

## 2008 Weinstein Conference Schedule

### Thursday May 15th 2008

10 AM– 4 PM: Registration (Ballroom Foyer)

1:45 PM: Opening Remarks-Jim Martin (AB Ballroom)

2:00- 3:05 PM: Platform Session I: Cardiomyocyte Biology  
(Chairs: Aarif Khakoo and Brad Amendt) (AB Ballroom)

2:00- 2:05 Chair's introduction

2:05- 2:20 Talk 1

***ndrg4* is required for normal myocyte proliferation during early cardiac development and is downstream of *tbx5* activation in zebrafish**

Xianghu Qu<sup>1,2</sup>, Haibo Jia<sup>2,3</sup>, Deborah. M. Garrity<sup>4</sup>, Kevin Tompkins<sup>1</sup>, Lorene Batts<sup>1</sup>, Bruce Appel<sup>2,5</sup>, Tao P. Zhong<sup>2,3</sup>, H. Scott Baldwin<sup>1,2</sup>

<sup>1</sup>Department of Pediatric Cardiology, <sup>2</sup>Department of Cell and Developmental Biology, <sup>3</sup>Department of Cardiovascular Medicine, <sup>5</sup>Department of Biological Sciences, Vanderbilt University Medical Center, Nashville, TN 37232, USA. <sup>4</sup>Department of Biology, Colorado State University, Fort Collins, CO, 80523, USA.

2:20- 2:35 Talk 2

**A genetic interaction between *Hopx* and *Hdac2* regulates cardiac development and myocyte proliferation**

Chinmay M. Trivedi, Qiaohong Wang, Min Min Lu, Nicole Antonucci, and Jonathan A. Epstein.

Department of Cell and Developmental Biology, Penn Cardiovascular Institute, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania-19104, USA.

2:35- 2:50 Talk 3

**Tropomyosin is Required for Cardiac Myofibril Assembly, Cardiac Development, and Viability in the Mouse**

Caroline R. McKeown and Velia M. Fowler  
Department of Cell Biology, The Scripps Research Institute

2:50-3:05 Talk 4

**Vertebrate heart growth is regulated by functional antagonism between *Gridlock* and *Gata5***

Haibo Jia<sup>\*</sup>, Isabelle N. King<sup>†</sup>, Sameer S. Chopra<sup>\*</sup>, Haiyan Wan<sup>\*</sup>, Terri T. Ni<sup>\*</sup>, Charlie Jiang<sup>\*</sup>, Xiaoqun Guan<sup>\*</sup>, Sam Wells<sup>\*</sup>, Deepak Srivastava<sup>†</sup>, and Tao P. Zhong<sup>\*</sup>

\*Departments of Medicine and Cell and Developmental Biology, Vanderbilt University School of Medicine, Nashville, TN 37232; and Gladstone Institute of Cardiovascular Disease, Department of Pediatrics, University of California, San Francisco, CA 94158

**3:05- 3:20 PM: Break**

3:20- 4:25 PM: Platform Session II – Vascular Development  
(Chairs: Mary Dickinson and Karen Hirschi) (AB Ballroom)

3:20- 3:25 Chair's Introduction

3:25- 3:40 Talk 1

**Loss of TGF-beta2 leads to aortic aneurysm during development**

AZHAR, MOHAMAD

BIO5 Institute and Department of Cell Biology & Anatomy, University of Arizona  
MRB 322, 1656 E Mabel St, PO Box 245217, Tucson, AZ 85724

3:40- 3:55 Talk 2

**Temporal requirement of Pax3 in the cardiac neural crest cell lineage**

Michael Olaopa\*, Paige Snider, Anne Moon<sup>1</sup> & Simon J Conway.

Cardiovascular Development Group, Herman B Wells Center for Pediatric Research, Indiana University School of Medicine, Indianapolis, IN 46202; <sup>1</sup> Departments of Neurobiology and Anatomy, University of Utah, Salt Lake City, UT 84112.

