

September
26th - 29th
2012 | Congress
Booklet

ESAO XXXIX

from replacement to regeneration
from science to clinic – Rostock 2012



Local organising committee

Prof. Dr. med. Gustav Steinhoff
Prof. Dr. med. Steffen Mitzner
Dr. med. Wolfgang Ramlow



European Society for Artificial Organs

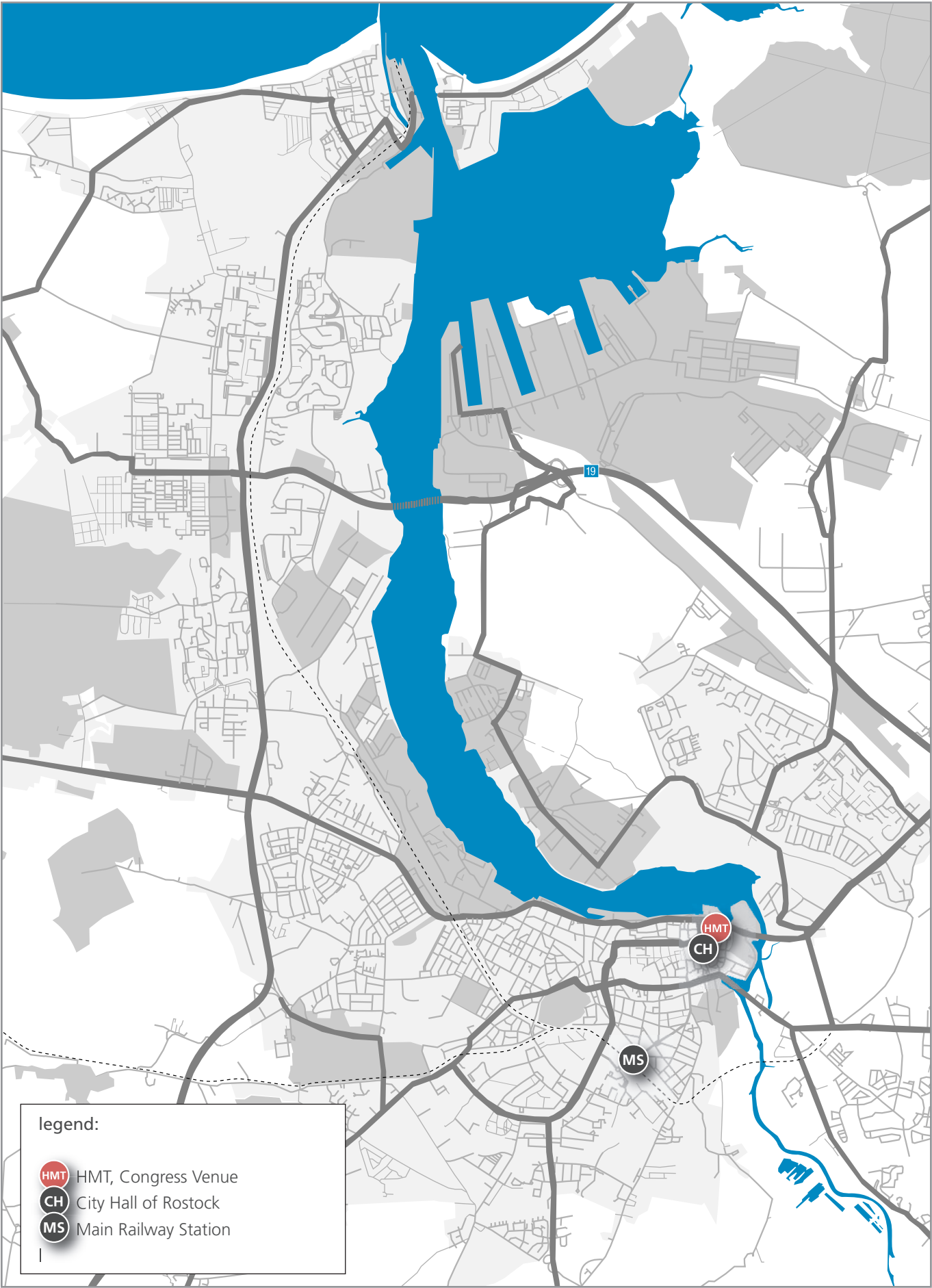


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WELCOME ADDRESS/MESSAGE FROM CONGRESS PRESIDENT

As congress president of the XXXIX. ESAO Congress I welcome you to Rostock on **September 26th – 29th, 2012**. Rostock is a prospering and easy-to-reach hanseatic city directly located at the Baltic Sea coast. The venue of the ESAO 2012 congress is the Academy of Music and Theatre, which resides in an old monastery in the city centre. Rostock is home to one of the oldest universities in the northern Europe: founded in 1419.

The motto of the ESAO Congress 2012 will be **“from replacement to regeneration – from science to clinic”**. The current state of organ assist and organ support allows for a rapidly advancing clinical practice for several hundred thousand patients worldwide. The prospect of organ transplantation, however, can only be realized for a small part of these patients. Therefore, new approaches to organ regeneration and tissue engineering, which are on the way to clinical practice, will be highlighted during the congress. Their development may supplement the clinical prospect for longterm management of organ failure employing artificial organs and organ regeneration/organ transplantation beyond temporary support. This scientific and clinical challenge will be addressed by the XXXIX. ESAO congress.

The scientific programme committee did select 59 keynote lectures of renowned international experts, 131 selected oral presentations and 101 poster presentations from worldwide scientific contributors. Nine poster presentations were selected for short oral presentation. We provide a clear programme structure by highlighting one special organ system each congress day: heart/cardiovascular (Chair: G. Steinhoff), liver (Chair: S. Mitzner) and kidney (Chair: W. Ramlow). The programme comprises 45 oral and 2 poster sessions with cardiovascular, dialysis, biomaterials, liver, and apheresis topics (www.esao2012.org). Above all the congress programme integrates aspects of both basic science and clinical development with a clear focus on translation and clinical practice. We intend to host you on an excellent and exciting congress by inviting outstanding experts and by giving young and promising clinicians and scientists the opportunity to present their work. Especially for young scientists there will be one day for yESAO activities (Tuesday, Sept. 25, 2012). Industry symposia, a poster exhibition and an industrial exhibition will complete the congress programme.

We are looking forward to seeing you in Rostock 2012.

Sincerely,

Prof. Dr. med. Gustav Steinhoff
Congress President XXXIX. ESAO congress 2012



WELCOME ADDRESS/MESSAGE FROM PRESIDENT OF ESAO



Dear ESAO members, dear congress participants!

as President of the European Society of Artificial Organs I heartily want to welcome you to our 39th annual meeting in Rostock, Germany. Rostock has a long tradition in dialysis, artificial heart and cardiovascular implants. Prof. Steinhoff has together with Prof. Mitzner and Dr. Ramlow and their teams prepared an excellent meeting. One focus of this meeting will be on the clinical application particularly for heart, liver and kidney, visible in three focus days. Moreover our congress has always been an interdisciplinary discussion platform for researchers, developers, clinical applicants and industry, with increasing focus also on bioartificial organs and tissue engineering. This is reflected in a broad spectrum of symposia, keynote lectures, oral and poster presentations, in 4 parallel threads. Particular emphasis has been laid in recent years in the specific interests in young researchers, with an own pregress day. An attractive social program with several evening events has also been prepared.

The Board of ESAO and myself wish you a stimulating and creative meeting!

With best regards

Prof. Heinrich Schima PhD
President of ESAO



SPONSORS/PLATIN



SPONSORS/GOLD



SPONSORS/SILVER



BOARDS AND COMMITEES/INTERNATIONAL SCIENTIFIC COMMITTEE

Jens Altrichter/Rostock, Germany
Angel Argiles/Montpellier, France
Michael Bauer/Jena, Germany
Reinhard Brunkhorst/Hannover, Germany
Andrea Buscaroli/Ravenna, Italy
Gerardo Catapano/Cosenza, Italy
Juan F. Del Canizo Lopez/Madrid, Spain
Kurt Derfler/Vienna, Austria
Frank Emmrich/Leipzig, Germany
Giuseppe Faggian/Verona, Italy
Dieter Falkenhagen/Krems, Austria
Thomas Groth/Halle, Germany
Axel Haverich/Hannover, Germany
Saleh M. Ibrahim/Lübeck, Germany
Ulrich Kertzscher/Berlin, Germany
Ashraf Khir/London, UK
Piotr Ladyzynski/ Warsaw, Poland
Peter J. Lansberg/Amsterdam, The Netherlands
Ingrid Ledebø/Lund, Sweden
Cécile Legallais/Compiègne, France
Nuno Neves/Porto Salvo, Portugal

Heinrich Prophet/Rostock, Germany
Gerhardt Rakhorst/Groningen, The Netherlands
Rui L. Reis/ Guimarães, Portugal
Claudio Ronco/Vicenza, Italy
Peter Rutherford/Zurich, Switzerland
Igor M. Sauer/Berlin, Germany
Heinrich Schima/Vienna, Austria
Aleksandar Sikole/Skopje, Republic of Macedonia
Sergio Stefoni/Bologna, Italy
Bernd Stegmayr/Umeå, Sweden
Ulrich Steinseifer/Aachen, Germany
Bodo Eckehard Straue/Düsseldorf, Germany
Raymond Vanholder/Ghent, Belgium
Pascal Verdonck/Ghent, Belgium
Jörg Vinken/Bad Homburg, Germany
Hans-Dieter Volk/Berlin, Germany
Brigitte Vollmar/Rostock, Germany
Beat H. Walpoth/Geneva, Switzerland
Georg Wieselthaler/Vienna, Austria
Roland E. Winkler/Rostock, Germany
Jan M. Wojcicki/Warsaw, Poland

BOARDS AND COMMITEES/LOCAL ORGANISING COMMITTEE

Congress president:

Prof. Dr. med. Gustav Steinhoff
Director of the Clinic for Cardiac Surgery, University of Rostock; Head of the Reference and Translation Center for Cardiac Stem Cell Therapy at University Medicine Rostock

Vice Chair:

Prof. Dr. med. Steffen Mitzner
Director of the Clinic for Nephrology, University Medicine Rostock

Vice Chair:

Dr. Wolfgang Ramlow
Medical Director of the Clinic for Nephrology, Dialysis and Apheresis, Rostock

Scientific assistance

Dr. Hoang Tu-Rapp
Reference and Translation Center for Cardiac Stem Cell Therapy at University Medicine Rostock

Dr. Heinrich Prophet

Apheresezentrum Rostock

Local organising committee

Katrin Höfer, Jana Gabriel
University Medicine Rostock

BOARDS AND COMMITEES/ESAO BOARD MEMBERS

President (present)	Heinrich Schima, Austria
President (elect)	Bernd Stegmayr, Sweden
President (past)	Bart Meyns, Belgium
Honorary President	Horst Klinkmann, Germany
General Secretary	Cécile Legallais, France
Honorary Board Member	Sergio Stefoni, Italy
Coopted Board Member	Ingrid Ledebø, Sweden Jörg Vienken, Germany
Treasurer	Jan Maria Wojcicki, Poland
Board Members	Andrea Buscaroli, Italy Thomas Groth, Germany Sunny Eloot, Belgium Giuseppe Faggian, Italy Ulrich Kertzscher, Germany Petar Kes, Croatia Ashraf Khir, UK Piotr Ladyzynski, Poland Igor M. Sauer, Germany Aleksandar Sikole, Republic of Macedonia Ulrich Steinseifer, Germany Georg Wieselthaler, Austria

AWARDS/THE ESAO-WICHTIG AWARD

is the most prestigious award of the ESAO. It is sponsored by Wichtig-Editore and the International Journal for Artificial Organs for the best paper in research, development or clinical introduction of artificial organ support or replacement. An international Jury has decides on the annual submissions. This



year the award goes to Mrs. Sarra deValence from the University of Geneva for a paper on "Long-term-performance of polycaprolactone cascular grafts in a rat abdominal aorta replacement model".

AWARDS/THE ESAO-INNOVATIVE AWARD

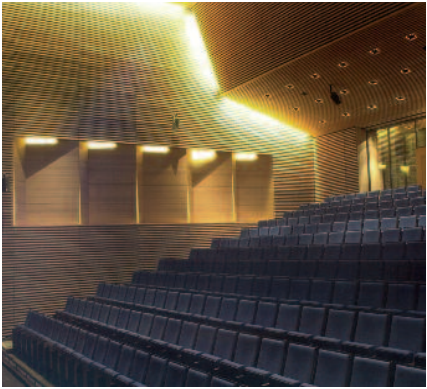
is given by a Jury of ESAO-Board-Members to the presenter of the most innovative oral presentation, based on the best rated abstracts and the presentation at the meeting.

AWARDS/THREE ESAO-POSTER AWARDS

are presented to the best posters. The decision is based on recommendations of the poster-session chairpersons for the best posters of their individual session and subsequently on the comparison of those by an international Jury.

