



2015 European ISACB Meeting

Nuremberg – Germany

December 3-4 2015

www.isacb.eu

Wednesday Dec 2

18:00 Welcome Reception at the Le Meridien Grand Hotel

Thursday Dec 3

9:00-10:00 Registration & Coffee

10:00-10:15 Welcome and Opening: *Theodor Fischlein, Nuremberg*

10:15-10:30 ISACB Welcome and Remarks: *David A. Vorp, Pittsburgh*
President of the International Society for Applied Cardiovascular Biology (ISACB)

SESSION 1 Tissue Engineering of Heart Valves

Chair: S. Hoerstrup, P. Zilla

10:30-11:00 *Key note speaker: Simon Hoerstrup, Zurich: Tissue Engineered Heart Valves towards clinical translation*

11:00-11:15 S. Lerakker, Eindhoven: Manufacturing the perfect tissue engineered heart valve: Scaffold Selection, Design & Optimization

11:15-11:30 Peter Zilla, Cape Town: Tissue regenerative trans-catheter polymeric valves: catering for the many?

11:30-11:45: Maximilian Emmert, Zurich: Transcatheter off-the-shelf heart valves with self-repair capacity: long term results from a translational animal model

11:45-12:00 Dan Simionescu, Clemson: Advances and Challenges in Stem Cell-based Heart Valve Tissue Engineering; in vitro Bioreactor Studies and in vivo Sheep Implantation

12:00-12:30 Discussion

12:30-14:00 Lunch (provided)

SESSION 2 Heart Valves - New Devices

Chair: F. Laborde, G. Santarpino

- 14:00-14:30: Key note speaker: *Francois Laborde, Paris: "Challenges in preclinical validation of new heart valve devices, a glimpse on the future"*
- 14:30-14:45 Giuseppe Santarpino, Nuremberg: Various uses of sutureless Prostheses: A Single Center Experience
- 14:45-15:00 Christoph Schmitz, Berlin: A new hybrid approach for the treatment of dilated ischemic cardiomyopathy
- 15:00-15:15 Reinhard Moidl, Vienna: Perioperative outcome is influenced by the design of the prosthesis after aortic valve replacement in patients with small aortic roots.
- 15:15-15:30 Markus Mach, Vienna: The change of mitral regurgitation severity after transfemoral vs. transapical trans-catheter aortic valve implantation (TAVI). Data from the Vienna CardioThoracic Aortic Valve RegistrY (VICTORY)
- 15:30-16:00 Coffee break

SESSION 3 Heart Valves - Tissue Degeneration

Chair: A. Simionescu, G. Thiene

- 16:00-16:30 Key note speaker: *Gaetano Thiene, Padua: "Tissue valve degeneration"*
- 16:30-16:45 Christoph Schmitz, Berlin: Is decellularized tissue an alternative to autologous material in Cardio-Vascular Surgery?
- 16:45-17:00 Boris Schmitt, Berlin: The importance of antigen removal in xenogeneic implants
- 17:00-17:15 Yoshiaki Takewa, Osaka: Development of a Novel Autologous Heart Valve (Biovalve) with In-Body Tissue Engineering Method
- 17:15-17:30: Agneta Simionescu, Clemson: Stabilized collagen and elastin-based scaffold for mitral valve tissue engineering

Friday Dec 4

8:00-9:00 Registration & Coffee

SESSION 4 Cardiovascular Tissue Engineering

Chair: D. Vorp, M. Wolf

9:00-9:30: Key note speaker: *Johann Meinhart, Vienna*
“Regulation of Tissue Engineering in the EU”

9:30-9:45 Alexander Assmann, Düsseldorf: Tissue engineering of heart valves

9:45-10:00 Takuma Fukunishi, Columbus: Small-Diameter Tissue-Engineering Vascular Grafts Using Electrospun PCL/Chitosan Nanofiber Scaffolds in Sheep Model

10:00-10:15 David Vorp, Pittsburgh: Tissue Engineered Vascular Grafts Constructed with Adipose-Derived Stem Cells from Diabetic Donors Fail via an Impaired Fibrinolytic Activity

10:15-10:30 Michael Wolf, Minneapolis: Exploration of endothelialization on a synthetic vascular graft with altered surface geometry and g-force endothelial cell seeding

10:30-10:45 Norbert Howanietz, Vienna: Clinical Endothelialization of vascular grafts

10:45-11:15 Coffee Break

SESSION 5 Vascular Wall

Chair: S. Nees, L. Timmins

11:15-11:45 Key note speaker: *Stephan Nees, Munich:*
“The vascular wall and its diseases in the light of new cell biological findings”

11:45-12:00 Shuoran Li, Los Angeles: Integrin Activation as a Tool to Modulate Vascular Patterning

12:00-12:15 Felix Nagel, Vienna: Tenascin-C deficiency attenuates abdominal aortic aneurysm progression

12:15-12:30 Lucas Timmins, Atlanta: Disturbed Hemodynamics Regulate Arterial Stiffening Through Thrombospondin-1 Dependent Mechanism

12:30-12:45 Tatiana Segura, Los Angeles: Bioengineering hydrogels for Brain repair

12:45-14:00 Lunch (provided)

SESSION 6 Cells and Blood

Chair: L. Brewster, T. Fischlein

- 14:00-14:30 Key note speaker: *Luke Brewster, Decatur: Robust Angiogenic Potential of Mesenchymal Stem Cells is Preserved in Patients with Critical Limb Ischemia*
- 14:30-14:45 Heather Cirka, Worcester: The effect of aggregate size on cell death and calcification of valvular interstitial cells.
- 14:45-15:00: Claudia Dittfeld, Dresden: Matrix stiffness and stretch impacts expression and localisation of mechanotransducers YAP and TAZ in aortic valvular interstitial cells
- 15:00-15:15 Can Tepeköylü, Innsbruck: Shock wave therapy induces angiogenesis in infarcted myocardium via a VEGF and bFGF dependent mechanism
- 15:15-15:30 Spencer Melby, Birmingham: Hemoglobin-associated oxidative stress in the pericardial compartment of postoperative cardiac surgery patients
- 15:30-15:45 Joachim Sirch, Nuremberg: Active clearance of blood clogged chest drain catheters

Discussion & Coffee: The Future of Tissue Engineering

15:45-16:45 Moderator: J. Meinhart

Gala Banquet 19:00

Posters

Giuseppe Santarpino, Nuremberg: Minimal invasive aortic valve replacement (MIAVR)

Selma Goktas, Istanbul: Histological and genetic investigation of the microvascular great artery morphogenesis

Siva K. Panguluri, Tampa: Cardiovascular complications under hyperoxia condition: Animal model to understand high mortality in ICU or Critical Care Units

Laura Maldarytė, Vilnius: 24 Hours Ambulatory Blood Pressure Monitoring in Primary Care

Tatiana Svermova, London: Increased plasma Slit2 levels following cardiac surgery: can it protect endothelial barrier function?

Claudia Dittfeld, Dresden: XAV-939 modulates pro-fibrotic characteristics and calcification of valvular interstitial cells in vitro

Ihab Moursi, Rueil Malmaison: Effectiveness of Off Pump CABG in Impaired Left Ventricular Function