3:55- 4:10 Talk 3

**Ectoderm-derived Gbx2 acts downstream of Tbx1 to control a Slit/Robo-mediated neural crest cell migration pathway during arch artery development.**

Amélie Calmont<sup>1</sup>\*, Sarah Ivins<sup>1</sup>\*, Kelly Lammerts Van Bueren<sup>1</sup>, Irinna Papangeli<sup>1</sup>, Vanessa kyriakopoulou<sup>1</sup>, Catherine Roberts<sup>1</sup>, M. Albert Basson<sup>2</sup>, Elizabeth A. Lindsay<sup>3</sup>, Antonio Baldini<sup>3</sup> and Peter J. Scambler<sup>1</sup>

\*Equal contribution

<sup>1</sup>Molecular Medicine Unit, Institute of Child Health, 30 Guilford Street, London WC1N 1EH, UK

<sup>2</sup>Department of Craniofacial Development, King's College London, Floor 27, Guy's Tower, London SE1 9RT, UK

<sup>3</sup>Telethon Institute of Genetics and Medicine (Tigem), Via Pietro Castellino 111, Napoli 1-80131, Italy

4:10- 4:25 Talk 4

**The role of the notochord in dorsal aortae fusion**

Robert J. Garriock and Takashi Mikawa  
University of California, San Francisco

**4:25- 4:40 PM: Break**

4:40- 5:45 PM: Platform Session III – SHF I

(Chairs: Robert Kelly and Nigel Brown) (A/B Ballroom)

4:40- 4:45 Chair's Introduction

4:45- 5:00 Talk 1

**An Fgf autocrine loop initiated in second heart field mesoderm regulates morphogenesis at the arterial pole of the heart**

Eon Joo Park<sup>1</sup>, Yusuke Watanabe<sup>2</sup>, Graham Smyth<sup>3</sup>, Sachiko Miyagawa-Tomita<sup>4</sup>, Erik N. Meyers<sup>3</sup>, John Klingensmith<sup>3</sup>, Todd Camenisch<sup>5</sup>, Margaret Buckingham<sup>2</sup>, Anne M. Moon<sup>1,6,7</sup>

<sup>1</sup>Department of Neurobiology and Anatomy, University of Utah; <sup>2</sup>Department of Developmental Biology, Pasteur Institute, Paris, France; <sup>3</sup>Department of Cell Biology, Duke University Medical Center, Durham, NC; <sup>4</sup>Department of Pediatric Cardiology, Tokyo Women's Medical University, Tokyo, Japan; <sup>5</sup>Department of Pharmacology & Toxicology, University of Arizona, Tucson;

<sup>6</sup>Department of Pediatrics, and <sup>7</sup>Program in Human Molecular Biology and Genetics, University of Utah, Salt Lake City

5:00- 5:15 Talk 2

**Spatiotemporally specific FRS2 $\alpha$ -mediated signals in cardiac outflow tract morphogenesis**

Jue Zhang, Yongshun Lin, Yongyou Zhang, Yongsheng Lan, Chunhong Lin, Robert J. Schwartz<sup>1</sup>, James F. Martin, and Fen Wang

Center for Cancer and Stem Cell Biology, <sup>1</sup>Center for Molecular Development and Disease, Institute of Biosciences and Technology, Texas A&M Health Science Center, 2121 W. Holcombe Blvd., Houston, TX 77030-3303.

5:15- 5:30 Talk 3

**A precursor pool spatially and genetically distinct from the first and second heart fields contributes to the myocardium of the sinus venosus**

M.T.M. Mommersteeg (1), J.N. Dominguez (2), J.B.E. Burch (3), N.A. Brown (2), A.F.M. Moorman (1), V.M. Christoffels (1)

1. Heart Failure Research Center, Academic Medical Center, Amsterdam, The Netherlands.

2. Division of Basic Medical Sciences, St George's, University of London, London, UK.

3. Cell and Developmental Biology Program, Fox Chase Cancer Center, Philadelphia, USA.

5:30- 5:45 Talk 4

**Reassessment of *Isl1* and *Nkx2-5* cardiac fate maps using a novel *Gata4*-based reporter of Cre activity**

Qing Ma<sup>1^</sup>, Bin Zhou<sup>1^</sup>, and William Pu<sup>1\*</sup>

<sup>1</sup>Department of Cardiology, Children's Hospital Boston, 300 Longwood Ave, Boston, MA 02115