GENERAL INFORMATION/CONGRESS VENUE

GENERAL INFORMATION/FLOOR PLAN

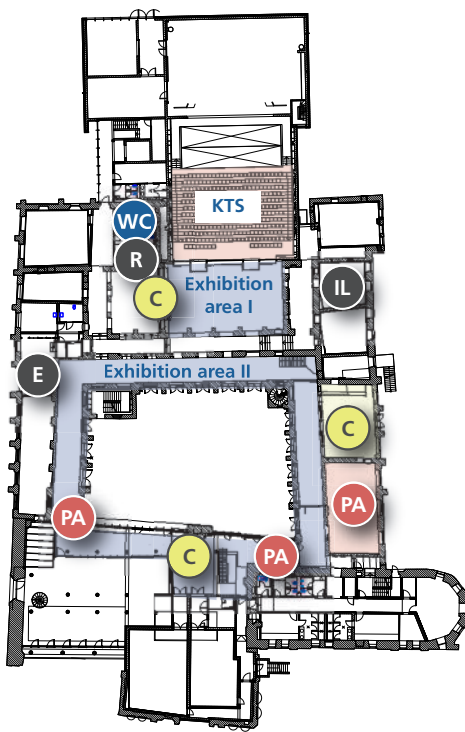


Academy of music and theatre

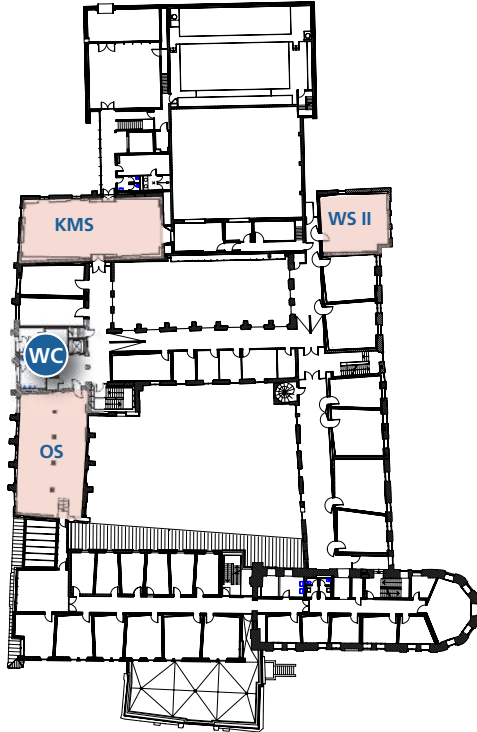
Congress venue is the Academy of Music and Theatre, Rostock. The academy is located in the "Katherinenstift", a formerly Franciscan monastery of the 13th century. Together with an additional new building (2001) the Katharinen-

stift offers a creative ambience with optimal work conditions. 450 Students from all over the world are educated here – we will have the opportunity to hear some of them during the social events.

1st floor

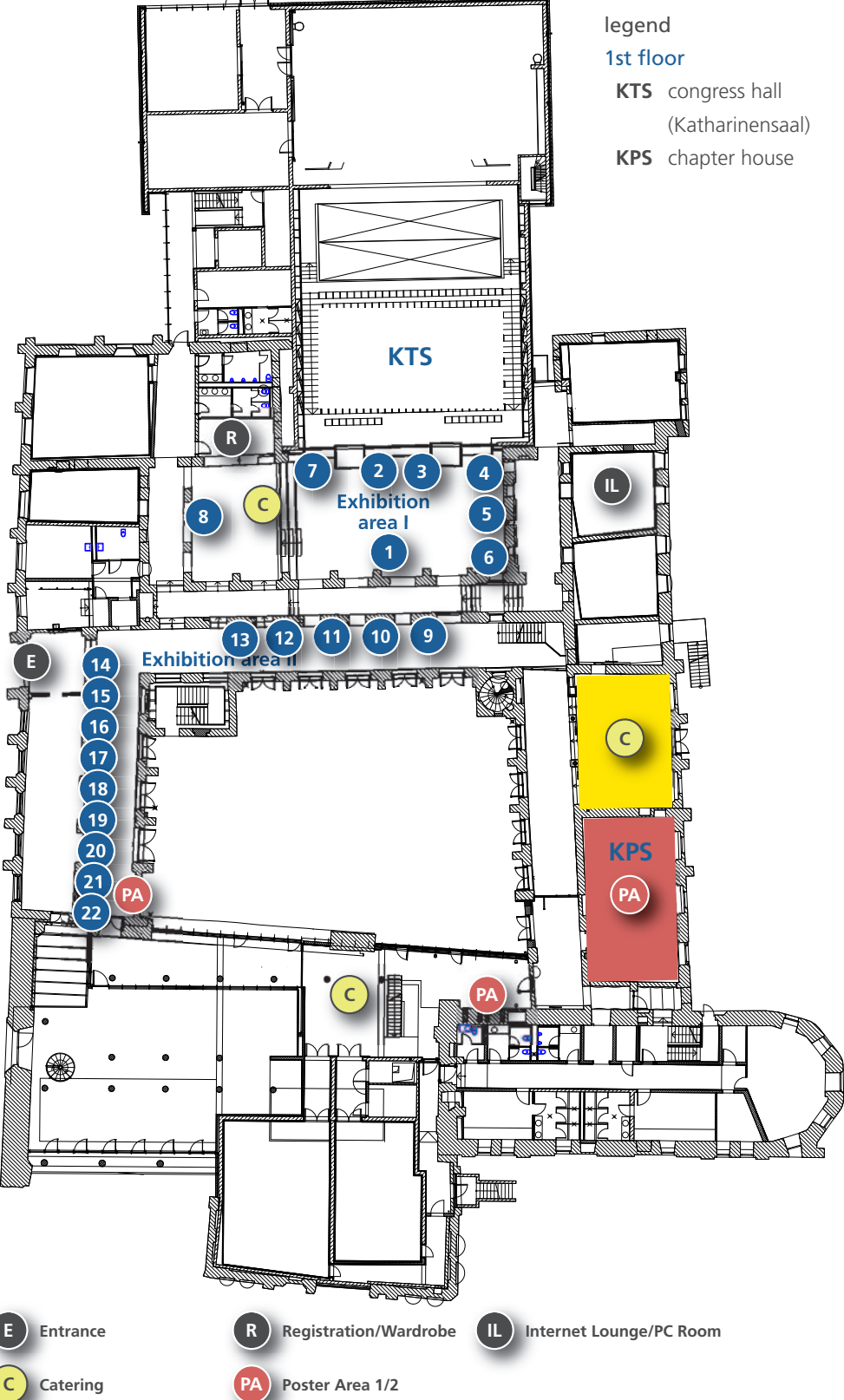


2nd floor



- legend
- 1st floor
- KTS congress hall (Katharinensaal)
- 2nd floor
- KMS chamber music hall
 - OS organ hall
 - WS II seminar room 2
- E Entrance
- R Registration/ Wardrobe
- IL Internet Lounge/PC Room
- WC Water closet
- C Catering
- PA Poster Area 1 / 2

1st floor



- legend
- 1st floor
- KTS congress hall (Katharinensaal)
 - KPS chapter house

EXHIBITORS

- 1 Fresenius
- 2 Gambro
- 3 Hepanet
- 4 Heartware
- 5 Terumo
- 6 Info Med
- 7 Albutec
- 8 NX Stage
- 9 CytoSorbents
- 10 Nikkiso
- 11 Miltenyi
- 12 Stada
- 13 Kaneka
- 14 Maquet
- 15 Edwards
- 16 SynCardia
- 17 Shire
- 18 Gore
- 19 Sanofi
- 21 HemoSep
- 22 Wichtig Editore

KEYNOTES/LIST OF CONFIRMED SPEAKERS

J. Altrichter/Rostock, Germany
R. Banares/Madrid, Spain
M. Bauer/Jena, Germany
R. David/Munich, Germany
K. Derfler/Vienna, Austria
F. Emmrich/Leipzig, Germany
D. Falkenhagen/Krems, Austria
K. Fukunaga/Nishinomiya, Japan
D. W. Grijpma/Enschede, NL
M. Harada- Shiba/Osaka, Japan
A. Haverich/Hannover, Germany
L. Herda/Greifswald, Germany
B. R. Jaeger/Muehlheim, Germany
R. Jalan/London, UK
U. Julius/Dresden, Germany
M. Jünger/ Greifswald, Germany
A. Kaminski/Rostock, Germany
J. Kielstein/Hannover, Germany
H. U. Kloer/Giessen, Germany
D. Kong/Tianjin, China
Y. Konttinen/Helsinki, Finland
B. Kreymann/Munich, Germany
A. Kribben/Essen, Germany
P. Lansberg/Amsterdam, NL
A. Lendlein/Teltow, Germany
P. Macchiarini/Stockholm, Sweden
E. Mancini/Bologna, Italy
J. Maerz/Heidelberg, Germany
C. Morath/Heidelberg, Germany

C. Morhuis/Bad Oeynhausen, Germany
H. Prophet/Rostock, Germany
W. Ramlow/Rostock, Germany
P. Reinke/Berlin, Germany
J. Ringel/Rostock, Germany
J. Rozga/Warsaw, Poland
S. Rummler/Jena, Germany
F. Saliba/Paris, France
E. Sandica/Bad Oeynhausen, Germany
K. Schenke-Layland/Tuebingen-Stuttgart, Germany
V. Schettler/Goettingen, Germany
K. R. Schmitt/Berlin, Germany
W. Sherman/New York, USA
K. Singbartl/Hershey, USA
S. Slomkowski/Kielce, Poland
K. Solem/Lund, Sweden
C. Stamm/Berlin, Germany
J. Stange/Rostock, Germany
C. Stefanutti/Rome, Italy
B. Stegmayr/Umea, Sweden
C. Steiner/Berlin, German
F. Stolze Larson/Copenhagen, Denmark
W. Szpirt/Copenhagen, Denmark
G. Tiedemann/Rostock, Germany
G. Tovar/Stuttgart, Germany
B. Walpoth/Genéva, Switzerland
A. Vogt/Munich, Germany
C. Yerebakan/Istanbul, Turkey

SESSION LISTS/LIST OF ORAL SESSIONS

Modelling for cardiovascular devices: Session W.1
Advances in Biomaterials: Session W.3
Cardiovascular Tissue Engineering: Session T.2
Cardiovascular Stem Cells: Session T.3
Cardiovascular Biomaterials and Perfusion: Session T.4
Apheresis in Cardiovascular Diseases II: Session T.6
Experimental Apheresis: Session T.7
Immune Apheresis: Session T.8
Cell Biomaterial Interaction: Session T.9
Assessment of Biomaterial Properties: Session T.10
Design and Synthesis of Biomaterials: Session T.11
Biomaterials and Tissue Engineering: Session T.12
Minimal invasive monitoring in kidney dialysis: Session T.13
Liver Support- whom to treat: Session F.2
Liver Support- Medical devices: Session F.3
Bioartificial Liver Support: Session F.4
Clinical application of cardiovascular devices: Session F.5
Cardiovascular In vivo experiments: Session F.6
IABP and Alternative Concepts: Session F.8
Clinical Dialysis 1: Session F.9
Clinical Dialysis 2: Session F.10
Renal Biomaterials and Device Technology: Session F.11
Tissue and Organ Engineering: Session F.12
Biochemical Evaluations: Session F.13
Albumin in CRD: Session S.1
Apheresis and Intensive Care: Session S.3
Cytapheresis in Inflammatory Bowel Disease: Session S.4
Cardiac Devices - Technical: Session S.5

SESSION LISTS/LIST OF POSTER SESSIONS

Cardiovascular: Poster Session 1
Apheresis: Poster Session 1
Liver: Poster Session 2
Clinical VAD studies and experiment: Poster Session 2
Valves: Poster Session 2
Dialysis: Poster Session 2
Cell biology for tissue engineering: Poster Session 2
Miscellaneous : Poster Session 2
Organ Repair and tissue enginnering: Poster Session 2

yESAO/PROGRAMME



SEPT. 24TH MONDAY

20:00 Meet together in Rostock: Bar “Hemmingway” (presumably)

SEPT. 25TH TUESDAY Academy of music and theatre

- 08:30-13:00 Focus on major organs, their support/replacement and their mutual interaction and interdependency
- 08:30-09:00 “Heart: From basic physiology to failure treatment with mechanical ventricular support”
S. Jacobs & T. Verbelen (Leuven, Belgium)
- 09:00-09:30 “Lung: Understanding organ function and treatment options for dysfunction”
R. Borchardt (Aachen, Germany)
- 09:30-10:00 Coffee break & discussion
- 10:00-10:30 “Kidney: Apheresis - a renal replacement spin off and its application”
H. Prophet (Rostock, Germany)
- 10:30-11:00 “Liver: Current regenerative strategies and future solutions for the liver”
N. Raschzok (Berlin, Germany)
- 11:00-11:30 Coffee break & discussion
- 11:30-12:00 “Blood as an organ: Composition, functions and interaction with [artificial]organs”
B. Krolitzki & M. Müller (Hannover, Germany)
- 12:00-13:00 Moderated panel discussion: „Searching for the links among the organs”
F. Moscato (Vienna, Austria)
- 13:00-14:00 Lunch

yESAO/PROGRAMME

- 14:00-16:30 Our scientific career in Europe
- 14:00-15:30 Stories from PhD and Post-doc careers:
Austria–M. Granegger; Belgium–S. Jacobs; England–G. Bruti; Germany–T. Kaufmann;
Italy–A. Di Molfetta; Poland–K. Zieliński; Scotland–L. Shedden; Spain–C. Amoros;
- 15:30-16:00 “University research: known opportunities & obstacles”
Prof. B. Vollmar (University of Rostock, Rostock, Germany)
- 16:00-16:30 “Research in Industry? Tips & tricks from an insider”
Dr. P. Rutherford (Baxter Healthcare SA. Zurich, Switzerland)
- 16:30-17:00 yESAO next steps

SEPT. 28TH FRIDAY

19:00 yESAO social evening: sailing school “Käpt'n Piet”



yESAO/SOCIAL PROGRAMM

Friday, 28th of Septembre 2012



The members of Young ESAO can have a relaxed evening at a special location for their own. „Käpt n Piet“ is a boat at the Port of Rostock. You find a lounge atmosphere at the water and can talk about your own topics.

