“Transcriptomic profiling of the pro-elastogenic state”

03:00pm - 03:30pm  Coffee Break

03:30pm - 04:00pm  Christi Kern  Medical University of South Carolina
“The dynamic role of proteoglycans in semilunar valve development”

04:00pm - 04:30pm  Alex Zambon  University of California - San Diego
“Hif1α is a major regulator of fetal cardiomyocyte metabolism and proliferation”

CDBC LECTURE

04:45pm - 05:00pm  Introduction and Chair: Roger Markwald

05:00pm - 05:45pm  CDBC/COBRE Lecture: Paul Grossfeld  University of California - San Diego
“The genetic basis of heart and brain defects in Jacobsen syndrome”

06:30pm - 09:30pm  Speakers Dinner at Cypress, 167 East Bay Street
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), Dr. Shoumo Bhattacharya (2012) and Dr. Simon Conway (2013).

This year’s Taber Lecture will be presented by Dr. Cecilia Lo. Dr. Lo received her PhD from Rockefeller University and was affiliated with the University of Pennsylvania from 1981 to 2001, when she left her position as Professor at UPenn to become Lab Chief and Center Director at NIH. In 2009, she moved to the University of Pittsburgh, where she is currently Professor and Chair of the Department of Developmental Biology. In her Taber Lecture, Dr. Lo will present aspects of her exciting studies in deciphering the genetic etiology of congenital heart disease titled “Dissecting the genetic etiology of congenital heart disease in a large scale mouse forward genetic screen”.