**5:45- 6:00 PM: Break**

**6:00- 7:00 PM: Keynote Presentation - Eric Olson** (AB Ballroom)

**7:00- 10:00 PM: Reception** (Liberty Hall)

**7:00 – 9:00 PM: Poster Session 1** (even numbered posters are manned)  
(Liberty Hall)

## **Friday May 16<sup>th</sup> 2008**

7:30- 9:00 AM: Continental Breakfast (Lamar)

9:00- 10:20 AM: Platform Session IV – Second Heart Field II  
(Chairs: Karen Niederreither and Anne Moon) (AB Ballroom)

9:00-9:05 AM Chair's Introduction

9:05- 9:20 Talk 1

**INVESTIGATING *BMP*-SIGNALING FUNCTIONS IN SECOND HEART FIELD**

Jun Wang<sup>\*</sup>, Lijiang Ma<sup>\*</sup>, Margarita Bonilla-Claudio<sup>\*</sup>, and James F. Martin<sup>\*</sup>

<sup>\*</sup>Institute of Biosciences and Technology, Texas A&M University System Health Science Center, 2121 Holcombe Blvd, Houston, Texas, 77030

9:20- 9:35 Talk 2

**Non-autonomous requirement for *BMP* signaling in morphogenesis of the cardiac outflow tract and right ventricle**

Murim Choi<sup>1</sup>, Laura Barbosky<sup>1,2</sup>, Jianwen Que<sup>1</sup>, Naoki Mine<sup>1</sup>, Matthew Goddeeris<sup>1,2</sup>, Robert Schwartz<sup>3</sup>, Erik N. Meyers<sup>1,2</sup>, Margaret L. Kirby<sup>1,2</sup>, and John Klingensmith<sup>1,2</sup>

#Departments of Cell Biology (1) and Pediatrics (2), Duke University Medical Center, Durham, NC 27710, USA; (3) Baylor College of Medicine, Houston, TX 77030, USA

9:35- 9:50 Talk 3

**The Dorsal Mesenchymal Protrusion (DMP), a Second Heart Field Derivative, Plays an Important Role in AV Septal Development.**

Snarr, Brian S; O'Neal, Jessica; Chintalapudi, Mastan R; Wirrig, Elaine; Phelps, Aimee; Trusk, Tom; Kubalak, Steven W; Wessels, Andy  
Department of Cell Biology and Anatomy, Medical University of South Carolina

9:50- 10:05 Talk 4

**Regulation and Function of miR-143 and miR-145 in Heart and Smooth Muscle**

Kimberly R. Cordes, Sarah U. Morton, Kathryn N. Ivey, and Deepak Srivastava, Gladstone Institute of Cardiovascular Disease, and Departments of Biochemistry & Biophysics and Pediatrics, University of California San Francisco, 1650 Owens Street, San Francisco, California 94158, USA.

10:05- 10:20 Talk 5

***Tbx1* is expressed in multi-potent cardiac progenitor cells and it regulates their proliferation and differentiation**

*Li Chen*<sup>1-2</sup>, *Susan Tang*<sup>2</sup>, *Antonio Baldini*<sup>1-3</sup>

<sup>1</sup> Program in Cardiovascular Sciences, Baylor College of Medicine, Houston, TX 77030.

<sup>2</sup> Institute of Biosciences and Technology, Texas A&M University Health Sciences Center, Houston, TX 77030.

<sup>3</sup> University Federico II, and Telethon Institute of Genetics and Medicine, Naples, Italy

**10:20- 10:35 AM: Break**

10:35-11:55 AM: Platform Session V – Cardiac Conduction System Development  
(Chairs: ) (AB Ballroom)

10:35- 10:40 Chair's Introduction

10:40– 10:55 Talk 1

**Zebrafish Cardiac Conduction/Rhythm Mutants: Cellular and Genetic Dissection of the Cardiac Electrical System**

Neil Chi, Robin Shaw, Lily Jan, and Didier Stainier  
University of California, San Francisco; Department of Biochemistry and Biophysics; Division of Cardiology

10:55- 11:10 Talk 2

**Tbx2 controls proliferation, working myocardial differentiation and atrioventricular conduction delay**

Wim TJ Aanhaanen<sup>1</sup>, Bastiaan JD Boukens<sup>1</sup>, Janyne F Brons<sup>1</sup>, M Sameer Rana<sup>1</sup>, Vincent Wakker<sup>1</sup>, Corrie de Gier-de Vries<sup>1</sup>, Andreas Kispert<sup>2</sup>, Antoon FM Moorman<sup>1</sup>, Vincent M Christoffels<sup>1</sup>