OVERVIEW/WEDNESDAY/09/26 - THURSDAY/09/27

Wed. 09/26			Thu. 09/27 Focus Heart			
Room A/KTS Cardiovascular	Room B/KMS Apheresis	Room C/OS Biomaterials	Room A/KTS Cardiovascular	Room B/KMS Apheresis	Room C/OS Biomaterials	Room D/WS1 Others
			Session T. 1 CV Tissue Engineering I	Session T. 5 Apheresis in Cardiovascular Diseases I	Session T. 9 Cell Biomaterial Interaction	Session T. 13 Minimal invasive monitoring in kidney dialysis
Opening Session Welcome address, Wichtig Award, Bücherl Award			Session T. 2 CV Tissue Engineering II	Session T. 6 Apheresis in Cardiovascular Diseases II	Session T. 10 Assessment of Biomaterial Properties	Session T. 14 Extracorporeal Treatment of Sepsis
			Poster Session 1 P1- P29	Poster Session 1 P17- P20	Poster Session 1 P21- P29	
			Session T. 3 CV Stem cells	Session T. 7 Experimental Apheresis	Session T. 11 Design and Synthesis of Biomaterials	Session T. 15 Pediatric extra-corporeal perfusion and assist device
Corporate Member Symposium			Session T. 4 CV Biomat. & Perfusion	Session T. 8 Immune Apheresis	Session T. 12 Biomaterials and Tissue Engineering	Session T. 16 Horizon 2020; Future of biomedical engineering: EU funding

OVERVIEW/FRIDAY/09/28 - SATURDAY/09/29

Fri. 09/28 Focus Liver				Sat. 09/29 Focus Kidney			
Room A/KTS Liver	Room B/KMS Cardiovascular	Room C/OS Dialysis	Room D/WS1 Others	Room A/KTS Dialysis	Room B/KMS Apheresis	Room C/OS Cardiovascular	Room D/WS1 Others
Session F. 1 Liver Support- status quo	Session F. 5 Clinical longterm results with arti- ficial heart sup- port	Session F. 9 Clinical Dialysis 1	Session F. 13 Biochemical Evaluations	Session S. 1 Albumin in CRD	Session S. 3 Apheresis and Intensive Care	Session S. 5 Cardiac Devices - Technical	Session S. 7 Special Regula- tory Session Biologic devices combination products
Session F. 2 Liver Support- whom to treat	Session F. 6 CV In vivo experiments	Session F. 10 Clinical Dialysis 2	Session F. 14 Advances in cardiac regenera- tion	Session S. 2 Uremic Toxins EUTOX - Wor- king group	Session S. 4 Cytapheresis in Inflammatory Bowel Disease	Session S. 6 Working Group Cardiovascular	Session S. 8 Selected poster presentation
Poster Session 2 P30- P39	Poster Session 2 P40- P63	Poster Session 2 P64- P82	Poster Session 2 P83- P98 + B24	Conference Closing Session with Awards			
Session F. 3 Liver Support- Medical devices	Session F. 7 Industry Symposium "Heartware", Long term VAD- Therapy: Pushing the limits	Session F. 11 Renal Biomateri- als and Device Technology	Session F. 15 Apheresis in Cardiovascular Diseases III				
Session F. 4 Bioartificial Liver Support	Session F. 8 IABP and Alter- native Concepts	Session F. 12 Tissue and Organ Engineering	Session F. 16 Apheresis in Transplantation & Intensive Care				
ESAO - General assembly - Room A/KTS							

ROOM A/KTS - Katharinenhall		ROOM B/KMS - Chambermusichall		ROOM C/OS - Organhall	
Cardiovascular					
Opening Session					
Chair 1: G. Steinhoff, Germany Chair 2: W. Ramlow, Germany Chair 3: S. Mitzner, Germany					
begin					
01.00 - 01.05	Welcome address G. Steinhoff, Congress President ESAO 2012				
01.05 - 01.15	E. Reisinger, Dean, University Medicine Rostock				
01.15 - 01.30	H. Klinkmann, Honorary President ESAO				
01.30 - 01.50	H. Schima, President ESAO Wichtig Award				
01.50 - 02.20	Bücherl Award Keynote Lecture: Y. Konttinen, Helsinki, Finland: Cell interaction and cell communication				
02.20 - 02.30	Congress opening ceremony: G. Steinhoff				
Modelling for cardiovascular devices (Session W.1)		Apheresis Treatment - Geographical Particularities (Session W.2)		Advances in Biomaterials (Session W.3)	
Chair 1: A. Di Molfetta, Italy Chair 2: K. Affeld, Germany		Chair 1: U. Julius, Germany Chair 2: B. Jaeger, Germany		Chair 1: K. Sternberg, Germany Chair 2: C. Legallais, France	
02.30 - 02.45	O1 A computational model of cardiovascular system response to physical exercise L. Friesiello, Pisa, Italy	K2 International apheresis registry (WAA) update 2012 Keynote: B. Stegmayr, Umea, Sweden	K5 European regulation of combination products (ATMP) Keynote: G. Tiedemann, Rostock, Germany		
02.45 - 03.00	O2 What causes the pump flow changes observed in patients with rotary blood pumps driven at a constant speed? F. Moscato, Vienna, Austria				
03.00 - 03.15	O3 The artero-ventricular coupling in patients undergoing cardiac resynchronization therapy (CRT) A. Di Molfetta, Pisa, Italy	K3 The German lipoprotein apheresis registry - first experiences from the pilot phase Keynote: V. Schettler, Goettingen, Germany	O7 The system of nano-thin membrane with immobilized microorganisms for anti-tumor factor production L. Granicka, Warsaw, Poland		
03.15 - 03.30	O4 Influences of anticoagulants, activated clotting time, and blood-contact materials on thrombogenicity: Comparative study using fresh blood samples M. Nagai, Tokyo, Japan		O8 Nano- Coating with Titanium of Glutaraldehyde- Fixed Heart Valve Prostheses Enables a Reduced Immune Response and a Self-Seeing Within Circulation N. Guldner, Luebeck, Germany		
03.30 - 03.45	O5 Platelet deposition in a stagnation point flow J. Schaller, Berlin, Germany	K4 Actual situation of lipoprotein apheresis in Saxony Keynote: U. Julius, Dresden, Germany	O9 Manufacturing and characterization of double layer polymer scaffolds M. Saatchi, Teltow, Germany		
03.45 - 04.00	O6 Computer Simulation of Endoluminal Stent-Graft Migration (N.Filipovic) N. Filipovic, Kragujevac, Serbia		O10 A novel injectable bio-nanocomposite for bone tissue engineering applications S. Bagheri-Khoulenjani, Tehran, Iran		
Corporate Member Symposium					
From bench to bedside – developments to improve patient outcomes					
Chairman 1: Peter Rutherford, Baxter Healthcare SA Chairman 2: Gustav Steinhoff, Rostock, Germany					
4.00 - 04.30	What drives dialysis development? Ingrid Ledebo (Honoured Corporate Guest speaker)				
4.30 - 04.50	Is the obvious need for artificial organs a peril or a promise? Joerg Vienken, Fresenius Medical Care				
4.50 - 05.20	Ventricular Assist Devices (VADs) as a mass therapy: Can we learn from the development of hemodialysis? Ed Leonhard, Columbia University, New York, USA and Heinz Schima, Medical University Vienna, Austria				
5.20 - 05.40	Citrate in dialysis fluids Gunilla Grundström, Gambro Lundia AB				
5.40 - 6.00	Meeting patient needs – scientists and doctors working together Peter Rutherford, Baxter Healthcare SA				

ROOM A/KTS - Katharinenhall			ROOM B/KMS - Chambermusichall			ROOM C/OS - Organhall			ROOM D/WVS 1 - Seminare room			
Cardiovascular			Apheresis			Biomaterials			Others			
begin	CV Tissue Engineering I (Session T.1)			Apheresis in Cardiovascular Diseases I (Session T.5)			Cell Biomaterial Interaction (Session T.9)			Minimal invasive monitoring in kidney dialysis (Session T.13)		
	Chair 1: G. Steinhoff, Germany Chair 2: C. Stamm, Germany			Chair 1: P. Lansberg, Netherlands Chair 2: W. Ramlow, Germany			Chair 1: D. Pfeiffer, Austria Chair 2: F. Evertz, Germany			Chair 1: K. Solem, Sweden Chair 2: T. Roy, Germany		
	K6 Cardiac tissue engineering Keynote: A. Haverich, Hannover, Germany			K9 The genetic background of hypercholesterolemia Keynote: J. Maerz, Heidelberg, Germany			K18 Designing biomaterials for cardiovascular implants and bioartificial organs Keynote: A. Lendlein, Teltow, Germany			K22 Monitoring of physiological signals using a dialysis machine Affiliation: K. Solem, Research Department, Gam-bro AB, Lund, Sweden		
	09.00 - 09.15			K10 Do the cost of genetic screening programs outweigh the benefits? Experiences from the Dutch FH cascade screening project Keynote: P. Lansberg, Amsterdam, NL			O43 Characterization of adhesional and cytomchanical properties of single living cells + tissue slices T. Mueller, Berlin, Germany			O63 ON-LINE HEART RATE MONITORING USING PRESSURE SENSORS OF THE DIALYSIS MACHINE M. Holmer		
09.15 - 09.30						O44 Chemically modified nanostructures influencing mammalian cell adhesion M.S. Niepel, Halle, Germany			O64 A new method for blood pressure monitoring during dialysis treatment sessions – first clinical results A. Riemann, Rostock, Germany			
09.30 - 09.45			K8 Vascular tissue engineering Keynote: B. Walpoth, Genève, Switzerland Winner Wichtig Award S. de Valence, Switzerland			K11 Triglycerides – more harmful than generally thought? Keynote: HU Kloer, Giessen, Germany			O45 Nanoparticle reference materials for cytotoxicity assays without side effects S. Barcikowski, Essen, Germany			
09.45 - 10.00						O46 Effects of immobilized thiolated glycosaminoglycans on proetin adsorption and cell adhesion A. Koewitsch, Halle, Germany			O65 Extraction of diagnostic parameters during continuous real-time hemodynamic monitoring S. Andruschenko, Rostock, Germany			
coffee break (30min)												
begin	CV Tissue Engineering II (Session T.2)			Apheresis in Cardiovascular Diseases II (Session T.6)			Assessment of Biomaterial Properties (Session T.10)			Extracorporeal Treatment of Sepsis (Session T.14)		
	Chair 1: A. Haverich, Germany Chair 2: G. Faggian, Italy			Chair 1: A. Vogt, Germany Chair 2: V. Schettler, Germany			Chair 1: T. Groth, Germany Chair 2: A.T. Neffe, Germany			Chair 1: P. Honoré, Belgium Chair 2: S Mitzner, Germany		
	10.30 - 10.45			K12 Will new lipid lowering drugs make lipoprotein aphoresis neglectable? Keynote: A. Vogt, Munich, Germany			K19 Bone regeneration using poly(trimethylene carbonate) and biphasic calcium phosphate composites Keynote: D.W. Grijsma, Enschede, NL			K23 New insights into pathogenesis of sepsis Keynote: M. Bauer, Jena, Germany		
	10.45 - 11.00			O12 Experience with small intestinal submucosa as a regenerative vascular graft J.C. Briceño, Bogotá, Colombia								
	11.00 - 11.15			O13 Laser-based Cell Printing for Human Stem Cell Therapy of the Wounded Heart Keynote: A. Haverich, Hannover, Germany			O47 Influence of different physical and chemical conditions on magnesium degradation F. Evertz, Hannover, Germany			K24 Extracorporeal cell therapies of sepsis Keynote: J. Altrichter, Rostock, Germany		
11.15 - 11.30			O14 Subcutaneous cell delivery could form Biotube with artery-consisting cells in a short period R. Iwai, Osaka, Japan			O48 Does implantation site of drug-eluting polymers matter: subcutaneous vs. aortic? J.C. Tille, Genève, Switzerland						
11.30 - 11.45			O15 First report of application of biotube vascular grafts to off-pump CABG in an acute porcine model T. Watanabe, Osaka/Kyoto, Japan			K14 Immunoadsorption in idiopathic dilated cardiomyopathy - Where do we stand? Keynote: L. Herda, Greifswald, Germany			K25 Cytokine adsorption in sepsis Keynote: K. Singbartl, Hershey, USA			
11.45 - 12.00			O16 Spray- and laser-assisted intraoperative table-side heart valve tissue engineering C. Klopsch, Rostock, Germany			O50 Stability of freeze-dried modified liposome-encapsulated hemoglobin C. Borgognoni, Sao Paulo, Brazil						
12.00 - 12.15			O17 Fixation of porcine aortic valves for the use in mock circuits T. Schloeghofer, Vienna, Austria			O51 RGD coated poly(epsilon-caprolactone) grafts induced rapid endothelialization in rats and rabbits W. Zheng, Tianjin, China						
12.15 - 12.30			O18 A histological and mechanical study of aortic root support mesh after implantation in an ovine model P. Verbrugghe, Leuven, Belgium			O52 Contribution of osteoblasts and monocytes to the aseptic loosening of total joint replacement K. Lochner, Rostock, Germany						

