Yale UCL
COLLABORATIVE

Cardiovascular Device Innovation Summit
January 17th and 18th, 2013

Yale University School of Medicine and University College of London

Summit Chairs

Alexandra Lansky and Michael Mullen

Summit Co-Chairs

Aroon Hingorani
John Martin
Anthony Mathur
Pascal Meier
Michael Simons
Andrew Taylor
Craig Thompson

UCLPartners Academic Health Science Partnership

Yale University School of Medicine

UCL

NHS National Institute for Health Research

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Thursday January 17th, 2013

8:00 am **Check-In and Breakfast, King's Place Events, Music Foyer**

9:00 am **Welcome and Introduction: Alexandra Lansky and Michael Mullen**

SESSION I **HEALTHCARE POLICY AND FUNDING IN 2013**

9:05 **Session Introduction**
John Martin

9:10 am **Opening Address:**
British Health Care Policy in a Global Landscape: Vision for Invigorating Academic Innovation and Entrepreneurship
George Freeman
Member of Parliament and Government Advisor on Life Sciences

9:30 am **Keynote Lecture:**
Funding Landscape in the Med-Tech Arena
Martin Hunt
Director, National Institute for Health Research, Invention for Innovation Program, United Kingdom

9:45 am **Keynote Lecture:**
Early Stage Funding Opportunities for Device Innovation – NIH Initiatives
Tim Baldwin
Deputy Branch Chief, Advanced Technologies and Surgery Branch
NHLBI, National Institutes of Health

10:05 am **Interactive Discussion Led by John Martin**
Discussants: George Freeman, Martin Hunt, Tim Baldwin

10:30 am **Coffee Break**

SESSION II **DEVICE INNOVATION IN A GLOBAL LANDSCAPE**

Moderators: Martin Rothman and Alexandra Lansky

11:00 am Regulatory Reform in Device Innovation: Can We Accelerate the US Pathway?
Ashley Boam
Branch Chief, Center for Devices and Radiological Health
US Food and Drug Administration

11:15 am Regulatory Pathway: EU perspective
Rob Higgins
Section Head, Medicines and Healthcare Product Regulatory Agency (MHRA)

11:30 am The Patient Innovator: The Importance of Patients in the Innovation Process
Tal Golesworthy

11:40 am Innovation and Academia: The Cross Roads of IP, Conflicts, and Patient Needs
Martin Rothman

11:50 am Innovation and the NHS! An Oxymoron?
Andrew Goldberg

12:00 pm Interactive Discussion
Moderator: Martin Rothman and Alexandra Lansky
Discussants: Ashley Boam; Rob Higgins, Tim Baldwin, Rick Geoffrion, Tal Golesworthy, Eitan Konstantino, Pauliina Margolis, Andrew Goldberg, Bryan Williams, Andrew Taylor, John Soderstrom

12:30 pm **Lunch**

SESSION III **INNOVATION: FOCUS ON TAVI AND SECOND GENERATION DEVICES AND NEUROPROTECTION**

Moderators: Andreas Baumbach and Pauliina Margolis

1:30 pm TAVI in Perspective: Adoption of a Disruptive Technology
Jodi Akin

1:40 pm Challenges with First Generation TAVI: Para Valvular Leak and Valve Degeneration
Michael Mullen

1:50 pm Next Iterations of Percutaneous Valves: Design and Engineering Considerations
Gaetano Burriesci

2:00 pm Next Generation Nanocomposite Polymeric Valve Leaflets: Design and Durability Features
Alex Sefalian

2:10 pm Genetically Modified Bovine Pericarium in Valve Design: Rational and Initial Outcomes
Chris McGregor

2:20 pm Neurologic Events Following TAVI: Incidence, Mechanism and Prognosis
Alexandra Lansky

2:30 pm Embolic Protection: A review of Neuroprotection Devices and Adjunctive Pharmacology
Andreas Baumbach

2:40 pm Endpoint Measures in Assessing Neuroprotection Devices
Szilard Voros

2:50 pm Interactive Discussion: Facilitating Device Iteration, Innovation and Safety
Moderator: Andreas Baumbach and Pauliina Margolis
Panelists: Jodi Akin, Andrew Taylor, Alex Sefalian, Chris McGregor, Gaetano Burriesci, Ashley Boam, Rob Higgins, Szilard Voros, Pauliina Margolis, Suneil Aggarwal, Alexandra Lansky, Michael Mullen