1 Heart Failure Research Center, Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands

2 Institut für Molekularbiologie, Medizinische Hochschule Hannover, Hannover, Germany

11:10- 11:25 Talk 3

**Deficiency of Zic3 affects conduction system development and patterning.**

A.M. Haaning<sup>1</sup>, R.C. Czosek<sup>1, 2</sup>, and S.M. Ware.<sup>1</sup> Department of Pediatrics, Cincinnati Children's Hospital and University of Cincinnati College of Medicine<sup>1</sup> and Department of Pediatrics, Division of Pediatric Cardiology, Boston Children's Hospital<sup>2</sup>.

11:25- 11:40 Talk 4

**ABNORMAL CARDIAC CONDUCTION SYSTEM DEVELOPMENT AND ARRHYTHMIAS IN BMPR2 HYPOMORPHIC MUTANTS**

Hanwei ZHANG, Laura BURGHI, Vivian CHIU, Fuhua CHEN, Emmanuèle C. Délot

UCLA Mattel Children's Hospital, Cardiovascular Research Laboratories

11:40- 11:55 Talk 5

**Mapping of the Cx30.2 minimal enhancer uncovers a critical role for GATA4 in development of the atrioventricular node**

Nikhil V. Munshi, Jeff Berry, John McAnally, Svetlana Bezprozvannaya, Joseph A. Hill, Vidu Garg, and Eric N. Olson.

The University of Texas Southwestern Medical Center at Dallas  
Department of Molecular Biology 5323 Harry Hines Boulevard  
Dallas, Texas 75390

**12:00- 1:00 PM: Box Lunch** (Liberty)

1:15-2:15 PM: Concurrent Workshops I

Cardiac Progenitors I – Moderator Antonio Baldini (C Ballroom)

1. Ken Chien
2. Sylvia Evans (not confirmed)
3. Eldad Tzahor
4. Antonio Baldini

Micro RNA's in Cardiac Development - Moderator Bob Schwartz (BTN)

1. Dazhi Wang
2. Deepak Srivastava
3. Bob Schwartz

**2:15– 2:40 PM: Break**

2:40– 4:00 PM: Platform Session VI – Signaling Pathways in Cardiogenesis  
(Chairs: ) (AB Ballroom)

2:40- 2:45 Chair's Introduction

2:45– 3:00 Talk 1

**Blocking Shh signaling in cardiac neural crest-ablated chick embryos rescues outflow tract septation**

Mary Redmond Hutson\*, Faustina Sackey, Katherine Luney, Margaret L. Kirby  
Department of Pediatrics, Duke University Medical Center, Durham, NC

3:00- 3:15 Talk 2

**Hedgehog signaling plays a cell-autonomous role in maximizing cardiac developmental potential**

Natalie A. Thomas, Marco Koudijs, Fredericus J.M. van Eeden, Alexandra L. Joyner, and Deborah Yelon  
Developmental Genetics Program and Department of Cell Biology, Kimmel Center for Biology and Medicine, Skirball Institute of Biomolecular Medicine, New York University School of Medicine, New York, NY 10016 USA

3:15- 3:30 Talk 3

***Hedgehog*-dependent atrial septum progenitors are required for cardiac septation**

Andrew D. Hoffmann, Michael A. Peterson, and Ivan P. Moskowitz  
Departments of Pediatrics and Pathology, The University of Chicago, Chicago, IL,  
60637, USA

3:30- 3:45 Talk 4

**Signaling via the TGF- $\beta$  type I receptor *Alk5* in heart development**

Somyoth Sridurongrit<sup>1</sup>, Robert Schwartz<sup>2</sup>, Pilar Ruiz-Lozano<sup>3</sup> and Vesa Kaartinen<sup>1\*</sup>  
<sup>1</sup>The Saban Research Institute of Childrens Hospital Los Angeles, <sup>2</sup>Baylor College of  
Medicine, Houston, TX 77030, USA, <sup>3</sup>The Burnham Institute for Medical Research.

