

**Nov. 14, Thu. Osaka International Convention Center Room A (1003)**

08:00 – 10:00 IFAO Symposium7 IFAO-ISHLT Joint symposium

Chairs Nir Uriel (Columbia University, United State)

Koichi Toda (Osaka University, Graduate School of Medicine, Japan)

SY07-1 Current approaches to LVAD implantation and outcome

Diyar Saeed (Leipzig Heart Center, Germany)

SY07-2 Neurological Complication Following LVAD Implantation, What Can We Learned From the Japanese Experience

Koichi Toda (Osaka University Graduate School of Medicine, Japan)

- SY07-3 Anticoagulation approaches to reduce adverse events  
Yoshikatsu Saiki (Tohoku University, Japan)
- SY07-4 Medical Management to Reduce Adverse Events  
Nir Uriel (Columbia University, United States)
- SY07-5 The revolving door of aortic valve in LVAD patients  
Koichiro Kinugawa (University of Toyama, Japan)
- SY07-6 LVAD as Bridge to Recovery, a Reality or Simply an Illusion?  
Gabriel Sayer (Columbia University Irving Medical Center, United States)

**10:00 – 11:40 IFAO Symposium10 Transplantation and artificial organs (VAD and ex-vivo perfusion)**

**Chairs Yoshifumi Naka (Columbia University Medical Center, United States)  
Paul Jansz (St Vincent's Hospital, Australia)**

- SY10-1 Keynote Heart transplantation utilizing donation after circulatory death (DCD) donors: Outcomes from a single institution, five-year experience  
Paul Jansz (St Vincent's Hospital, Australia)
- SY10-2 Establishing heart transplantation from Donation after Circulatory-determined Death (DCD) donors: Manchester experience.  
Rajamiyer Venkateswaran (Wythenshawe Hospital, United Kingdom)
- SY10-3 Bronchial-arterial-circulation-sparing lung preservation: A new organ protection approach for lung transplantation  
Shinya Tane (University of Pittsburgh Medical Center / Temple University Health System / Lewis Katz School of Medicine, United States)
- SY10-4 Impact of timing of temporary Right Ventricular Assist Device during implantation of long term Left Ventricular Assist Device  
Marcus Taylor (Manchester University NHS Foundation Trust, United Kingdom)
- SY10-5 Trend of heart transplant and left ventricular assist device in Japan  
Daisuke Yoshioka (Osaka University, Japan)
- SY10-6 Mechanical Circulatory Support for Biventricular Heart Failure: Virtual Analysis of Single vs. Double Device Approach  
Jamshid Karimov (Cleveland Clinic / Case Western Reserve University, United States)
- SY10-7 Implantable LVAD support does not affect outcomes after heart transplant  
Tomaso Bottio (University of Padova, Italy)
- Commentator Hikaru Matsuda (Professor Emeritus, Osaka University, Japan)

**13:00 – 13:50 Special lecture1**

**Chair Yoshiyuki Taenaka (National Cerebral and Cardiovascular Center, Japan)**

- SL01 Studies on interactive robots  
**Hiroshi Ishiguro** (Osaka University / ATR, Japan)

## Program

---

14:00 – 16:00 IFAO Symposium13 New ideas in circulatory support

Chairs Eisuke Tatsumi (National Cerebral and Cardiovascular Center, Japan)  
Daniel Timms (BiVACOR Inc, United States)

- SY13-1 Risks of Total Artificial Hearts and Required Mitigations a BiVACOR Perspective  
Keynote Daniel Timms (BiVACOR Inc, United States)
- SY13-2 Updates on Cleveland Clinic Continuous-Flow Total Artificial Heart  
Kiyotaka Fukamachi (Cleveland Clinic, United States)
- SY13-3 Implications for Wireless blood pump management in the 21st Century  
William Bolt (Abiomed Inc.)
- SY13-4 Next generation fully implantable VAD  
Peter W.J. Hinchliffe (Jarvik Heart Inc.)
- SY13-5 Bidirectional venous drainage: A new concept for peripheral afterload reduction during ECMO  
Ludwig K. von Segesser (Centre Hospitalier Universitaire Vaudois, Switzerland)
- SY13-6 Implementation of new technologies to MCS devices  
Tomonori Tsukiya (National Cerebral and Cardiovascular Center Research Institute, Japan)
- SY13-7 Hemocompatibility Assessment of CH-VAD  
Chen Chen (CH Biomedical. Inc., China)