ROOM A/KTS - Katharinenhall			ROOM B/KMS - Chambermusichall		ROOM C/OS - Organhall		ROOM D/WS 1 - Seminare room	
Cardiovascular			Cardiovascular		Biomaterials		Others	
CV Stem Cells (Session T.3)			Experimental Apheresis (Session T.7)		Design and Synthesis of Biomaterials (Session T.11)		Pediatric extracorporeal perfusion and assist device (Session T.15)	
Chair 1: W. Sherman, USA Chair 2: D. Kong, China			Chair 1: B. Stegmayr, Sweden Chair 2: A. Sikole, Macedonia		Chair 1: T. Groth, Germany Chair 2: D. Falkenhagen, Austria		Chair 1: A. Haverich, Germany Chair 2: E. Sandica, Germany	
begin								
02.00 - 02.15	O19 A new strategy to transform bone marrow stem-cells into venous endothelial cells F. Schlegel, Leipzig, Germany	O20 Intra-Myocardial Homing of Adult Stem Cells in a Goat Model: Glandular vs. Mesenchymal Stem Cells N.W. Guldner, Luebeck, Germany	O35 Mediator modulation from whole blood or monocytic cells stimulated with lipopolysaccharide reduces enothelial activation V. Weber, Krems, Austria		K20 How to design polymers for bioapplications? On the road to 3D organ construction Keynote: G. Tovar, Stuttgart, Germany		K27 Mechanical circulatory support in pediatric population - Bad Oeynhausen Experience Keynote: E. Sandica, Bad Oeynhausen, Germany	
02.15 - 02.30			O36 A safe protocol for regional citrate anticoagulation in membrane plasma exchange S. Buettner, Frankfurt a.M., Germany					
02.30 - 02.45	O21 Transplantation of parthenogenetic embryonic stem cells for treatment of myocardial infarction Y. Liu, Tianjin, China	O22 Identification of cardioprotective CD4+AT2R+ T cell subpopulation in response to ischemic heart injury A. Skorska, Rostock, Germany	O37 SCUF (slow continuous ultrafiltration) in the treatment of patients with cardiorenal syndrome - a single center experience W. Ries, Flensburg, Germany		O53 Control of mechanical properties in biopolymer-based biomaterials A.T. Neffe, Teltow, Germany		K 28 Berlin experience with pediatric assist device and heart transplantation Keynote: C. Stamm, Berlin, Germany	
02.45 - 03.00			O38 Application of an extracorporeal system in non-anaesthetized rats to proof different apheresis technologies in disease models S. Berg, Karlsburg, Germany		O54 Supramolecular Nano-Composites; a New Approach to Materials with Tunable Mechanical Properties M. Mehmanchi, Tehran, Iran			
03.00 - 03.15	O23 Influence of the stimulation of AT2R via its agonist Compound 21 on the characteristics of murine CD117+ bone marrow stem cells M. Ludwig, Rostock, Germany	O24 Therapeutically relevant characteristics of a ResQ 60 BMC-prepared cell product from human sternal bone marrow depend on stem cell content in vitro and in vivo C.A. Lux, Rostock, Germany	O39 The use of adsorbent technology in the treatment of SIRS/sepsis: A rodent model E. Coutts, Glasgow, UK		O55 Human bioartificial epidermal substitutes using biodegradable membranes S. Salerno, Rende, Italy		K29 Pediatric ECMO Keynote: C. Yerebakan, Istanbul, Turkey	
03.15 - 03.30			O40 Experience with a cytokine adsorption filter in a porcine model of cardiopulmonary bypass L. Shedden, Glasgow, UK		O56 Hemotech: novel blood substitute with pharmacologic features J. Simoni, Lubbock, USA			
coffee break (30min)								
CV Biomaterials and Perfusion (Session T.4)			Immune Apheresis (Session T.8)		Biomaterials and Tissue Engineering (Session T.12)		Horizon 2020; Future of biomedical engineering: EU funding (Session T.16)	
Chair 1: B. Walpoth, Austria Chair 2: J. Morshuis, Germany			Chair 1: W. Szpirt, Denmark Chair 2: H. Prophet, Germany		Chair 1: D.W. Grijpma, Netherland Chair 2: J. Rychly, Germany		Chair 1: B. Glasmacher	
begin								
04.00 - 04.15	O25 Gene targeting with adenoviral vectors conjugated magnetic nanobeads for cardiac regeneration Y. Zhang, Rostock, Germany	O26 Development of Microporous Covered Stents for Treating Cerebral Aneurysms Y. Nakayama, Osaka, Japan	K15 PLEX in vasculitis-status quo Keynote: W. Szpirt, Copenhagen, Denmark		K21 Polyester scaffolds with nano- and microparticle fillers with interfacial properties adaptable to environment Keynote: S. Slomkowski, Lodz, Poland		Roundtable discussion	
04.15 - 04.30								
04.30 - 04.45	O27 Clinical study of a novel ultrafiltration device for circuit salvage in high-risk CABG patients T. Gourlay,Glasgow, UK	O28 Development of Microporous Covered Stents for Treating Cerebral Aneurysms Y. Nakayama, Osaka, Japan	K16 Apheresis indications in dermatology Keynote: M. Jünger, Greifswald, Germany		O57 Endothelialization and biocompatibility of Polymer-based Nanocomposites A. Haverich, Hannover, Germany			
04.45 - 05.00	O28 Development of a vascular model with non-linear mechanical properties G. Gabel, Berlin, Germany	O29 New method for continuous blood pressure measurement. S. Weber, Berlin, Germany			O58 Inhibition of calcification of bovine pericardium after treatment with biopolymers, e-beam irradiation and in vitro endothelialization R. Polak, Sao Paulo, Brazil			
05.00 - 05.15	O30 New method for continuous blood pressure measurement. S. Weber, Berlin, Germany	O31 Numerical simulations of jet flow in the aorta W. Li, Berlin, Germany	K17 Treatment of transplant vasculopathy by lipoprotein apheresis Keynote: BR Jaeger, Muelheim, Germany		O59 Novel Autologous Heart Valve (Biovalve Stent) for Transcatheter Aortic Valve Implantation Y. Takewa, Kyoto, Japan			
05.15 - 05.30					O60 Novel matrices for intervertebral disc regeneration via human mesenchymal stem cells A. Schmiermund, Giessen, Germany			
05.30 - 05.45	O32 Development of hybrid inflow cannula for assist devices I. Yusuke, Tokyo, Japan	O33 Numerical simulations of jet flow in the aorta W. Li, Berlin, Germany	O41 Plasma exchange in glucocorticosteroid-unresponsive patients with clinically isolated syndrome J. Ehler, Rostock, Germany		O61 Intramedullary introduction of the material LitAr stimulates posttraumatic cell regeneration S.D. Litvinov, Samara, Russia			
05.45 - 06.00			O42 A women with a chylomicronemia syndrome complicated by acute pancreatitis treated with cDPPP. (W. Ries) W. Ries, Flensburg, Germany		O62 REGENERATION OF CANINE INFERIOR ALVEOLAR NERVE BY POLYGLYCOLIC ACID-COLLAGEN TUBE K. Shigeno, Kyoto, Japan			

ROOM A/KTS - Katharinenhall		ROOM B/KMS - Chambermusichall		ROOM C/OS - Organhall		ROOM D/WS 1 - Seminare room	
Liver		Cardiovascular		Dialysis		Others	
Liver Support - status quo (Session F.1)		Clinical longterm results with artificial heart support (Session F.5)		Clinical Dialysis 1 (Session F.9)		Biochemical Evaluations (Session F.13)	
Chair 1: J. Stange, Germany Chair 2: J. Vienken, Germany		Chair 1: G. Wieselthaler, USA Chair 2: S. Kyo, Japan		Chair 1: A. Sikole, Macedonia Chair 2: F. Grandi, Italy		Chair 1: B. Glasmacher, Germany Chair 2: J. Wojcicki, Poland	
begin	08.30 - 08.45	K30 Status on medical devices for liver support Keynote: F. Saliba, Paris, France	K39 Clinical longterm results with artificial heart support Keynote: M. Morshuis, Bad Oeynhausen, Germany	O94 Cartiac Troponin T after switch of hemodialysis patients from ow flux to high flux dialyzers A.E. Grzegorzewska, Poznan, Poland	O95 Spectrometric monitoring of dialysis dose (Kt/V) in dialysate: A comparison with urea kinetics T. Goeksel, Aachen, Germany	O118 The overall hemoglobin glycation rate constant healthy subjects might be lower than in patients with Typ 2 diabetes P. Ladyczynski,, Wasaw, Poland	K42 Molecular mechanisms of tissue protection Keynote: K.R. Schmitt, Berlin, Germany
	08.45 - 09.00						
	09.00 - 09.15	K31 Extracorporeal albumin dialysis – Trial report Keynote: R. Banares, Madrid, Spain	O76 The role of NT-proBNP in monitoring LVAD therapy S. Jacobs, Leuven, Belgium	O96 Basics of sodium modelling on chronic hemodialysis F. Grandi, Mirandola, Italy	O97 Dialysis efficiency with regard to middle molecular toxin reduction W. Kleinekofort, Wiesbaden, Germany		
	09.15 - 09.30		O77 Japanese Long-term durable implantable centrifugal blood pump EVAHEART Left Ventricular Assist System T. Nishinaka, Tokyo, Japan			"will be presented as poster only" Postersession P2	
	09.30 - 09.45	FP5A in Patients with Acute-On-Chronic Liver Failure - Trial report Keynote: A. Kribben, Essen, Germany	O78 Microvascular perfusion during minimal vs conventional extracorporeal circulation in CABG P. Donndorf, Rostock, Germany	O98 Basics of extracorporeal thermoregulation in chronic hemodialysis T. Roy, Bad Homburg, Germany	O120 Antioxidants improve cryopreservation of primate mesenchymal stem cells N.Hofmann, Hannover, Germany		
	09.45 - 10.00		O79 Variations in gene expression profiles during pulsatile and non-pulsatile CPB in elderly patients M. Dodonov, Verona, Italy	O99 Proximalization of the Arterial Inflow of Arteriovenous access: An Experimental Study U. Krueger, Berlin, Germany	O121 The Impact of the Ca- Binding Protein S100A1 in Muscular Cardiac Assist N.W. Guldner, Luebeck, Germany		
coffee break (30min)							
Liver Support - whom to treat (Session F.2)		CV In vivo experiments (Session F.6)		Clinical Dialysis 2 (Session F.10)		Advances in cardiac regeneration (Session F.14)	
begin		Chair 1: I. Sauer, Germany Chair 2: J. Rozga, Poland	Chair 1: H. Bergmeister, Austria Chair 2: P. Klapproth, Germany	Chair 1: n.n., Italy Chair 2: J. Fort Ros		Chair 1: G. Steinhoff, Germany Chair 2: B.E. Strauer, Germany	
10.30 - 10.45	K33 Liver support - Where do we need to go? Keynote: F. Stolze Larsen, Copenhagen, Denmark	O80 NeonatOx: An ECMO System for Use as Artificial Placenta J. Arens, Aachen, Germany	O81 Optimization of the coronary flow by a novel cardiac cycle-synchronized rotation control mode in a continuous-flow LVAD in chronic heart failure model M. Arakawa, Osaka, Japan	O100 Hemofiltration with endogenous reinfusion (hFR): viable therapy to enhance middle and large molecular size solute removal J. Fort Ros, Barcelona Spain	O101 Does the daily sodium intake influence mortality in dialysis patients? G. Severova- Andreevska, Skopje, Macedonia	K43 Biomaterials and gene therapy for myocardial regeneration Keynote: D. Kong, Tianjin, China	
10.45 - 11.00							
11.00 - 11.15	O66 Extracorporeal liver support in liver failure: parameters leading to treatment and risk factors for negative outcome – a single center experience C. Sponholz, Jena, Germany	O82 Pharmacologically induced hypothermia vs mild therapeutic hypothermia for myocardial protection during cardioplegic arrest A. Rungatscher, Verona, Italy	O83 Efficacy of continous flow mechanical circulatory support devices in a chronic ischemic heart failure bovine model M. Sobieski, Louisville, USA	O102 "Cancelled"		K44 Cardiac stem cell application technology Keynote: W. Sherman, New York, USA	
11.15 - 11.30	O67 Progress in the treatment of the liver failure. MARS: results, limits and proposal for improvement R. Marangoni, Como, Italy	O84 An Isolated Heart Setup to Investigate Diagnostic and Control Methods for Rotary Blood Pumps M. Granegger, Vienna, Austria	O85 Efficacy of continous flow mechanical circulatory support devices in a chronic ischemic heart failure bovine model M. Buller, Louisville, USA	O103 Impact on heparin dosage and compatibility using a citrate enriched dialysate in high-flux dialysis W. Paetow, Rostock, Germany	O104 Microembolies of air are deposited in the lungs of haemodialysis patients T. Braennstroern, Umea, Sweden	K45 Genetic control of cardiomyocyte differentiation and direct programming Keynote: R. David, Munich, Germany	
11.30 - 11.45	K34 Understanding acute on chronic liver failure Keynote: R. Jalan, London, UK	O86 Investigation of myocardial recovery in a chronic ischemic heart failure bovine model M. Buller, Louisville, USA	O87 Muscle Protection in Cardiac Bioassist: Demands, Experimental Results And Device Implementation P. Klapproth, Luebeck, Germany	O105 Acetate free Hemodialysis A. Amore, Torino, Italy	O106 HOW IMPORTANT IS THE DIALSATE FLOW DURING HEMODIALYSIS TREATMENTS P. Ahrenholz, Rostock, Germany	K46 Myocardial regeneration in cardiac surgery Keynote: A. Kaminski, Rostock, Germany	
11.45 - 12.00							
12.00 - 12.15	O68 Comparison of extracorporeal liver support systems MARS and SPAD in decompensated liver failure – preliminary results of a prospective cross-over study A. Kortgen, Jena, Germany	O86 Investigation of myocardial recovery in a chronic ischemic heart failure bovine model M. Buller, Louisville, USA	O87 Development of a Minimally Invasive Implantable Para-aortic Blood Pump P.J. Lu, Tainan, Taiwan	O106 HOW IMPORTANT IS THE DIALSATE FLOW DURING HEMODIALYSIS TREATMENTS P. Ahrenholz, Rostock, Germany	O107 Clotting factors in patients with end stage renal disease P. Dejanov, Skopje, Macedonia		
12.15 - 12.30	O69 Liver support in cardiac surgery M. Engel, Bad Oeynhausen, Germany						