3:30 pm **Tea Break**

SESSION IV **INNOVATION: FOCUS ON INTERVENTIONAL DEVICES IN MITRAL VALVE DYSFUNCTION**
Moderators: Michael Mullen and Neil Moat

3:45 pm Functional Mitral Regurgitation: Understanding Pathology and Functioning of Mitral Valve Dysfunction
Neil Moat

3:55 pm Imaging in Mitral Valve Repair: 2D, 3D and Exercise Echocardiography
Antonis Pantazis

4:05 pm Challenges in Edge to Edge Mitral Leaflet Repair: Techniques and New Technologies
Olaf Franzen

4:15 pm Computerized Modeling of the Mitral Valve: Utility in Device Development
Venessa Diaz

4:25 pm Percutaneous Mitral Valve Replacement: Current State of Technology

Lars Sondergaard

4:35 pm Percutaneous Mitral Annuloplasty: Feasibility and Effectiveness
Rick Geoffrion

4:45 pm Innovation Session: Can We Innovate to Design an Effective Percutaneous Mitral Valve Technology?
Moderator: Michael Mullen and Neil Moat
Discussants: Rick Geoffrion, Olaf Franzen, Andrew Taylor, Lars Sondergaard, Vanessa Diaz, Ashley Boam, Rob Higgins, Tim Baldwin

5:30 pm **Adjourn**

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Friday January 18th, 2013

8:00 am **Breakfast, King's Place Events, Music Foyer**

SESSION V **INNOVATION: FOCUS ON NEW DRUG AND BIOLOGIC DELIVERY STENTS AND SCAFFOLDS**

Moderators: Craig Thompson and Anthony Mathur

9:00 am The evolution of Drug Eluting Stents: Understanding Design, Material, Drug and Use
Andreas Baumbach

9:10 am Outcomes of Current Generation DES: What Constitutes Meaningful Clinical Improvements?
David Hildick-Smith

9:20 am Fully Bioresorbable Stent Platforms: Engineering and Clinical Challenges
Machiel Van Der Leest

9:30 am Anti-Thrombotic and New Coating Materials: Polymers, Nano Technology, Diamond Coating and More
Richard Jackman

SESSION VI **INNOVATION: NEW FRONTIERS IN IMPLANTABLE THERAPIES: CLINICAL NEED, REGULATORY CHALLENGES, AND MARKET OPPORTUNITIES - CASE EXAMPLES WITH PANEL DISCUSSIONS**

Moderators: David Hildick-Smith and Rick Geoffrion
Panelists: Craig Thompson, Martin Rothman, Ashley Boam, Rob Higgins, Eitan Konstantino, Pauliina Margolis, Andreas Baumbach, John Soderstrom, Andrew Goldberg, Michael Mullen, Anthony Mathur, Tim Baldwin

9:40 am 5' Case Example 1: Magnetic Bioresorbable DES
Anthony Mathur

10' Panel Discussion

9:55 am	5’ Case Example 2: Stent Delivery of Gene Therapy **Seppo Yla Hertualla** 10’ Panel Discussion
10:10 am	5’ Case Example 3: Tissue Engineered Vascular Endograft **Toby Richards** 10’ Panel Discussion
10:25 am	5’ Case Example 4: Ascending Thoracic Aneurysm Graft **Ajay Jain** 10’ Panel Discussion
10:40 am	**Coffee Break**
11:00 am	5’ Case Example 5: New Devices for CTO **Craig Thompson** 10’ Panel Discussion
11:15 am	5’ Circulatory Assist During PCI: The Reitan Pump **Elliot Smith** 10’ Panel Discussion
11:30 am	5’ Non-Invasive Blood Pressure Monitoring Device: Caspro **Bryan Williams** 10’ Panel Discussion
11:45 am	5’ Uterine Artery Gene Therapy **John Martin** 10’ Panel Discussion

SESSION VII **INNOVATION: NEW IMAGING APPLICATIONS**

Moderators: Andrew Taylor and Michael Cleman

12:00 pm Novel Imaging Techniques for Coronary Disease
Al Sinusas

12:15 pm Virtual Device Implantation - A way to Guide Personalized Treatment
Silvia Schievano

12:30 pm Summit Summary and Concluding Remarks
John Martin and Michael Simons

12:45 pm **Adjourn**