16:20 – 17:50 IFAO Symposium16 Pediatric VAD/ECMO

Chairs Antonio Amodeo (Pediatric Hospital Bambino Gesù, Italy)  
Takayoshi Ueno (Osaka University Graduate School of Medicine, Japan)

- SY16-1 Pediatric Ventricular Assist Device  
Keynote Antonio Amodeo (Bambino Gesù Pediatric Hospital, Italy)
- SY16-2 The use of Pediatric Excor<sup>®</sup> (PEd) in children with Restrictive Cardiomyopathy as a bridge to Cardiac Transplantation  
Timothy Thiruchelvam (Great Ormond Street Hospital for Children, United Kingdom)
- SY16-3 Clinical outcomes of long-term ventricular assist device support for pediatric patients in our hospital  
Tomomitsu Kanaya (Osaka University, Japan)
- SY16-4 The echocardiographic approach to pulsatile LVAD Pediatric Patients: Lesson learned from the last 10 years  
Arianna Di Molfetta (Policlinico Gemelli Hospital, Italy)
- SY16-5 Long-term Outcome of use of Jarvik 2000 continuous flow LVAD in children: Single center experience  
Gianluigi Perri (Bambino Gesù Children Hospital / A. Gemelli University Hospital, Italy)
- SY16-6 Use of trans-carotid IMPELLA 2.5 axial flow pump device during VA-ECMO support in pediatric post heart transplant acute Heart Failure  
Walter Vignaroli (Bambino Gesù Children Hospital, Italy)

---

**Nov. 14, Thu. Osaka International Convention Center Room B (1001)**

09:30 – 10:30 IFAO Invited lecture2 Renal-cardiac syndrome

Chair Akihiro Yamashita (Hosei University, Japan)

IL02 Cardio-renal syndrome with focus on patients using artificial organs

**Bernd Stegmayr** (Umea University, Sweden)

10:30 – 11:30 IFAO Symposium11 Hemodiafiltration and critical care medicine

Chairs Bernard Canaud (University of Montpellier, France)

Ryoichi Ando (Musashino Red Cross Hospital, Japan)

SY11-1 Hemodiafiltration and critical care nephrology: Where are we today? What could be the future?  
Keynote Could artificial intelligence a game changer?

Bernard Canaud (University of Montpellier, France)

SY11-2 Bio compatibilities of on line HDF~Effects of HDF dilution methods on radical stress~

Tadashi Tomo (Oita University, Japan)

SY11-3 Do we need dialyzers with a specific performance for HDF

Joerg Vienken (University of Applied Sciences, Germany)

SY11-4 Design specifications of hemodiafilters for CRRT

Akihiro Yamashita (Hosei University, Japan)

14:00 – 15:30 IFAO Symposium14 VAD coordinator symposium: Driveline, patient education, and palliative care

Chairs Karl Nelson (Centennial Hospital, Hospital Corporation of America, United States)

Minoru Ono (The University of Tokyo, Japan)

SY14-1 LVAD Coordinators are Vital to the Success of Destination Therapy and Exceptional Patient  
Keynote Outcomes

Karl Nelson (Centennial Hospital, Hospital Corporation of America, United States)

SY14-2 The Current Status of MCS and Involvement of VAD Coordinators

Miyoko Endo (The University of Tokyo, Japan)

SY14-3 Current status and future perspectives of VAD coordinator in Osaka University Hospital

Momoka Nakashima (Osaka University Hospital, Japan)

SY14-4 Role of clinical research coordinators on data collection and input of J-MACS in National Cerebral Cardiovascular Center

Nana Kitahata (National Cerebral Cardiovascular Center, Japan)

SY14-5 Current status and issues of management of patients with implantable left ventricular assist device in National Cerebral and Cardiovascular Center

Yumiko Hori (National Cerebral and Cardiovascular Center, Japan)