ROOM A/KTS - Katharinenhall			ROOM B/KMS - Chambermusichall		ROOM C/OS - Organhall		ROOM D/WS 1 - Seminar room	
Liver			Cardiovascular		Dialyses		Others	
begin	Liver Support - Medical devices (Session F.3) Chair 1: B. Kreymann, Germany Chair 2: S. Mitzner, Germany		Industry Symposium “Heartware”, Long term VAD-Therapy: Pushing the limits (Session F.7) Chair 1: H. Schima, Austria Chair 2: B. Meyns, Belgium		Renal Biomaterials and Device Technology (Session F.11) Chair 1: E. Mancini, Italy Chair 2: P. Ahrenholz		Apheresis in Cardiovascular Diseases III (Session F.15) Chair 1: C. Stefanutti, Italy Chair 2: H. U. Kloer, Germany	
	02.00 - 02.30	K35 Liver New Development – Medical Devices Keynote: J. Stange, Rostock, Germany	The MVAD – a new platform for long term circulatory support J. LaRose, Miami, USA		K40 New technologies in the treatment of acute renal failure Keynote: E. Mancini, Bologna, Italy		K47 Lipoprotein Apheresis – which patients are candidates with respect to German regulation? Keynote: W. Ramlow, Rostock, Germany	
	02.30 - 02.45	O70 Impaired albumin binding capacity in advanced liver disease: relation to liver dysfunction and oxidative albumin damage R.E. Stauber, Graz, Austria	Advanced cardiovascular diagnostics from pump parameters only F. Moscato, Vienna, Austria		O108 Refilling rate differences in patients undergoing horter and longer hemodialysis sessions M. Pietribiasi, Warsaw, Poland		K48 Experiences from the Italian LDL-Apheresis Multicenter study working group Keynote: C. Stefanutti, Rome, Italy	
02.45 - 03.00	O71 Human nonmercaptalbumin-2 (HNA2) is a better predictor of short-term mortality than MELD in chronic liver failure R.E. Stauber, Graz, Austria			O109 Improvement of cardiovascular stability during dialysis with HFR Aequilibrium: AIMS Study G. Donati, Bologna, Italy				
	K36 A new albumin dialysis device for liver support Keynote: B. Kreymann, Munich, Germany	Guiding and managing large numbers of long term ambulatory VAD-patients D. Roefe, Bad Oeynhausen, Germany		O110 Benchmark of single-use ultrafilter in HDF applications G. Glorieux, Gent, Belgium		K49 The role of apheresis treatment in familial hypercholesterolemia (FH) - long-term experiences from Japan Keynote: M. Harada-Shiba, Osaka, Japan		
				O111 Design against haemolysis in the AFE SYSTEM™ Pump G. Tansley, Gold Coast, Australia				
coffee break (30min)								
begin	Bioartificial Liver Support (Session F.4) Chair 1: B. Vollmar, Germany Chair 2: C. Legallais, France		IABP and Alternative Concepts (Session F.8) Chair 1: A. Khir, UK Chair 2: A. Kaminski, Germany		Tissue and Organ Engineering (Session F.12) Chair 1: D. Falkenhagen, Austria Chair 2: J. Kielstein, Germany		Apheresis in Transplantation and Intensive Care (Session F.16) Chair 1: K. Derfler, Austria Chair 2: P. Reinke, Germany	
	04.00 - 04.30	K37 Future perspectives of cell therapy Keynote: F. Emmrich, Leipzig, Germany	O88 Fluid structure interaction simulations of a total artificial heart: useful as a design tool? S.J. Sonntag, Aachen, Germany		K41 Applying technology for tissue engineering Keynote: K. Schenke-Layland, Tuebingen-Stuttgart, Germany		K50 Balancing the immune system - a challenge in renal transplantation Keynote: P. Reinke	
	04.00 - 04.15		O89 Chronic intermittent mechanical support: an in vitro report A.Z. Khudzari, Kuala Lumpur, Malaysia					
04.30 - 04.45	O72 Neohybrid liver graft - a novel concept of in vivo tissue-engineering S. Rohn, Berlin, Germany	O90 Validation of a computational model for studying the combined effect of upstream and downstream mechanical properties on the performance of the intra-aortic balloon (IAB) (G. Bruti) B. Bruti, Uxbridge, UK		O112 Cellular repopulation in a whole-kidney decellularized matrix via antegrade and retrograde routes Y. Sato, Kawasaki, Japan		K51 The role of apheresis treatment in renal transplantation Keynote: K. Derfler, Vienna, Austria		
04.45 - 05.00	O73 Towards a clinical bioartificial liver machine based on human liver cells C. Selden, London, UK	O91 Development of a new extra aortic counter pulsation device using shape memory alloy fibers M. Hashem, Sendai, Japan		O113 Novel artificial kidney concept: mixed matrix membranes combining diffusion and adsorption in 1 step M. Tijink, Enschede, NL				
05.00 - 05.15	O74 Micro RNAs in liver regeneration: the mysterious MIR-352 L. Lisboa, Berlin, Germany	O92 Cardiac supporting device using artificial rubber muscle Y. Saito, Hiroasaki, Japan		O114 Heparin infusion affects RANKL / OPG system in hemodialysis patients: unfractionated heparin vs LMWH I. Capelli, Bologna, Italy		K52 Apheresis in ABO-incompatible renal transplantation - the Heidelberg experience Keynote: C. Morath, Heidelberg, Germany		
05.15 - 05.30	O75 Micron-sized iron oxide particles for detection and loco-regional stimulation of transplanted liver cells A. Leder, Berlin, Germany	O93 A new method to evaluate the high variability in ballistography for contact-less recording S. Herrmann, Dublin, Ireland		O115 Microvesicles derived from endothelial progenitor cells protect kidneys and pancreatic islets from ischemia-reperfusion injury F. Figliolini, Torino, Italy				
05.30 - 06.00	K38 Critical outlook on a new generation of liver support systems - do we still need cells? Keynote: J.Rozga, Warsaw, Poland	Syncardia Total Artificial Heart M. Morshuis, Bad Oeynhausen, Germany		O116 Regional citrate anticoagulation limits sepsis-associated microvascular injury through the inhibition of release of microvesicles from activated leukocytes and platelets V. Cantaluppi, Torino, Italy		K53 ABO incompatible liver transplantation Keynote: S. Rummier, Jena, Germany		
05.45 - 06.00				O117 Impact of KIR and KIR-Ligand compatibility on long-teram renal transplant outcome. M. Cappuccilli, Bologna, Italy				

ROOM A/KTS - Katharinenhall		ROOM B/KMS - Chambermusichall		ROOM C/OS - Organhall		ROOM D/WS 1 - Seminar room	
Dialyses		Apheresis		Cardiovascular		Others	
Albumin in CRD (Session S.1)		Apheresis and Intensive Care (Session S.3)		Cardiac Devices - Technical (Session S.5)		Special Regulatory Session: Biologic devices combination products (Session S.7)	
begin	Chair 1: R. Vanholder, Belgium Chair 2: R. E. Winkler	Chair 1: S. Stracke, Germany Chair 2: M. Bauer, Germany		Chair 1: T. Mazusawa, Japan Chair 2: U. Steinseifer, Germany		Chair 1: J. Altrichter, Germany Chair 2: T. Schmitz-Rode, Germany	
	0122 A pilot study to investigate the removal of poorly removed uraemic toxins from post-haemodialysis patient blood samples using a prototype adsorbent monolith device S.R. Sandemann, Brighton, UK	K54 Newly developed organ assist technology in multiorgan failure Keynote: D. Falkenhagen, Krems, Austria		"Organ Music" Prof. G. Steinhoff, Rostock, Germany		Regulatory aspects of biologic-device combination products F. Baumgarten, EUROCAT Institute for Certification and Testing GmbH, Darmstadt, Germany	
	08.45 - 09.00	K55 Plasma exchange or immunoadsorption in shigatoxin producing E. coli induced hemolytic uremic syndrome (STEC-HUS)? Keynote: J. Kielstein, Hannover, Germany		O128 Transapical concentric double lumen cannula for ventricular support J.F. Cañizo, Madrid, Spain		Terminal sterilization of biofunctionalized surfaces – a pre-requisite for transferring ideas to medicine W. Altenhofen, LEUKOCARE AG, München	
08.50 - 09.10	0123 Kinetics of protein-bound solutes during hemodialysis S. Eloot, Gent, Belgium			O129 Novel long term ventricular assist device for mild heart disease patients (JSAO presentation) Masuzawa, Hitachi, Japan		Industrial perspective on BDCP J. Vienken, Fresenius Medical Care, Bad Homburg	
09.00 - 09.15	Albumin Binding Capacity in Chronic Kidney Disease S. Klammt, Rostock, Germany			O130 The helical flo pump and the helical flow total artificial heart (JSAO presentation) Y. Abe, Tokyo, Japan		University perspective on BDCP S. Jockenhövel, Aachen	
09.10 - 09.30							
09.15 - 09.30							
09.30 - 09.45	Albumin Dialysis in Chronic Kidney Disease S. Mitzner, Rostock, Germany	O124 Protein A immunoadsorption in severe Escherichia coli 0104:H4 – associated hemolytic uremic syndrome with neurological complications S. Stracke, Greifswald, Germany					
09.45 - 10.00		O125 Removal of free light chains (FLC) in multiple myeloma with renal failure on high-cut-off membranes F. Lopot, Prague, Czech Republic		O131 Miniaturization and Preclinical Testing of an Implantable Ventricular Assist Device A. Arndt, Berlin, Germany		Discussion	
09.50 - 10.00							
coffee break (30min)							

POSTERSESION/POSTERSESSION P1

Poster Session 1 (P1-P16, P53, P55)

Chair 1: N.W. Guldner, Germany (P1-P8)
Chair 2: T. Gourlay, UK (P9-P16)

P1 Experimental acute and chronic myocardial ischaemia assessed by micro-PET
B. Walpoth, Genève, Switzerland
P2 Computational analysis of retinal artery occlusion
T. Kaufmann, Aachen, Germany
P3 Computational Analysis of Pathological Blood Flow Conditions in Stenosed Arteries and Aneurysms
M. Behbahani, Aachen, Germany
P4 The use of a perfusion simulator: evaluation of accuracy and repeatability in extracorporeal circulation
A. Tokumine, Higashiōsaka, Japan
P5 Analysis of sternal force distribution during median sternotomy on corpses
P. Aigner, Vienna, Austria
P6 Histopathological gradation of aortic wall changes in adults with severe aortic stenosis
M. Labudovic Borovic, Belgrade, Serbia
P7 Biotube application to the arteriovenous shunt
M. Yamanami, Osaka, Japan
P8 Adhesion strength of endothelial cells on acellular bovine pericardiac tissue engineering scaffolds
E. Pagoulatou, Patras, Greece
P9 Surface Morphology Dependency of Tissue Formation in In Body Tissue Architecture Technology
T. Ichikawa, Osaka, Japan
P10 Massive In Body Architecture of Robust “Biotube” Vascular Grafts by Dye-Eluting Molds
T. Tsujinaka, Osaka, Japan

P11 Devitalized xenogenic vascular grafts transplantation: 1-year follow-up
D.V. Byzow, Kharkov, Ukraine
P12 Rapid preparation of biotube vascular grafts by using eosin-eluting molds
T. Watanabe, Kyoto, Japan
P13 3D- printing system for submerged deposition of cell loaded hydrogels
A. Blaeser, Aachen, Germany
P14 A decellularized equine pericardial patch implanted into the systemic circulation
P. Dohmen, Berlin, Germany
P15 In Vivo-Tissue Engineered Autologous Aortic Valved Conduits (BIOVALVES type VII): Preparation and Evaluation
Y. Nakayama, Osaka, Japan
P16 Effect of coils on intraaneurysmal flow
L. Goubergrits, Berlin, Germany

Poster Session 1 (P17-P20)

Chair 1: W. Szpirt, Denmark
Chair 2: H. Prophet, Germany

P17 Therapeutic plasma exchange as rescue therapy in severe sepsis and septic shock
J. Hadem, Hannover, Germany
P18 Investigation of dali-sorption of the lipoproteins binding ability using method of fluorescence dyes
A. Korolik, Minsk, Belarus
P19 Monocytic THP-1 cells, monocytes and peripheral blood mononuclear cells differ in cytokine secretion upon stumulation with lipopolysaccharide
V. Weber, Krems, Austria
P20 Immunoadsorbent for selective removal IgG from plasma in system lupus erythematosus
V.V. Kirkovski, Minsk, Belarus

Poster Session 1 (P21-P29)

Chair 1: A. Lendlein, Germany (P21-P25) /
Chair 2: D. Kong, China (P26-P29)

P21 Influence of different surface treatment of Poly (N-Butyl Acrylate) networks on L929 mouse fibroblasts adhesion and viability
S. Braune, Teltow, Germany
P22 Promotion of bone repairing by use of novel collagen scaffold in rabbit skull defect model
M. Wakatsuki, Kyoto, Japan
P23 Autologous Vena Cava Tissue for Right Ventricular Outflow Tract Reconstruction in a Sheep Model
C. Schmidtke, Luebeck, Germany
P24 Modulating cell adhesion on pH dependent multilayers of natural & semi-synthetic glycosaminoglycans
N. Aggarwal, Halle, Germany
P26 DEVELOPMENT OF BIOMATERIALS FROM HUMAN AMNIOTIC MEMBRANE MATRIX
K.A.T. Carvalho, Curitiba-Paraná, Brazil
P27 Synthesis of Contact Lenses Containing Polyhedral Oligomeric Silsesquioxanes
M. Hanifeh, Tehran, Iran
P28 On the problems connected with the bone prothesis
P. Agati, Bologna, Italy
P29 Gender specific outcomes in polimer free compared to polimer based drug eluting stents
T. Trajceski, Prishtina, Kosovo
Regeneration of canine inferior alveolar nerve by polyglycolic acid-collagen tube
K. Shigeno, Kyoto, Japan