3:45- 4:00 Talk 5

**The novel gene *Megf8* plays an essential role in left-right patterning and cardiogenesis**

Zhen Zhang<sup>1\*</sup>, Bishwanath Chatterjee<sup>1\*</sup>, Deanne Alpert<sup>1</sup>, Richard Francis<sup>1</sup>, Cheng Cui<sup>1</sup>,  
Matthew Daniels<sup>2</sup>, Qing Yu<sup>1</sup>, Steven Sabol<sup>1</sup>, Yongli. Bai<sup>3</sup>, Maxim Koriabine<sup>3</sup>, Yuko Yoshinaga<sup>3</sup>,  
Wendy Schackman<sup>4</sup>, Pieter J. DeJong<sup>3</sup>, Len Pennachio<sup>4</sup>, Kenneth Kramer<sup>1</sup>, Cecilia W. Lo<sup>1 $\zeta$</sup>   
\*Equal contribution <sup>1</sup>Laboratory of Developmental Biology <sup>2</sup>Electron Microscopy Core  
National Heart Lung and Blood Institute National Institutes of Health, Bethesda, MD 20892-1583  
<sup>3</sup>BACPAC Resources Center, Children's Hospital Oakland Research Institute, Oakland, CA  
<sup>4</sup>Joint Genome Institute, Lawrence Berkeley National Laboratory Berkeley, CA,

**4:00- 4:30 PM: Break**

4:30- 5:50 PM: Platform Session VII – Valvulogenesis

(Chairs: Katherine Yutzey and Jose Luis de la Pompa) (AB Ballroom)

4:30- 4:35 Chair's Introduction

4:35– 4:50 Talk 1

**Notch1 Represses Bmp-Dependent Aortic Valve Calcification**

Vishal Nigam and Deepak Srivastava  
Gladstone Institute of Cardiovascular Disease  
Departments of Pediatrics (Cardiology) and Biochemistry & Biophysics, University of  
California San Francisco, San Francisco, CA 94158



4:50- 5:05 Talk 2

**A Human *alk2* mutation causes atrioventricular septal defects**

Kelly A. Smith, Sonja Chocron, Irene C. Joziassse, Maarten van Dinther, , Jasper J. van der Smagt, Peter A. Doevendans, Peter ten Dijke, Barbara J. Mulder, Jeroen Bakkers  
Hubrecht Institute for Developmental Biology and Stem Cell Research and University Medical Center Utrecht, Utrecht, Netherlands.

5:05- 5:20 Talk 3

**Valve Development in Mice Requires GATA4/FOG Transcriptional Complex**

Nikolay Manuylov and Sergei Tevosian  
Department of Genetics, Dartmouth Medical School, Hanover, NH 03755

5:20- 5:35 Talk 4

**BMP-2 Signals EMT via the Type III TGF $\beta$  Receptor (TGF $\beta$ R3)**

Todd A. Townsend<sup>1</sup>, Kellye C. Kirkbride<sup>2</sup>, Gerard C. Blobe<sup>2</sup>, and Joey V. Barnett<sup>1</sup>  
<sup>1</sup>Department of Pharmacology, Vanderbilt University, Nashville, TN  
<sup>2</sup>Department of Medicine, Duke University, Durham, NC

5:35- 5:50 Talk 5

**Scleraxis is required for cell lineage differentiation and extracellular matrix remodeling during murine heart valve formation in vivo.**

Agata K. Levay<sup>1</sup>, Jacqueline D. Peacock<sup>1</sup>, Yinhui Lu<sup>2</sup>, Robert B. Hinton Jr.<sup>3</sup>, Karl E. Kadler<sup>2</sup>, Ronen Schweitzer<sup>4, 5</sup> and Joy Lincoln<sup>1</sup> □  
<sup>1</sup>Department of Molecular and Cellular Pharmacology, Leonard M. Miller School of Medicine, University of Miami, 1600 NW 10th Avenue, Miami, FL, 33101, USA  
<sup>2</sup>Wellcome Trust Center for Cell-Matrix Research, Faculty of Life Sciences, University of Manchester, Michael Smith Building, Oxford Road, Manchester, M13 9PT, UK  
<sup>3</sup>Division of Molecular and Cardiovascular Biology, Cincinnati Children's Hospital, 3333 Burnet Avenue, Cincinnati, OH, 45229, USA  
<sup>4</sup>Department of Cell and Developmental Biology, Oregon Health and Science University, Portland, OR, USA  
<sup>5</sup>Shriner's Hospital for Children, Research Division, Portland, OR 97239, USA