SY14-6 A MCS Experience-South of the Equator

Janelle Mclean (The Alfred, Australia)

## Program

---

16:20 – 17:50 IFAO Symposium17 Robotics in surgery (urology, cardiovascular, thoracic, and abdominal surgery) and nursing care

Chairs Jae Won Lee (Asan Medical Center, Korea)  
Goro Matsumiya (Chiba University Graduate School of Medicine, Japan)

- SY17-1 Robotic cardiac surgery: Innovation?  
Keynote Jae Won Lee (Asan Medical Center, Korea)
- SY17-2 Robotic mitral valve repair using Loop technique  
Yosuke Takahashi (Osaka City University, Japan)
- SY17-3 Clinical outcomes and mitral durability after robotic mitral valve repair; a single- center experience  
WonKyung Pyo (Asan Medical Center, University of Ulsan College of Medicine, Korea)
- SY17-4 Current status and prospective of robotically assisted cardiac surgery  
Yasushi Yoshikawa (Osaka University, Japan)
- SY17-5 Will robotic mitral valve repair become a standard procedure in near future?  
Tomoyuki Fujita (National Cerebral and Cardiovascular Center, Japan)
- SY17-6 A shift of robotics, from intra-abdominal to endo-luminal: Are we ready?  
Kiyokazu Nakajima (Osaka University Graduate School of Medicine, Japan)

## Nov. 14, Thu. Osaka International Convention Center Room C (1002)

08:00 – 11:20 IFAO Symposium8 IFAO-APSAO Joint symposium

Chairs Cumaraswamy Sivathasan (National Heart Centre Singapore, Singapore)  
Toru Masuzawa (Graduate School of Science and Engineering, Ibaraki University, Japan)

- SY08-1 Mechanical Circulatory Support in Asia  
Keynote Cumaraswamy Sivathasan (National Heart Centre Singapore, Singapore)
- SY08-2 Mechanical Circulatory Support in Australia  
Geoff Tansley (Griffith University / The Prince Charles Hospital, Australia)
- SY08-3 The Future of Artificial Organ in Malaysia  
Kahar Osman (University Teknologi Malaysia, Malaysia)
- SY08-4 Current Strategy for Medical Device Industrialization in Korea  
Kyung Sun (Korea University, Korea)
- SY08-5 Two successfully implantations of HeartCon, a New LVAD Independently Developed in China  
Xiaocheng Liu (TEDA International Cardiovascular Hospital, China)
- SY08-6 Development of a magnetically levitated extra-corporeal ventricular assist device in China  
Po-Lin Hsu (magAssist, Inc. / Soochow University, China)
- SY08-7 Controlling the Variance of In Vitro Hemolysis Test per ASTM standards: Experience and Recommendations  
Liudi Zhang (Soochow University, China)
- SY08-8 How does a Moving Impeller Influence the Hydraulic Performance of a Magnetically Levitated Centrifugal Blood Pump  
Tingting Wu (Soochow University, China)

- SY08-9 A Centralized Multi-Objective Model Predictive Control for a Biventricular Assist Device: An In Vitro Evaluation  
V.C.A. Koh (University of Malaya / University of New South Wales, Malaysia)
- SY08-10 Impact of Intermittent Low-Speed on Aortic Regurgitation after Jarvik 2000 LVAD Implantation: Results from the J-MACS Registry  
Hiroki Kohno (Chiba University Hospital, Japan)
- SY08-11 Circulating traveling waves enhance the maturation of hiPSC-derived cardiomyocytes in self-organized tissue ring  
Junjun Li (Osaka University Graduate School of Medicine, Japan)
- SY08-12 Photoelectric Dye-Coupled Polyethylene Film: Photoresponsive Properties Evaluated by Kelvin Probe and In Vitro Biological Response Detected in Dystrophic Retinal Tissue  
Toshihiko Matsuo (Okayama University Graduate School of Interdisciplinary Science and Engineering in Health Systems, Japan)
- SY08-13 Surface-functionalized and insulin loaded PLLA nanofibrous matrices with improved biophysicochemical performances and wound healing of diabetic mice  
Mingyan Zhao (Hospital of Guangdong Medical University, China)
- SY08-14 A surgical method for evaluation of polylactic acid and biomaterials for cardiovascular stent and tissue engineering applications  
Ramya Ahuja (Indian Institute of Technology Delhi, India)