POSTERSESION/POSTERSESSION P2

Poster Session 2

Chair 1: R. Banares, Spain
Chair 2: A. Kribben, Germany

P30 Neogenesis of liver struactical units after cotransplantation of liver and bone marrow cells as a basis for prolonged recovery of damaged liver
M. Shagidulin, Moscow, Russia
P31 Impact of Albumin Dialysis on Albumin Binding Function - an in vivo study
M. Kretschmann, Rostock, Germany
P32 Efficient differentiation of human induced pluripotent stem cells to definitive endoderm on functionalized nanofibers
M. Kazemi-Ashtiani, Tehran, Iran
P33 Prospective validation of cross organ serum protein biomarkers – Initial results with CXCL9 and CD44 for diagnosis of acute liver rejection
K.A. Prabowo, Berlin, Germany
P34 Association of OASL gene with chronic HCV therapy response to pegylated interferon-α and ribavirin
S. Kiprijanovska, Skopje, Macedonia
P35 Characterization of liver cell culture in micro-fluidic biochips by a real time imaging analysis
M. Naudot, Compiègne, France

P36 Experience of application of Prometheus liver support therapy on patients with hepatorenal syndrome
Y. Santotski, Minsk, Belarus
P37 Comparison of Extracorporeal Liver Assist System (ELAD®) vs. Standard Care in Treating Chinese Patients with Acute-on-Chronic Liver Failure
Z. Duan, Beijing, China
P38 Hepatocyte toxicity of industrial stabilizers in commercial human serum albumin
M. Stiffel, Rostock, Germany
P39 Impact of Albumin Dialysis on Albumin Binding Function - an in vitro study
L. Borufka, Rostock, Germany

Poster Session 2
Clinical VAD studies and experiment

Chair 1: B. Walpoth, Switzerland (P40-P45)
Chair 2: C. Klopsch, Germany (P46-P50)

P40 Comparative analysis of GME activity in 3 circuit designs during pulsatile and non-pulsatile CPB
A. Milano, Verona, Italy
P41 Does age matter in the venoarterial extracorporeal life supports, which are irrelevant to major operation?
T. Kim, Seoul, South-Korea

P42 Evaluation of platelet aggregation in patients supported by centrifugal continuous flow left ventricular assist device
K. Suzuki, Tokyo, Japan
P43 Extracorporeal Membrane Oyxgenation for the Treatment of Acute Respiratory Failure due to Respiratory Syncytial Virus after Congenital Heart Surgery
C. Yerebakan, Istanbul, Turkey
P44 Resuscitation of Non-postcardiotomy Cardiogenic Shock with ECMO
W. Meng-Yu, Gueishan, Taiwan
P45 Oxygenated shunting from right to left: a minimizes atrio-atrial ECMO for midterm lung assistance
A. Goetzenich, Aachen, Germany
P46 First steps in muscle perfusion monitoring for biomechanical cardiac assist methods
P. R. J. Margaritoff, Hamburg, Germany
P47 A Transcutaneous Energy Transmission System Delivering up to 45 Watt to an Artificial Heart
C. Sommer, Vienna, Austria
P48 Preliminary study on the development of artificial papillary muscle using shape memory alloy fibre
Y. Shiraishi, Sendai, Japan
P49 Investigation of the initial phase of thrombus generation
K. Affeld, Berlin, Germany

P50 Effect of resistance, compliance and position on the performance of the intra-aortic balloon (IAB): an experimental study
G. Bruti, Uxbridge, UK

Valves

Chairman 1: U. Steinseifer, Germany
Chairman 2: P. Donndorf, Germany

P51 Influence of the bulging sinus of the aorta on the flow and leaflet movement of the aortic valve
T. Akutsu, Yokohama, Japan
P52 Hybrid solution for aortic valves examination
M. Darowski, Warsaw, Poland
P53 Optimal implantation of a mitral mechanical heart valve
D. Berca, Tel Aviv, Israel
P54 Investigation of adjustable parameters for the optimization of polyurethane heart valve kinematics and durability
J. Roggenkamp, Aachen, Germany
P55 Numerical investigation of the hemodynamics of transcatheter aortic valves
Y. Brener, Tel Aviv, Israel
P56 A new generation of transcatheter heart valves
B. Rahmani, London, UK

Modeling and pump control

Chair 1: B.Meyns, Belgium (P56-P59)
Chair 2: J. Grosshauser, Germany (P60-P63)

P57 Development of a novel drive mode for preventing aortic insufficiency during continuous-flow LVAD support by electrocardiogram-synchronized rotational speed change
K. Kishimoto, Osaka, Japan
P58 Cardiovascular Simulator as a tool for remote training application
K. Zielinski, Warsaw, Poland
P59 Influence of arterial compliance on baroreflex activity during IABP assistance: a hybrid model study
L. Fresiello, Rome, Italy
P60 Pump and circulatory parameters interactions during continuous flow pump assistance. Model study
G. Ferrari, Rome, Italy
P61 Aortic and mitral regurgitation changes during parallel or serial LVAD assistance
A. DiMolfetta, Rome, Italy
P62 A numerical model of the coronary circulation to evaluate the fractional flow reserve (FFR)
A. DiMolfetta, Rome, Italy
P63 Left-right flow balance investigation of a total artificial heart
M. Laumen, Aachen, Germany
P64 Safety Control applied to a Ventricular Assist Device
A. Cavalheiro, Sao Paulo, Brazil

Poster Session 2 Dialysis

Chair 1: I. Capelli, Italy (P65-70)
Chair 2: S. Stracke, Germany (P71-77)
Chair 3: A. Führer, Germany (P78-83)

P65 The effect of high-flux hemodialysis on hemoglobin concentration in patients on dialysis
A. Sikole, Skopje, Macedonia

P66 Survival of dialysis patients in relation to malnutrition in inflammation complex syndrome
A. Sikole, Skopje, Macedonia
P67 Dialysis complications contribute to worsening disability
L. Trajceska, Skopje, Macedonia
P68 The ontology of fluid and solute transport process in peritoneal dialysis
T. Podsiadly-Marczykowska, Warsaw, Poland
P69 Skin Autofluorescence, a Measure of Cumulative Metabolic stress and Advanced Glycation End Products, shows seasonal variations in haemodialysis patients in northern Sweden
B. Ramsauer, Umea, Sweden
P70 Percutaneous nephrostomy as a treatment of obstructive nephropathy
G. Severova-Andreevska, Skopje, Macedonia
P71 Clinical outcome of transfusion processed by ultrafiltration in patients undergoing coronary bypass
T. Gourlay, Glasgow, UK
P72 Early detection of venous stenosis in arteriovenous fistula
V. Pusevski, Skopje, Macedonia
P73 Impact of the degree of residual stenosis after balloon-angioplasty in arteriovenous fistulae
I. Decorato, Compiègne, France
P74 Effect of associated complex cardiac disease pathology on postoperative renal function deterioration in patients undergoing aortic valve surgery
R.M. Dandale, Verona, Italy
P75 Health related quality of life in HD patients with different daily intake of calcium carbonate
S. Gelev, Skopje, Macedonia
P76 Peritonitis rate and clinical outcomes of peritoneal dialysis - related peritonitis
P. Dzekova-Vidimliski, Skopje, Macedonia
P77 Clinical effectiveness of vaccination against influenza in dialysis patients
L. Trajceska, Skopje, Macedonia
P78 Impact of Genistein, Prednisolone and Hyaluronan on glucose transport across peritoneum in vitro.
T. Grzelak, Poznan, Poland
P79 KDIGO suggestions for serum MBD markers and health related quality of life in HD patients
S. Gelev, Skopje, Macedonia
P80 Comparison of two laboratory assays for PTH determination in hemodialysis patients
G. Donati, Bologna, Italy
P81 Sequential Peritoneal Equilibration Test (sPET): a new method to evaluate peritoneal transport
M. Galach, Warsaw, Poland
P82 Incidence of late deep venous thrombosis in transplatn patient: a singel center evaluation
P. Todeschini, Bologna, Italy
P83 Citrate dialysate is useful to reduce the extent of anticoagulation in haemodialysis
B. Stegmayr, Umea, Sweden

Poster Session 2

Chair 1: K. Schenke-Layland, Germany (P83-P86)
Chair 2: B. Vollmar, Germany (P87-P93)
Chair 3: N. M. Neves, Portugal (P94-P101)

CELL BIOLOGY FOR TISSUE ENGINEERING
P84 Effects of hypothermia on RBM3 and CIRP cold-shock proteins expression in murine organotypic hippocampal slice cultures
G. Tong, Berlin, Germany
P85 Hypothermia reduces inflammation in a co-culture model of neuronal and microglial cells
J. Mochner, Berlin, Germany
P86 Moderate hypothermia: minimizing impairment in HL-1 cardiomyocytes following ischemia
C. Walker, Berlin, Germany
P87 Hypothermia after hypoxia is neuroprotective possibly via upregulation of cold shock protein RBM3
L.M. Rosenthal, Berlin, Germany

MISCELLANEOUS

P88 Improvement of mechanical property of gelatin/chitosan scaffold using TIPS with a membrane top layer
M. Pezeshki, Tehran, Iran
P89 Transepidermal Water Loss at Palm and Wrist in Patients with Carpal Tunnel Syndrome
P. Foltynski, Warsaw, Poland

P90 Validation of the added compliance and resistance method for lung function tests on a population of artificial patients
K.J. Palko/K. Zielinski, Warsaw, Poland
P92 The Impacts of revised act on organ transplantation on patients and the public
H. Nakada, Osaka, Japan
P93 Molecular hydrogels of anti-cancer drugs for chemotherapy
H. Wang, Tianjin, China

ORGAN REPAIR AND TISSUE ENGINNERING
P94 Optimal geometry of convection-enhanced HFMBs for bone tissue engineering
I.E. DeNapoli, Rende, Italy
P95 A model-based strategy for osteogenic cell culture under controlled oxygen concentration in hollow fibre membrane bioreactors for bone tissue engineering
G. Catapano, Rende, Italy
P96 The experiment of the bone regeneration in the canine frontale
M. Kaneko, Kyoto, Japan
P97 Articial trachea and in situ tissue engineering: twelve year-follow up in canine model
T. Nakamura, Kyoto, Japan

P98 Platelet rich plasma enhances vascularization and organ repair in experimental allergic dermatitis
V. Zaporozhan, Odessa, Ukraine
P99 Optimization of the HUVEC cells culture
A. Ciechanowska, Poland
P100 Novel enzymes for hMSC detachment in large scale expansion process
K. Cierpka
P101 Incidence of late deep venous thrombosis in renal transplant patient: a single center evaluation
P. Todeschini
O119 Interaction between Albumin and the Uremic Toxins Indoxyl Sulphate & P-Cresyl Sulphate
Y. Zheng, Brighton, UK

SOCIAL EVENTS/GET TOGETHER
Wednesday, 26th of September 2012



The Get Together of ESAO 2012 will be at the port with an awesome view over the roofes of Rostock. You can watch boats and sailors passing and enjoy your stay. The Restaurant and Bar „SILO 4“ presentes you a special buffet and drinks.

SOCIAL EVENTS/PRESIDENTIAL RECEPTION
Friday, 28th of Septembre 2012



Shuttleservice:
from congress venue entrance
19:20 Uhr for yESAO,
19.50 Uhr | 20.10 Uhr | 20.30 Uhr |
20.50 Uhr | 21.10 Uhr;

from Darwinium
22.30 | 22.50 | 23.10 | 23.30 | 23.50
| 0.10 Uhr

At 7.30 pm start busses to bring you to a very new event-location at the Rostock Zoo. The „Darwineum“ shows the evolution in a very impressive kind. You can have facinating insights in the world of Gorillas and Orang utans. We will combine this special atmosphere for you with a dinner. From 10.30 pm all 20 minutes the bus- ses bring you back into the city.

The tickets for the evening costs for in- dustrial members 70,- € and for con- gress participants 30,- €. Keynotespeakers are free.

SOCIAL EVENTS/CONGRESS DINNER
Thursday, 27th of September 2012



On Thursday evening you´ll stay at the University of Music and Drama. The Portrestaurant „Carlo 615“ will create a dinner for you. The congress area is a wonderful accomodation for having a surprising evening with artists and mu- sicians around. this very special stage, starting 9 pm. Some more surprises are waiting for you. Stay curious about it.

Prof. Dr. Steinhoff and his Jazzband „Jazz at Heart“ will give a concert at



GENERAL INFORMATION/WELCOME TO HANSEATIC CITY ROSTOCK



A medieval city centre, a river flowing into the Baltic Sea, a tranquil fishing village, for picturesque seaside resorts, several shipyards and harbours, one of the best sailing patches in the world, Northern Europe's oldest university and Germany's largest city forest- all this is Rostock.

Rostock is almost 800 years old and one of the first Hanseatic Cities. Northern Gothic Brickwork decorates the historical center of the city and harmonizes with new elements. Ferries from Scandinavia and the Baltic States arrive here. Today Rostock unites tradition and mo-

dernism. One of many attractions is the New Market with the City Hall and the church St. Marien, the shopping mile „Kröpeliner Straße“ with gabled houses from different ages and the city harbor at the banks of the Warnow with old and modern sailing ships. Rostock does not only offer architecture but also theatre and cultural experience, summer theatre in a traditional shipyard and unique museums.