**Dinner on Own**

**6:00- 8:00 PM: Poster Session II (odd numbered posters are manned)**

## Saturday May 17th 2008

7:30- 9:00 AM: Continental Breakfast (Lamar)

9:00- 10:05 AM: Platform Session VIII – Stem Cells and Reprogramming  
(Chair: Antonio Baldini)

9:00- 9:05 Chair's Introduction

9:05– 9:20 Talk 1

### **Normal Commitment but Impaired Maturation of Cardiac Progenitor Cells from Induced Pluripotent Stem Cells**

Sean M. Wu,<sup>1,8#</sup> Matthias Stadtfeld,<sup>2#</sup> Min Zeng,<sup>1#</sup> Esther Yu,<sup>1</sup> Yuko Fujiwara,<sup>4</sup>  
Guangwen Wang,<sup>5</sup> Stuart H. Orkin,<sup>4,6,7,8</sup> Laurie Jackson-Grusby,<sup>5,8</sup> Konrad  
Hochedlinger<sup>2,3,8\*</sup>

<sup>1</sup>Cardiovascular Research Center, Division of Cardiology, Department of Medicine,

<sup>2</sup>Center for Regenerative Medicine, <sup>3</sup>Cancer Center, Massachusetts General Hospital, Boston, MA 02114. <sup>4</sup>Division of Hematology and Oncology, <sup>5</sup>Department of Pathology,

<sup>6</sup>Howard Hughes Medical Institute, Children's Hospital, Boston, MA 02115, USA.

<sup>7</sup>Department of Pediatric Oncology, Dana-Farber Cancer Institute, Boston MA, 02115, USA. <sup>8</sup>Harvard Stem Cell Institute, Cambridge, MA 02138, USA

9:20- 9:35 Talk 2

### **Enhancing epicardial stem cell repair mechanisms with synthetic small-molecules**

Jamie Russell, Sean Goetsch, Houman Khalili, Jenny Hsieh, Hesham Sadek, Jay Schneider.

Depts. of Medicine and Molecular Biology, UT Southwestern Medical Center, Dallas, TX.

9:35- 9:50 Talk 3

### **Non-invasive in vivo cellular and molecular imaging of transplanted stem cells for cardiac repair/regeneration strategies using magnetic resonance and bioluminescence modalities**

David Taylor<sup>1</sup>, Ramanakumar Kammili<sup>1</sup>, Kellie Thompson<sup>1</sup>, Brent French<sup>2</sup>, and Steven Ebert<sup>1\*</sup>

<sup>1</sup>Burnett School of Biomedical Sciences, University of Central Florida, Orlando, FL

<sup>2</sup>Dept. of Biomedical Engineering, University of Virginia Health System, Charlottesville, VA \*Presenting author

9:50- 10:05 Talk 4

**Epicardial-derived *Wt1*<sup>+</sup> progenitors contribute to the cardiomyocyte lineage in the developing heart**

Bin Zhou<sup>1,2</sup>, Qing Ma<sup>1,2</sup>, Satish Rajagopal<sup>1,2</sup>, Sean M. Wu<sup>3</sup>, Ibrahim Domian<sup>3</sup>, José Rivera-Feliciano<sup>2</sup>, Dawei Jiang<sup>1</sup>, Alexander von Gise<sup>1,2</sup>, Sadakatsu Ikeda<sup>1,2</sup>, Kenneth R. Chien<sup>3</sup>, and William T. Pu<sup>1,2</sup>

<sup>1</sup>Department of Cardiology, Children's Hospital Boston, 300 Longwood Ave, Boston, MA 02115

<sup>2</sup>Department of Genetics, Harvard Medical School, 77 Avenue Louis Pasteur, NRB 0360, Boston, MA 02115 <sup>3</sup>Harvard Stem Cell Institute, Harvard University and Cardiovascular Research Center, Massachusetts General Hospital, 185 Cambridge St., Boston, MA 02114

**10:05- 10:15 AM: Break**

10:15- 11:50 AM: Platform Session IX –Transcriptional Regulation  
(Chairs: Brian Black and Tony Firulli) (AB Ballroom)

10:15- 10:20 Chair's Introduction

10:20– 10:35 Talk 1

**Dissecting a Genomic Regulatory Landscape Controlling Heart Development**

Ivy Aneas, Fabio Arimura, Marcelo A. Nobrega  
Department of Human Genetics, University of Chicago, Chicago, IL, USA.