**14:00 – 15:30 IFAO Symposium15 International comparison of chronic hemodialysis: Japan as number 1 ?**

**Chairs Stephen R. Ash (Indiana University Health Arnett and HemoCleanse Technologies, LLC, United States)  
Tadao Akizawa (Showa University School of Medicine, Japan)**

- SY15-1 Keynote Making hemodialysis less toxic "-" benefits of Japanese practices and one view of dialysis in the future  
Stephen R. Ash (Indiana University Health Arnett / Ash Access Technology, HemoCleanse Technologies LLC, United States)
- SY15-2 Why Is the Mortality of Dialysis Patients in Japan Much Lower than in Europe? Lessons learned from DOPPS  
Bernard Canaud (University of Montpellier, France)
- SY15-3 What DOPPS Provided Us as Evidence Regarding the Japanese Dialysis Patients  
Norio Hanafusa (Tokyo Women's Medical University, Japan)
- SY15-4 Current European status on long-term dialysis  
Bernd Stegmayr (Umea University, Sweden)
- SY15-5 Characteristics and Changes in practice patterns from before to after JSDT 2013 guidelines on HD prescriptions in Japan  
Tadashi Tomo (Oita University, Japan)

## Program

---

16:10 – 17:50 IFAO Symposium18 Intensive insulin therapy and artificial pancreas

Chairs Greet Van den Berghe (Leuven University, Belgium)  
Joerg Vienken (University of Applied Sciences, Germany)

- SY18-1 Glucose control in the ICU  
Keynote Greet Van den Berghe (KU Leuven University, Belgium)
- SY18-2 Investigation of the behavior of rat pancreas islet in an organ on chip model  
Amal Essaouiba (UTC, France)
- SY18-3 Continuous blood glucose monitoring using artificial pancreas in neurosurgery  
Motomasa Furuse (Osaka Medical College, Japan)
- SY18-4 Use of artificial pancreas for glycemic control in cases after cardiovascular surgery  
Yu Horiguchi (Osaka University Graduate School of Medicine, Japan)
- SY18-5 Can strict blood glucose control by an artificial pancreas during hepatectomy improve patient outcomes?  
Naoji Mita (Tokushima University Hospital, Japan)
- SY18-6 Artificial pancreas changes the current evidence?  
Tomoaki Yatabe (Kochi Medical School, Japan)
- SY18-7 Evaluation of insulin sensitivity during perioperative period; glucose clamp using artificial pancreas STG-55  
Takeshi Yokoyama (Kyushu University, Japan)
- SY18-8 Development and clinical use of artificial endocrine pancreas  
Kenro Nishida (Kumamoto Chuo Hospital, Japan)

**Nov. 14, Thu. Osaka International Convention Center Room D (1008)**

08:00 – 09:30 IFAO Symposium9 ECMO and lung transplantation

Chairs Justyna Swol (General Hospital Nuremberg, University Hospital of Paracelsus Medical University, Germany)  
Shingo Ichiba (Nippon Medical School Hospital, Japan)

- SY09-1 Evolving therapeutic strategies for advanced lung failure  
Keynote Norihisa Shigemura (Temple University Health System and Lewis Katz School of Medicine, United States)
- SY09-2 Primary Graft dysfunction requiring Extracorporeal membrane oxygenation (ECMO) in post lung transplant setting A single center experience  
Neeraj Kamat (Wythenshawe Hospital ( Manchester University NHS Foundation Trust ), United Kingdom)
- SY09-3 ECMO as bridge to lung transplantation: pre-operative, intra-operative, and post-operative challenges  
Amy Hackmann (University of Southern California, United States)
- SY09-4 Can the paradigm shift observed in bridge to lung transplantation therapy be transferred to other patient groups supported with ECMO?  
Justyna Swol (Paracelsus Medical University Nuremberg, General Hospital Nuremberg, Germany)