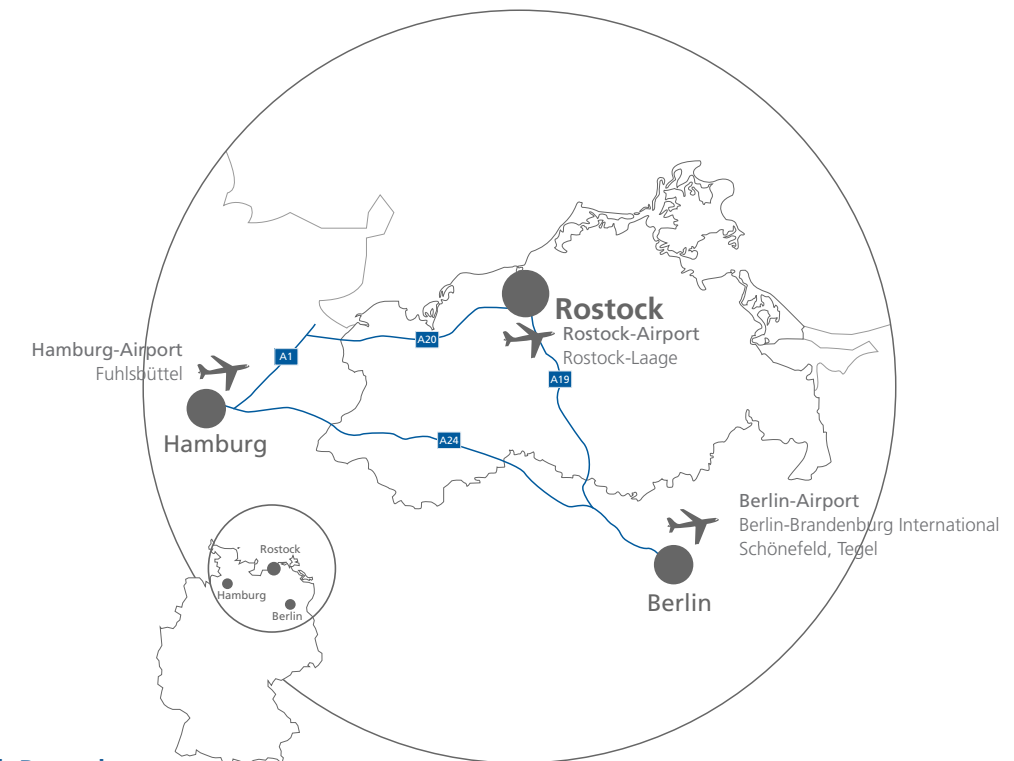
In Warnemünde, the charming seaside resort of Rostock it's also possible to enjoy the extent of the Sea, the sun and the beach, the unique maritime world of experiences with fisher houses, light-house, pier and cruise ships.

legend:

- HMT HMT, Congress Venue
- S4 Restaurant Silo 4
- KP Käpt'n Piet
- CH City hall of Rostock
- MS Main Railway Station
- 1 Steigenberger Hotel Sonne
- 2 Radisson SAS
- 3 Ibis Hotel



GENERAL INFORMATION/TRAVEL INFORMATION



How to reach Rostock...

... by Car

To reach Rostock from Berlin, head north or south out of the city to the A10. Follow it northwest to the A24, which leads straight into the A19 running directly north to Rostock (2,5 hours).

... by Train

There are frequent direct trains to Rostock from Berlin and hourly services from Hamburg. Find your connection here www.deutschebahn.com. **Attention the rail between Berlin and Rostock is under construction be aware of long train rides between 2,5h up to 5h.**

... by Boat

There are ferry services to Denmark, Sweden and Latvia, as well as to Estonia and Finland in summer. Fares are quite complicated depending on the season and the number of people travelling, so the following are provided as rough high-season guides only.

Scandlines

www.scandlines.eu
travels to Gedser, Denmark, Trelleborg in Sweden and Ventspils, Latvia.

TT-Line

www.ttline.com
sails to/from Trelleborg.

Boats arrive and depart from the overseas seaport (Überseehafen), which is on the east side of the river Warnow. There is an S-Bahn from Seehafen to Rostock main station, but it's a 20-minute walk from the station to the piers.

... by Air

Rostock's airport, Rostock-Laage

RLG

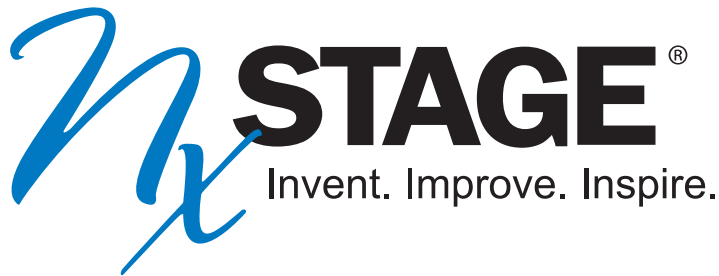
www.rostock-airport.de
has a sparse number of scheduled services to and from Cologne-Bonn, Dortmund, Munich and Zürich, plus different charter flights.

EXHIBITORS/PLATIN



Fresenius booth 1

Today, Fresenius Medical Care is the world's largest, integrated provider of products and services for individuals with chronic kidney failure, a condition that affects more than 2.1 million individuals worldwide. Through its network of 3,123 dialysis clinics in North America, Europe, Latin America, Asia-Pacific and Africa, Fresenius Medical Care provides dialysis treatment to 256,456 patients around the globe. Fresenius Medical Care is also the world's largest provider of dialysis products, such as hemodialysis machines, dialyzers and related disposable products.



NX Stage booth 8

EXHIBITORS/GOLD



HeartWare booth 4

HeartWare, Inc. is a medical device company and leading innovator of miniaturized circulatory support technologies to treat patients suffering from advanced heart failure. Through a cadence of progressively smaller devices, implanted with progressively less invasive surgery, HeartWare is working toward treating an increasing proportion of heart failure patients and accessing patients at an earlier stage of their disease progression. HeartWare's lead product, the HeartWare® Ventricular Assist System, features the HVAD® pump, a miniaturized implantable centrifugal pump capable of producing up to 10 liters per minute of blood flow. The pump is designed to be implanted above the diaphragm, directly adjacent to the heart, thereby avoiding the abdominal surgery generally required to implant competing devices.

In 2009, HeartWare received CE marking for the System and it is now commercially available in Europe. In March 2011, the Therapeutic Goods Administration (TGA) in Australia approved the HeartWare® Ventricular Assist System for listing on the Australian Register of Therapeutic Goods (ARTG). The device is currently the subject of United States clinical trials for two indications: Bridge-to-Transplant and Destination Therapy. To date, more than 1,800 advanced heart failure patients have received the HVAD Pump in more than 22 countries worldwide.



Gambro booth 2



infomed booth 6

With 20 years of experiences around the world, Infomed has comforted its leadership as a provider of extracorporeal blood purification devices offering complete solutions with many advanced medical treatments such as: Continuous hemofiltration and hemodiafiltration, plasma exchange, double filtration plasmapheresis (DFPP), cascade filtration, blood or plasma perfusion and CPFA (Coupled Plasma Filtration Adsorption). Infomed provides a complete range of machines and all associated disposables such as pre-assembled kits, filters and adsorption cartridges.



Terumo booth 5

Tokyo-based Terumo Corporation is one of the world's leading medical device manufacturers with \$4 billion in sales and operations in more than 160 nations. Founded in 1921, the company develops, manufactures, and distributes world-class medical devices including products for use in cardiothoracic surgery, interventional procedures, and transfusion medicine; the company also manufactures a broad array of syringe and hypodermic needle products for hospital and physician office use.

EXHIBITORS/SILVER

EDWARDS LIFESCIENCES booth 15

Edwards Lifesciences is the global leader in the science of heart valves and hemodynamic monitoring. Driven by a passion to help patients, the company partners with clinicians to develop innovative technologies in the areas of structural heart disease and critical care monitoring that enable them to save and enhance lives.

Our technologies are categorized into our four business units - heart valve therapy, critical care, cardiac surgery systems and vascular – each with a rich history and unique patient focus. We also lead the development of new investigative technologies designed for the non-surgical replacement of heart valves and minimal invasive cardiovascular techniques. We believe that these challenging new procedures hold great promise for patients considered high-risk for conventional valve replacement as this technology allows clinicians to deliver valves via a catheter, eliminating the need for traditional open-heart surgery.

MAQUET - GETINGE GROUP booth 14

As a trusted partner for hospitals and clinicians since 1838, Maquet is a global leader in medical systems that advance surgical interventions, cardiovascular procedures and critical care. Maquet develops and designs innovative products and therapeutic applications for the operating room, hybrid OR/cathlab, intensive care unit, and patient transport within acute care hospitals, improving outcomes and quality of life for patients.

MAQUET – The Gold Standard.

For more information please visit www.maquet.com and www.getingegroup.com.

NIKKISO booth 10

The Nikkiso group has been providing extracorporeal technologies and products in order to meet demands of our customer and patients, the society and the times we live in for more than half a century. We are recognized as precision machinery company in the field of blood purification and hemodialysis. Beside our huge expertise in the development and production of technology and medical equipment our R&D team recently developed a new adsorptive device for the treatment of Ulcerative Colitis patients. Based in Hanover/Germany the Nikkiso Europe is responsible for the development, production and sales of Nikkiso products in the EMEA region.

MILTENYI booth 11

Miltenyi Biotec, founded in 1989, is a premier provider of advanced products and services in the fields of stem cells, immune and cellular therapies as well as tissue regeneration. With more than 1200 employees worldwide, we develop, manufacture and commercialize state-of-the-art technologies for research and clinical applications. Our products and services cover all areas of cell-based research and clinical development, from sample preparation, cell separation, cell culture, flow cytometric and molecular analysis, to clinical therapeutic applications and contract GMP manufacturing.

ALBUTEC booth 7



MAQUET

NIKKISO



EXHIBITORS/SILVER



HEPANET booth 3

Since 2006 HepaNet is responsible in the field of liver dialysis business in Germany, representing the Albumin-Dialysis. Besides the classical sale of consumables HepaNet draws from our individual therapy service in case of emergency. We also offer since 2011 pocket ultrasonic devices from GE Healthcare.



SYNCARDIA booth 16

The SynCardia temporary Total Artificial Heart (TAH-t) is the world's only FDA, Health Canada and CE approved Total Artificial Heart. The TAH-t is currently approved as a bridge to transplant for patients dying from end-stage biventricular failure. The 13.5 lb Freedom™ portable driver has received CE approval in Europe and is undergoing an IDE clinical study in the U.S. The Freedom driver is designed to provide mobility for stable TAH-t patients both inside and outside the hospital. Visit our booth for updates on the clinical study, the 50cc TAH-t and destination therapy.



CYTOSORBENTS booth 9

CytoSorbents is a medtech company using blood purification to modulate the immune system and fight multi-organ failure in life-threatening illnesses. Its technology is based on biocompatible, highly porous polymer beads that can remove toxic substances from blood by pore capture and adsorption. In 2011, CytoSorb® achieved CE approval as an extracorporeal cytokine filter to be used in patients with elevated cytokines. CytoSorb® modulates the immune system by reducing "cytokine storm" that could otherwise lead to deadly inflammation, multiple organ failure, immune dysfunction, and often death in illnesses such as sepsis, trauma, burn injury, ARDS, pancreatitis and other systemic inflammatory syndromes.

CytoSorb filters are commercially available in Germany, Austria, Switzerland and selected European countries.



KANEKA booth 13

Kaneka Pharma Europe N.V. is the major enterprise in developing and commercializing medical devices as vascular intervention and therapeutic apheresis products, functional food ingredients as Co-Q10 and pharmaceutical ingredients for mainly statins and ACE-i for the healthcare sector. This combination and our long experience in those fields make it possible, that Kaneka is the expert in successfully supporting the CVD management interventions. Since 1989 Kaneka is one of the pioneers for therapeutic apheresis products. Therefore we are celebrating the Liposorber® which is now on the market for 25 years. Liposorber® LA-15 apheresis columns for plasma treatment are available worldwide and in Europe there is on the top the Liposorber® D for whole blood treatment. The simpleness combined with high efficacy highlights this product. Innovative technology cooperates excellent with Kaneka's top medical devices.

Be informed about our products with high performance and our specific and individual service by contacting the Kaneka team in the US, EU and Japan to learn about the most recent scientific insights and treatment methods.



STADA booth 12

UNIVERSITY OF ROSTOCK



Founded in 1419, the University of Rostock is one of the best loved higher education establishments in the East of Germany. As a comprehensive university rich in tradition it offers variety, a broad spectrum of subjects, clear profile building in research and good support for students. The University of Rostock is family-friendly and strives for complete accessibility. The oldest university in the Baltic Sea region and the third oldest in Germany works in various co-operations with the economy and is an important stimulus generator in the region. Our motto TRADITIO ET INNOVATIO reflects our almost 600 year history and our courage always to try something new. As the economic centre of the North-East and located in the midst of one of the most beautiful holiday regions in Germany, Rostock stands out with a high quality of life and the flair of a large city by the sea. The dynamically developing regional hub profits from its central location between the metropolises of Berlin, Hamburg and Copenhagen.

With its 200,000 inhabitants, Rostock is characterised scientifically, economically and culturally by 15,000 students and a work force of 5,000 in the university and university clinic. The regional economy has benefitted from the over 800 start-up companies launched from the university since 1991. Young people from the West of Germany and increasing numbers of foreign students are discovering Rostock as a study location. Students from 99 countries can be found meanwhile on the four campus locations in the city. Since 1991 over 500 million Euros has been invested in the infrastructure of the university.

As a comprehensive university, Rostock offers courses of study across nearly all areas: natural and technical sciences, cultural and social sciences, medicine, law, theology and teaching. With over 90 courses of study, 29 bachelor programmes, 38 masters programmes and 26 state exam courses (inc. teaching), the University of Rostock belongs to the higher education establishments in Ger-

UNIVERSITY OF ROSTOCK



many with the broadest spectrum of subjects.