10:35– 10:50 Talk 2

***Isl1* is a direct transcriptional target of Forkhead transcription factors in the second heart field**

Jione Kang<sup>1</sup> and Brian L. Black<sup>2</sup>  
University of California San Francisco, Cardiovascular Research Institute  
600 16<sup>th</sup> Street, Genentech Hall S476, San Francisco, CA 94158

10:50- 11:05 Talk 3

***Nkx2-5* transactivates the *Ets-related protein 71* gene and promotes an endothelial/endocardial fate in the developing heart**

Anwarul Ferdous<sup>1</sup>, Arianna Caprioli<sup>2,3</sup>, Richard P. Harvey<sup>3</sup>, Eric N. Olson<sup>3</sup>, Michael Kyba<sup>2,3</sup>, and Daniel J. Garry<sup>1</sup>

<sup>1</sup>Lillehei Heart Institute, Department of Medicine, University of Minnesota, MN, USA

<sup>2</sup>Developmental Biology, <sup>3</sup> Molecular Biology, University of Texas Southwestern Medical Center, Dallas, TX, USA.

<sup>3</sup>Victor Chang Cardiac Research Institute and Faculties of Medicine and Life Science, University of New South Wales, Sydney, Australia

11:05- 11:20 Talk 4

**The MEF2-dependent microRNAs 133a-1 and 133a-2 play redundant roles in cardiac growth and morphogenesis.**

Ning Liu<sup>1</sup>, Svetlana Bezprozvannaya<sup>1</sup>, Xiaoxia Qi<sup>1</sup>, James A. Richardson<sup>2</sup>, Rhonda Bassel-Duby<sup>1</sup>, and Eric N. Olson<sup>1</sup>

Departments of Molecular Biology<sup>1</sup> and Pathology<sup>2</sup>, University of Texas Southwestern Medical Center, Dallas, Texas, USA

11:20- 11:35 Talk 5

**An Ultra-conserved Post-transcriptional *Bone Morphogenetic Protein (BMP)2* Repressor Functioning in the Developing Heart of the Epicardial Lineage and a Subset of the Neural Crest Lineage.**

Boudewijn P. T. Kruithof<sup>1</sup>, Carolina S. Cabral<sup>1</sup>, Junwang Xu<sup>3</sup>, David T. Fritz<sup>2</sup>, Vinciane Gausin<sup>1</sup>, and Melissa B. Rogers<sup>2, 4</sup>,

<sup>1</sup>Dept. of Cell Biol. & Molec. Medicine, UMDNJ-NJMS, Newark, NJ

<sup>2</sup>Dept. of Biochem. & Molec. Biol., University of Medicine and Dentistry (UMDNJ)-New Jersey Medical School (NJMS), Newark, NJ

<sup>3</sup> Dept. of Cell & Devel. Biol. and the Cardiovascular Inst., University of Pennsylvania, Philadelphia, PA

<sup>4</sup>Presenting author, 185 South Orange Ave., Newark, NJ 07101-1709, Phone: (973) 972-2984, Fax: (973) 972-5594, email: [rogersmb@umdnj.edu](mailto:rogersmb@umdnj.edu)

11:35- 11:50 Talk 6

**A New Wnt/beta-catenin Signaling Mechanism Controls PITX2 Homeodomain Transcription Factor Activity**

Melanie Amen<sup>1</sup>, Jianbo Wang<sup>1</sup> and Brad A. Amendt<sup>1\*</sup>

<sup>1</sup>Texas A&M Health Science Center, Institute of Biosciences and Technology, Houston, TX

**12:00- 1:00 PM: Box Lunch (Liberty)**

1:15- 2:15 PM: Concurrent Workshops II

Cardiac Progenitors II – Moderator Vincent Christoffels (C Ballroom)

1. Ivan Moskowitz
2. Brad Davidson
3. Vincent Christoffels
4. Jeroen Bakkers

Transcriptional Regulation and Chromatin: Moderator Benoit Bruneau (BTN)