- SY09-5 Recent Advances in the Respiratory ECMO  
Shinichiro Ohshimo (Hiroshima University, Japan)
- SY09-6 Long-term respiratory support using artificial lungs and pumps for bridging to recovery or lung transplant: Devices under research  
Masaki Anraku (The University of Tokyo / Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan)

**9:40 – 11:40 IFAO Symposium12 Minimally invasive aortic valve procedures: MICS, sutureless valve, and TAVI**

**Chairs Gunther Laufer (Medical University of Vienna, Austria)  
Hiroshi Niinami (Tokyo Women's Medical University, Japan)**

- SY12-1 Future-ability of surgeons in aortic valve disease  
Keynote Gunther Laufer (Medical University of Vienna, Austria)
- SY12-2 Comparison of clinical outcomes between rapid-deployment and conventional bioprostheses in isolated aortic valve replacement  
Wooseok Choi (Asan Medical Center, University of Ulsan College of Medicine, Seoul, Korea)
- SY12-3 SAVR with stentless valve in the TAVI era  
Satoru Domoto (Tokyo Women's Medical University, Japan)
- SY12-4 Totally endoscopic aortic valve replacement  
Toshiaki Ito (Japanese Red Cross Nagoya First Hospital, Japan)
- SY12-5 The diversities in treatments for AS by surgeons  
Koichi Maeda (Osaka University, Japan)
- SY12-6 Patient-data based experimental simulator for developing and investigating effective use of transcatheter aortic valve  
Kiyotaka Iwasaki (Waseda University, Japan)
- SY12-7 Off the Job Training of Sutureless Heart Valve with 3D Calcified Aortic Stenosis Model  
Takashi Shirakawa (Kansai Rosai Hospital, Japan)
- Commentator Seung Hyun Lee (Yonsei University, Korea)

**11月14日(木) 大阪国際会議場 Room D (1008)**

**14:00 – 14:45 JSAO 一般口演1 人工心肺 (CE)**

**座長 梅田 千典 (自治医科大学附属さいたま医療センター)**

- OJ01-1 ローラーポンプが血小板機能・構造変化におよぼす影響  
古垣 達也 (筑波大学附属病院 医療機器管理センター/筑波大学大学院人間総合科学研究科)
- OJ01-3 体外循環中の RBC 投与に対する FFP 適正投与量の検討  
倉島 直樹 (東京医科歯科大学医学部附属病院 ME センター)
- OJ01-4 超低体温循環停止法が術後急性腎障害へ与える影響  
仕田原 智 (大阪急性期・総合医療センター 臨床工学室)



## Program

- OJ01-5 胸部大動脈手術の止血難渋因子と好中球、リンパ球比に関する検討  
古平 聡 (北里大学病院 ME 部)

### 15:30 – 16:30 大会賞審査講演

**座長 戸田 宏一 (大阪大学大学院医学系研究科 心臓血管外科)**

- PA-1 左室補助人工心臓 (LVAD) 装着時の 2D Speckle tracking 法による左右心室機能評価に関する動物実験による基礎的検討  
稲富 絢子 (国立循環器病研究センター 人工臓器部)
- PA-2 当院における小児重症心不全に対する VAD 治療成績  
金谷 知潤 (大阪大学大学院医学系研究科 心臓血管外科)
- PA-3 細胞シート移植治療における血管新生プロセスの形態学的検討  
原田 明希摩 (大阪大学大学院医学系研究科 心臓血管外科)
- PA-4 人工心肺を用いた心臓手術における膠質液使用の有用性の検討  
有道 真久 (心臓病センター 榊原病院 臨床工学科)
- PA-5 植込型補助人工心臓装着術後周術期の認知機能に関与する因子の検討  
天尾 理恵 (東京大学医学部附属病院 リハビリテーション部)