At the University Clinic, a hospital providing maximum care, treatment at the highest level of all areas of medicine is given annually to over 40,000 inpatients and 160,000 outpatients. Interdisciplinary treatment centres have been established for illnesses of the heart, circulation and musculoskeletal system as well as cancers, dementias and nervous diseases.

With a focus on "Regenerative Medicine - The Reconstruction of Biological

Function", university medicine is particularly committed to the profile lines "Life, Light and Matter" and "Successful Aging".

350 research projects, sponsored by the EU, the Federal Government, local government, charities and industry have a financial volume of 50 million Euros.

Key aspects are stem cell research, biomaterial and implant research as well as the study of movement disorders within degenerative illnesses. 250 young doctors, dentists and medical biotechnologists complete their studies each year.

Universität
Rostock



Traditio et Innovatio

GENERAL INFORMATION/MISC

GENERAL INFORMATION/MISC

Conference Venue

Academy of Music and Theatre Rostock
Beim St.-Katharinenstift 8
18055 Rostock, Germany

Registration and Information Desk

All attendees must be registered for the conference. Admission to the conference and social events is only permitted to those wearing the official conference badge. If a name badge is misplaced, please contact the registration/information desk.

Registration fee payment on-site will be available (cash and credit card). Nevertheless, registration is mandatory. Please contact

Certificate of Attendance is available to all registered participants in the conference bag. Just fill in your name.

Receipt for registration fees are available to all registered participants upon request on the registration/information desk.

The registration/information desk will be located in the foyer of the first floor and will be open during the following hours:

Day 1 – Tuesday, September 25	07.30 – 18.00
Day 2 – Wednesday, September 26	07.30 – 18.00
Day 3 – Thursday, September 27	07.30 – 18.00
Day 4 – Friday, September 28	07.30 – 19.00
Day 5 – Saturday, September 29	07.30 – 14.30

Conference Abstracts

A separate publication of The International Journal of Artificial Organs can be found in your conference pack that includes the abstracts.

Exhibitors Information

Exhibition stands will be located in the foyer of the first floor. Attendees will have the opportunity to visit the exhibition stands throughout the duration of the conference during coffee breaks, lunch times and poster sessions.

Internet lounge and Computer Facilities

Internet services and computer facilities will be available at the conference venue (first floor, ...) where attendees may check their emails and keep in touch with home and office. **Keynote and Oral Speakers have to give off their presentations at this room directly after the registration process.**

Lunch

Lunch during the conference days is included in the registration fee.

Smoking Policy

It is forbidden to smoke in public places like cafes, bars and restaurants (excluding those with signalized smoking areas). Smoking is only allowed outside the conference building and at the inner courtyard.

Photography Policy

Recording and photographing Conference presentations will not be allowed.

Electricity Supply

220 V is the standard power supply throughout Germany. If you need a plug or a power adapter you may find in electronic specialty retailers.

Accommodation

The organizers of the congress have negotiated special rates with different Hotels in Rostock for the participants. The majority of the hotels are located in the city centre. Short descriptions of the hotels are available on the conference website. It is the responsibility of the participants to pay their own hotel accommodation.

Transportation

On Friday there will be bus shuttles from the academy of music and theatre to the Darwineum at the zoo of Rostock.

Weather

Please visit the worldwide known website www.weather.com

Currency

Germany uses the Euro (€). Travellers cheques can be exchanged for cash in banks.

Goods and Service Tax

All displayed prices for goods and services include tax.

Shopping

The best place for shopping in Rostock is the Kröpeliner Straße. It only takes you 5 minutes by foot from the academy of music and theatre. Shops in Rostock are generally open Monday – Saturday from 09.00 to 20.00.

Eating out

There are many restaurants and cafes nearby the academy of music and theatre. The restaurants offer varied menus, prices and decor. Local specialities such as seafood are worth sampling.

Tipping

Generally it is accepted practice in restaurants to leave a gratuity if good service is received. It is customary to tip hotel porters. Tips for taxis are optional.

Emergencies

Police: Dial 110
Ambulance and fire service: Dial 112



EACTS/3RD EACTS MEETING ON CARDIAC AND PULMONARY REGENERATION

Berlin-Brandenburgische Akademie Berlin, Germany | December 14th & 15th, 2012



Course Directors:

G. Steinhoff, Rostock
U. Martin, Hannover

Organization Committee:

R.A. Schmid, G. Karoubi, Berne;
H.J. Ankersmit, Vienna

Conference Organization:

R. Uhde, Berlin-Rostock

Industry Relations, Registration

R. Uhde
Email: robert.uhde@sphinxet.de
Phone: +49 381 - 128 93 92
Fax: +49 381 - 128 94 79

Venue:

Berlin-Brandenburgische Akademie, Berlin, Germany

Target Audience:

Cardiac and Thoracic Surgeons, residents, basic and clinical researchers; industry researchers

Course Overview:

Regenerative Medicine – update and future development | Stem cell science and technology | Tissue engineering technology | Clinical translation – regulatory framework (GxP) and clinical studies | Lung regeneration | Cardiac regeneration | Surgical techniques and animal models | Cell communication and paracrine factors | Basic science

Learning Objectives:

Theoretical skills: Basic stem cell and tissue engineering science; regulatory knowledge (GMP, GLP, GCP); clinical experience and new concepts in stem cell therapy, tissue engineering and cardiac regeneration.

Course Format:

State-of-the-art lectures, best abstracts and poster presentations of young researchers, High level discussions with experts, industrial exhibition

EACTS/PROGRAMME

Berlin-Brandenburgische Akademie Berlin, Germany | December 14th & 15th, 2012

DECEMBER 13, 2012

Session 1: Science talk – Clinical Prospect of Cardiovascular Regeneration

Gustav Steinhoff, Rostock, Germany
John P. Cooke, Stanford, USA
Joe Wu, Stanford, USA
Ulrich Martin, Hannover, Germany

December 14, 2012

Session 2 "Basic Science"

Wen-Yee Choi, Durham, USA
Mechanisms of cardiac regeneration
– learning from zebrafish

Gilbert Weidinger, Ulm, Germany
Heart regeneration in zebrafish

Robert David, Rostock/Munich, Germany
Cardiac differentiation in Xenopus is initiated by xMespA

Session 2 "Stem cell science and technology"

Sean M. Wu, Stanford, USA
Cardiovascular cell differentiation

Robert Zweigerdt, Hannover, Germany
Cardiac differentiation of pluripotent stem cells and upscaling technologies

Session 3 "Tissue engineering Technology"

Li Qian, UCSF, USA
Directed programming technology

W Zimmermann, Goettingen, Germany
Applications of engineered heart tissue

Session 4 "Lung regeneration"

Anna Karina Perl, Cincinnati, USA
Lung fibroblasts and regeneration

Session 5 "Cardiovascular regeneration"

Thomas Braun, Bad Nauheim, Germany
Cardiomyocyte de-differentiation and growth factor signaling during cardiac repair and disease

DECEMBER 15, 2012

Session 6 "Clinical translation-regulatory framework and GxP"

Joseph C. Wu, Stanford, USA
ES-cells: Cardiac cell therapy

Alexander Kaminski, Rostock, Germany
Application of adult stem cells in cardiac surgery

Sebastian Sethe, Durham, UK
Regulatory frameworks in Europe and USA

Session 7 "Paracrine factors"

Jan Henrik Ankersmit, Vienna, Austria
APOSEC - PBMC and Cell Regeneration

Stefano Di Santo, Bern, Switzerland
EPC Secretomes and ischaemia

Session 8 "Regenerative Cardiovascular Medicine up date and future development"

John P. Cooke, Stanford, USA
A closer view on angiogenesis in peripheral artery disease

Takayuki Asahara, RIKEN Kobe, Japan
Vascular progenitor cells and vascular regeneration

ART/MORAL BURDEN



Moral Burden, Markus Lange, 2012

Günter von Sengbusch

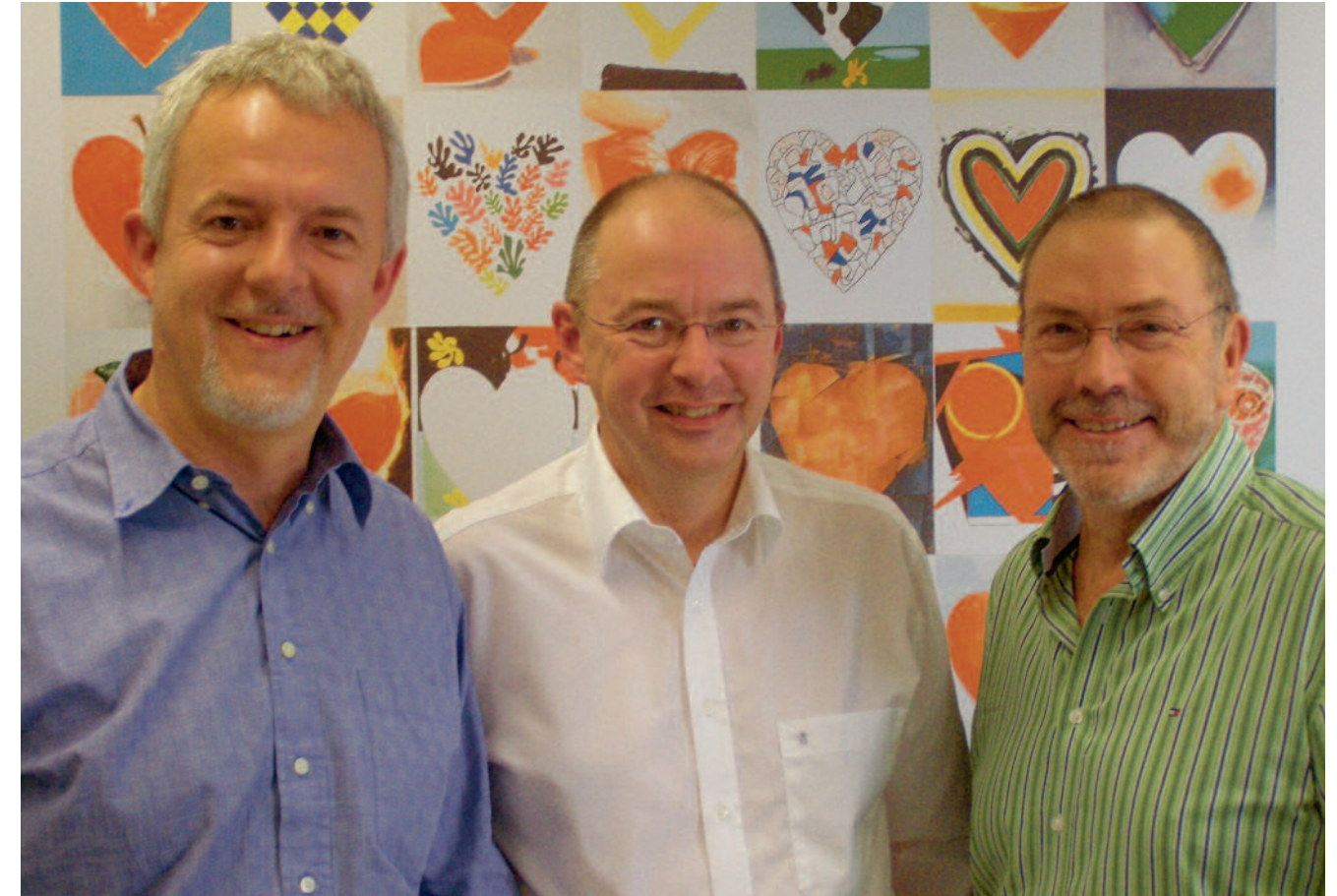
The painting of Markus Lange goes back to the early pioneering years of dialysis in the beginning 60-ies of the last century when many more patients suffered from kidney failure than could be treated by available machines, the so-called artificial kidneys. In 1962 LIFE published an article under the head line "They Decide Who Lives, Who Dies" on this topic. Considering the limited access to the developing treatment of kidney failure, the Seattle's King County Medical Society decided that the final judgement on who will be accepted by the Seattle Artificial Kidney Center should not be taken by the physicians themselves. Therefore a small group of "quite ordinary people" was appointed with no moral or ethical guidelines to the patients for dialysis only led by their own individual conscience. The committee did not have to take any medical decision, however, had to decide, who from those, that had been already pre-

screened along the best knowledge of medicine by a board of physicians, should be admitted to the treatment – in fact a Life or Death Committee as stated in the LIFE article.

The committee started its work in 1961. Markus Lange has taken up the challenge of decision taking in a situation in which moral and ethical values do not offer clear decision taking references and searching for justice does not offer detectable indications for benchmarked decisions. The wage of justice at the top of the Rod of Asclepius fails to be of value. The snake, symbol of medicine in the ancient times, is tying up all committee members thus reinforcing their burden of the decision taking process while increasing numbers of new candidates are asking for treatment. Even the almost unlimited availability of knowledge and cognition present in the endless amount of books of the library and the

curtain of wisdom protecting the committee leave its members to their own individual consciences – nothing more, however also nothing less.

Time has changed and treatment of kidney failure has become common practice – at least in industrialized countries. However, the topic of decision taking on life or death in special situations has not vanished. The present discussion on the decision making process in the context of organ transplantation involves similar aspects, although sufficient "objective" parameters seem to be available for the decision process – thus in case of need parameters are even declared "objective" in order to escape or negate the demand of accepting the involved moral burden.



It is our pleasure to organize the ESAO 2012 congress for you.

Gustav Steinhoff (Congress president ; coordinator heart)

Wolfgang Ramlow (coordinator kidney)

Steffen Mitzner (coordinator liver)