1. Benoit Bruneau
2. Brian Black
3. Ching Pin Chang

**2:15- 2:30 PM: Break**

2:30- 3:30 PM: Business Meeting (Sam Houston)

2:30- 3:30 PM: Opportunities and Resources Workshops (AB Ballroom)

2:30- 3:00

NIH Funding opportunities for postdoctoral fellows and new investigators  
Tony L. Creazzo, PhD, Scientific Review Officer, NHLBI

3:10- 3:25

The TIGM mouse genetics resource  
William Shawlot, PhD, Senior Scientist, Texas Institute for Genomic Medicine (TIGM)

**3:30- 3:45 PM: Break**

3:45- 5:05 PM: Platform Session X – Emerging Issues I  
(Chair: Jim Martin) (AB Ballroom)

3:45-3:50 Chair's Introduction

3:50– 4:05 Talk 1

**Reptilian heart development and the molecular basis of cardiac chamber evolution**

Kazuko Koshiba-Takeuchi<sup>1,2\*</sup>, Alessandro D. Mori<sup>1,2,4,6\*</sup>, Bogac L. Kaynak<sup>1,2</sup>, Judith Cebra-Thomas<sup>8</sup>, Erika Paden<sup>9</sup>, Stephany Latham<sup>10</sup>, Laural Beck<sup>10</sup>, R. Mark Henkelman<sup>5,7</sup>, Jun K. Takeuchi<sup>1,2</sup>, Brian L. Black<sup>3</sup>, Eric N. Olson<sup>11</sup>, Juli Wade<sup>10</sup>, Frank L. Conlon<sup>9</sup>, Scott F. Gilbert<sup>11</sup>, & Benoit G. Bruneau<sup>1,2,4,6</sup>

<sup>1</sup> Gladstone Institute of Cardiovascular Disease, San Francisco, CA 94158; <sup>2</sup> Department of Pediatrics, University of California, San Francisco, CA 94158

4:05- 4:20 Talk 2

**Array-CGH: a novel tool to identify the genetic causes of CHDs**

Thienpont B<sup>1</sup>, Breckpot J<sup>1</sup>, Van Loo P<sup>3</sup>, Tranchevent L<sup>3</sup>, Gewillig M<sup>2</sup>, Moreau Y<sup>3</sup>, Vermeesch JR<sup>1</sup> & Devriendt K<sup>1</sup>

<sup>1</sup> Center for Human Genetics, University of Leuven, Belgium

<sup>2</sup> Paediatric Cardiology Unit, University of Leuven, Belgium

<sup>3</sup> Department of Electrical Engineering, ESAT-SCD, University of Leuven, Belgium

4:20- 4:35 Talk 3

**Elevated CUG-BP1 is a primary effect of toxic RNA in a mouse model of myotonic dystrophy**

Guey-Shin Wang<sup>1</sup>, Debra L. Kearney<sup>1</sup>, Mariella De Biasi<sup>4</sup>, George Taffet<sup>3</sup>, and Thomas A. Cooper<sup>1,2</sup>

Departments of Pathology<sup>1</sup>, Molecular and Cellular Biology<sup>2</sup>, Medicine<sup>3</sup>, Neuroscience<sup>4</sup>, Baylor College of Medicine, Houston, TX 77030

4:35- 4:50 Talk 4

**Over-expression of SENP2, a de-sumoylation enzyme, in cardiomyocytes leads to congenital cardiac defects**

Jun Wang<sup>1</sup>, Ivan Moskowitz<sup>2</sup>, Robert J Schwartz<sup>1</sup>

1. Institute of Biosciences and Technology, Texas A&M Health Science Center, 2121 W. Holcombe, Boulevard, Houston, TX 77030. 2. Departments of Pediatrics and Pathology, The University of Chicago, 5841 S. Maryland Avenue, MC 1059, Chicago, Illinois 60637

4:50- 5:05 Talk 5

**Mechanical Properties of PEGDA Hydrogels with Surface Immobilized Vascular Endothelial Growth Factor Affect Endothelial Cell Tubulogenesis**

Julia E. Leslie, Jennifer L. West  
Rice University, Houston, Texas, USA

5:05- 5:10 PM: Wrap Up - Jim Martin (AB Ballroom)

**6:00- 10:00 PM: Banquet featuring Entertainment by The Transactivators (Liberty)**