### 16:40 – 17:25 JSAO 一般口演 2 植込み型 VAD 患者の看護とリハビリ (Ns)

**座長 堀 由美子 (国立循環器病研究センター 病態代謝部)**

- OJ02-1 動画教育を用いた補助人工心臓の看護師教育への取り組み  
川西 直樹 (大阪大学医学部附属病院)
- OJ02-2 植込型補助人工心臓装着患者の抗凝固療法を支える在宅管理指導  
榊原 亮 (東京女子医科大学病院 看護部)
- OJ02-3 「植込型補助人工心臓患者の心肺蘇生 Flowchart」を活用した急変時対応の教育と、その成果  
山田 君代 (医療法人渡辺医学会 桜橋渡辺病院)
- OJ02-5 植込型左室補助人工心臓装着患者の退院時 6 分間歩行距離を規定する因子の検討  
鎌田 理之 (大阪大学医学部附属病院 リハビリテーション部)

## Nov. 14, Thu. Osaka International Convention Center Poster Session Room (1009)

### 16:00 – 17:05 IFAO Poster session9 VAD clinical1

**Chair Koji Kawahito (Jichi Medical University, Japan)**

- PE09-1 Effect of cardiac rehabilitation in heart failure patient with Heartmate III  
Shiang-Lin Shen (Cheng Hsin General Hospital, Taiwan)
- PE09-2 Long-term outcome of HVAD in Japan -single center experience-  
Yuji Sakashita (Osaka University Graduate School of Medicine, Japan)
- PE09-3 Detection of Seasonal Trends in National Donor Heart Availability Using the UNOS Dataset  
Mohammed Kamalia (Medical College of Wisconsin, United States)
- PE09-4 Carbon monoxide diffusing capacity predicts cardiac readmission in patients undergoing left ventricular assist device implantation in Japan  
Masaki Tsuji (The University of Tokyo, Japan)
- PE09-5 Left ventricular assist device: Patient selection strategies and outcomes  
You Jung Ok (Asan Medical Center, University of Ulsan College of Medicine, Korea)

- PE09-6 Preserved right ventricular function is a risk factor for de novo aortic insufficiency but not for adverse events in LVAD patients  
Shusaku Maeda (Osaka University Graduate School of Medicine, Japan)
- PE09-7 Risk factors for renal dysfunction after continuous-flow Left ventricular assist device implantation.  
Takaaki Samura (Osaka University Graduate School of Medicine, Japan)
- PE09-8 Effects of the implantation of long-term left ventricle assist device on post-transplant outcomes  
H. Bedanova (Centre of Cardiovascular and Transplant Surgery, Brno, Czech Republic)

**16:00 – 17:05 IFAO Poster session10 VAD clinical 2**

**Chair Masatoshi Akiyama (Tohoku University Hospital, Japan)**

- PE10-1 Predicting Cerebrovascular Accident during Implantable LVAD Support using Artificial Intelligence Trained on Acoustic Spectra  
Yusuke Misumi (Osaka University Graduate school of Medicine, Japan)
- PE10-2 Successful cases of heart transplantation in the patients with the active-phase left ventricular assist device pump pocket infection.  
Masaro Nakae (Osaka University, Japan)
- PE10-3 Investigating possible causes of HeartMate II lead damage: respiratory movements  
Zameer Abdul Aziz (National Heart Centre Singapore, Singapore)
- PE10-4 New management of Severe Heart Failure at our Hospital  
Norikazu Oshiro (OgakiTokushukai hospital, Japan)
- PE10-5 Heart Transplantation Outcome of Refractory Cardiogenic Shock After Temporary Left Ventricular Assisted Device Implantation  
Ting Chao Lin (Cheng Hsin General Hospital / National Yang-Ming University, Taiwan)
- PE10-6 Impella 5.0 therapy decreases bleeding complications in patients after change from extracorporeal life support  
Shiho Naito (University Heart and Vascular Center Hamburg, Germany)
- PE10-7 Successful treatment with Impella in a patient with post-Total Arch Replacement with an open stent graft for type A acute aortic dissection  
Hisashi Yoshida (Tokyo Women's Medical University, Japan)
- PE10-8 Left Ventricular Assist Devise Implantation after Extra Corporeal Membrane Oxygenation therapy and axillary full support Impella Therapy  
Alexander Bernhardt (University Heart and Vascular Center Hamburg, Germany)

