

Transregional Collaborative Research Center 127

**Biology of Xenogeneic Cell, Tissue and Organ Transplantation –
From Bench to Bedside**

Final Meeting 15.-17.05.2024



Venice International University

San Servolo, Venice, IT

<https://www.univiu.org/>



Tuesday, 15.05.2025

18.30	<i>GET TOGETHER</i>
18.45	Welcome and Introduction - Bruno Reichart, Eckhard Wolf
19.00	<i>DINNER – with members of the Leducq Excellence Network</i>

Wednesday, 16.05.2024

Modulating the host-to-xenograft immune response	
08.30	Targeting stimulatory and inhibitory receptor/ligand interactions to diminish human anti-pig immune responses Reinhard Schwinzer, Constanca Ferreira de Figueiredo (A1)
09.00	Local immunomodulation by viral vectors and genetic modifications Andrea Bähr, Sebastian Michel, Peter Murray, Christian Kupatt (A2)
09.30	Immunogenicity of islets of different clinically relevant sources in a preclinical humanized mouse model Claudia Waskow, Barbara Ludwig, Andreas Linkermann (A5)
10.00	Regulatory T cells in xenotransplantation Elmar Jaeckel, Fatih Noyan (A4)
10.30	<i>C O F F E E</i>
11.00	Immunity, macrophage: T cell cross-talk, self-tolerance, amino acid metabolism Peter Murray, Max Planck Institute of Biochemistry, Munich
11.30	snRNA-seq and spatial transcriptomics to provide new insights into xenotransplant rejection mechanisms Daniel Reichart, Department of Cardiology, LMU Klinikum, and Gene Center, LMU Munich
12.00	N.N. Joshua I. Weiner, Columbia University, Department of Surgery
12.30	<i>L U N C H</i>
Optimizing source pigs for xenotransplantation	
14.00	Modifying the porcine genome for xeno-organ transplantation Konrad Fischer, Wilfried Kues (B1&2)
14.30	Auckland Island pigs – new source for xenogeneic organ transplantation Asghar Ali, Gene Center, LMU Munich
14.40	Genetically engineered donor pigs with improved pancreatic islets Elisabeth Kemter, Anika Böttcher, Nikolai Klymiuk, Eckhard Wolf (B2)
15.00	Genetic analysis of PERV Nikolai Klymiuk (B2)
15.20	Microbiological including virologic safety Antonia W. Godehardt, Ralf R. Tönjes, Joachim Denner, Benedikt B. Kaufer
16.00	<i>C O F F E E</i>
Exogenesis – cellular humanization of porcine organs	
16.30	Engineering humanized vasculature in a gene edited pig Daniel J. Garry, University of Minnesota
17.00	Exogenous organs for transplantation without rejection Hiromitsu Nakauchi, Stanford University and Tokyo Medical and Dental University
17.30	Overcoming xeno-barriers in human-animal chimera formation Hideki Makaki, Tokyo Medical and Dental University
18.00	Recapitulating porcine cardiac development in vitro: from expanded potential stem cell to embryo culture models Monika Nowak-Imialek, Technical University of Munich
19.00	<i>D I N N E R</i>

Thursday, 17.05.2024

Xenogeneic and allogeneic beta-cell replacement strategies	
08.30	Comparative developmental biology of murine, porcine and human islets Heiko Lickert, Helmholtz Munich
09.00	Optimization of porcine neonatal islet like cell clusters for clinical transplantation therapy Stephan Speier, Christian Cohrs, Elisabeth Kemter (C1)
09.30	Treatment of type 1 diabetes with porcine islet cells: transplantation of multi-transgenic islets expressing immunomodulatory molecules Lelia Wolf-van Buerck, Jochen Seissler (C3)
10.00	Optimizing porcine islet macroencapsulation for the treatment of patients with insulin-dependent diabetes mellitus Barbara Ludwig, Stefan Bornstein, Rocio Sancho Zapatero, Petra Welzel (C4)
10.30	<i>C O F F E E</i>
Gene and cell therapies of cardiac and skeletal muscle	
11.00	Humanized skeletal muscle in pig Mary G. Garry, University of Minnesota
11.30	Gene therapy of Duchenne muscular dystrophy Christian Kupatt, Technical University of Munich
12.00	Designer cells for cardiac regeneration Alessandra Moretti, Technical University of Munich
12.30	<i>L U N C H</i>
Xenotransplantation of heart valves and hearts	
14.00	Preclinical assessment of antigen-reduced decellularized porcine heart valves Andres Hilfiker, Serghei Cebotari, Falk Büttner, Heiner Niemann
14.30	Steps to clinical xenogeneic cardiac replacement Matthias Längin, Jan-Michael Abicht, Paolo Brenner, Bruno Reichart
15.00	Cardiac xenotransplantation in humans Muhammad M. Mohiuddin, University of Maryland School of Medicine
16.00	<i>C O F F E E</i>
Ethical, legal and societal implications	
16.30	Ethical, legal, psychosocial, and societal issues of xenotransplantation and exogenesis Georg Marckmann, Jochen Sautermeister, Nils Hoppe
17.45	Finances and reporting Dorothea Marquardt, Eckhard Wolf
18.00	Views back and views ahead Bruno Reichart, Eckhard Wolf
19.00	<i>D I N N E R</i>

Friday, 18.05.2024

09.00	Venice Tour
12.30	<i>L U N C H</i>
13.30	End of the Meeting