**16:00 – 17:00 IFAO Poster session11 VAD basic1**

**Chair Tomohiro Nishinaka (National Cerebral Cardiovascular Center, Japan)**

- PE11-1 Simulating aortic and mitral regurgitation during cardiac beat synchronization control with a rotary blood pump.  
Daisuke Ogawa (Sun Medical Technology Research Corp., Japan)
- PE11-2 Effect of manufacturing method on the properties of a monopivot centrifugal blood pump prototype  
Masahiro Nishida (National Institute of Advanced Industrial Science and Technology, Japan)
- PE11-3 In vitro effects of pump orientation on performance in the advanced ventricular assist device  
Takuma Miyamoto (Cleveland Clinic, United States)

## Program

---

PE11-4 Withdrawn

PE11-5 Transition of an acute LVAD experimental animal model at our experimental facility  
Tatsuki Fujiwara (Tokyo Medical and Dental University, Japan)

PE11-6 Effects of viscosity change on flow rate estimation of a centrifugal blood pump using the passively stabilized position of an impeller  
Shuya Shida (Ibaraki University, Japan)

PE11-7 The effect of chosen assay, storage conditions and bilirubin concentrations on hemolysis levels in multiple species  
Tomotaka Murashige (Tokyo Institute of Technology / Griffith University, Japan)

### 16:00 – 17:00 IFAO Poster session12 VAD basic 2

Chair Tomonori Tsukiya (National Cerebral and Cardiovascular Center Research Institute, Japan)

PE12-1 Examination of VWF degradation in a monkey model with a centrifugal blood pump  
Yasuyuki Shiraishi (Institute of Development, Aging and Cancer, Tohoku University, Japan)

PE12-2 Numerical Simulation of a Blood Flow in the Narrow Gap Region of a Hydrodynamic Thrust Bearing Installed in a Centrifugal Blood Pump  
Tetsuya Yano (Hirosaki University, Japan)

PE12-3 Quantitative evaluation of platelet aggregation under high shear stress  
Akiko Oota (National Institute of Advanced Industrial Science and Technology (AIST), Japan)

PE12-4 The threshold shear stress for mechanical damage as evaluated by hemolysis, red blood cell deformability, and platelet activation using a novel shearing device  
Kosuke Igarashi (Shibaura Institute of Technology, Japan)

PE12-5 Biophysical alterations to erythrocytes exposed to sublethal shear stresses  
Antony McNamee (Menziess Health Institute Queensland, Griffith University, Australia)

PE12-6 Magnetically levitated blood shear stress device design for a microscale flow channel  
Yuki Hokazono (Gunma University / Texas Heart Institute, Japan)

PE12-7 Evaluation of thrombus detection methods in a magnetically levitated blood pump in an animal experiment  
Haruna Seki (Tokyo Medical and Dental University, Japan)

### 16:00 – 17:00 IFAO Poster session13 CPB/ECMO

Chair Takafumi Masai (Sakurabashi Watanabe Hospital, Japan)

PE13-1 Development of a thrombus induction method at a target site using fibrinogen coating solution  
Haruna Seki (Tokyo Medical and Dental University, Japan)

PE13-2 Venous-arterial Extracorporeal membrane oxygenation insertion in awake patients  
Young Su Kim (Samsung Medical Center, Sungkyunkwan University School of Medicine, Korea)

PE13-3 Efficacy of mini-cardiopulmonary bypass (mini-CPB) support for prevention of embolic stroke during debranching TEVAR  
Hisashi Uemura (Hyogo College of Medicine, Japan)

- PE13-4 An Improvement Project for Preprocessing Completeness before Transferring Patients using ECMO  
Chnu-Hsiang Chen (Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- PE13-5 Connection options for an Artificial Lung  
Sebastian Kalverkamp (University Hospital RWTH Aachen, Germany)
- PE13-6 Study on the occlusion blood destruction of the roller pump  
Shota Kato (Gunma Paz University, Japan)
- PE13-7 Understanding Pulsatility in the era of continuous flow ventricular assist devices  
Sam Emmanuel (St Vincent's Hospital, Australia)

**16:00 – 17:00 IFAO Poster session14 Engineerings**

**Chair Masahiro Osa (Ibaraki University, Japan)**

- PE14-1 Implantable contactless generator driven by the electrically-stimulated skeletal muscle  
Takumu Mochida (Tokyo Institute of Technology, Japan)
- PE14-2 Wearable sensor attaching to nail surface for long term patient monitoring  
Kohei Ishii (National Institute of Technology, Kagawa College, Japan)
- PE14-3 Optimum sterilization methods of biocompatible hybrid material for implantable devices  
Yusuke Inoue (Tohoku University / University of Tokyo, Japan)
- PE14-4 Reduction of surge voltage in transcutaneous energy transmission system using half-active rectifier  
Tomoki Okinaga (Tokyo University of Science, Japan)
- PE14-5 Design of an energy harvester for development a self-generating implantable medical device by energy of a heartbeat.  
Tomoki Tahara (Tokyo Medical and Dental University, Japan)
- PE14-6 Transcutaneous Energy Transmission System for a Totally Implantable Artificial Heart - Application of Class-E Amplifier and Comparison of the Resonance Circuit-  
Masatoshi Sonda (Tokyo University of Science, Japan)

**16:00 – 17:00 IFAO Poster session15 Regenerative therapy(basic science)**

**Chair Shigeru Miyagawa (Osaka University, Japan)**

- PE15-1 Effects of docosahexaenoic and arachidonic acids on mRNA expression in cultured cardiomyocytes  
Mizuna Yano (Yamagata University, Japan)
- PE15-2 Investigation on the cardiomyocyte subtypes derived from human iPS cells on ventricular ECM hydrogels  
Fumika Hamada (Yamagata University, Japan)
- PE15-3 CellSaic with ADSCs promotes angiogenesis for critical limb ischemia in mice by improving the engraftment rate  
Hideki Tanioka (Osaka University, Japan)
- PE15-4 HMGB1 can suppress adverse ventricular remodeling by recruiting bone marrow stem cells in rat myocardial infarction model  
Takasumi Goto (Osaka University Graduate School of Medicine, Japan)
- PE15-5 Functional measurement of human bioengineered cardiac tissue using iPS cells derived from dilated cardiomyopathy patients with lamin variant  
Koichiro Miura (Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, Japan)

## Program

---

PE15-6 Human Umbilical Cord Mesenchymal Stem Cell Sheet Ameliorate the Effects of Myocardial Ischemia Injury

Rui Guo (Peking University Third Hospital, China)

PE15-7 Does Hysteresis of Exposure to Tangential Force Field Affect Alignment of Cell Cultured on Micro Striped Pattern?

Shigehiro Hashimoto (Kogakuin University, Japan)

**16:00 – 17:05 IFAO Poster session16 Regenerative therapy(tissue engineering)**  
**Chair Li Liu (Osaka University Graduate School of Medicine, Japan)**

PE16-1 Laminin221 enhances therapeutic effects of hiPS-CMs derived 3-dimensional engineered cardiac tissue transplantation in a rat ischemic cardiomyopathy model

Takaaki Samura (Osaka University Graduate School of Medicine, Japan)

PE16-2 Therapeutic Efficacy of Large Aligned Cardiac Tissue Derived from Xeno-free Induced Pluripotent Stem Cell in a Porcine Ischemic Cardiomyopathy Model

Kota Suzuki (Osaka University Graduate School of Medicine, Japan)

PE16-3 Fabrication of highly functional LbL-3D Heart by cell accumulation technique and collagen culture vessel.

Yoshinari Tsukamoto (Osaka University, Japan)

PE16-4 Dynamic culture in a rotating wall vessel bioreactor yields functional engineered cardiac constructs derived from induced pluripotent stem cells

Taro Nakazato (Osaka University Graduate School of Medicine, Japan)

PE16-5 A bioreactor system for the cardiac differentiation of human iPS cells

Shin Yoshino (Yamagata University, Yonezawa, Japan)

PE16-6 Withdrawn

PE16-7 Electrical stimulation to mesenchymal stem cells cultured in hyaluronic acid gelatin hydrogel

Juan Vaca Gonzalez (Fundación Universitaria del Área Andina, Colombia)

PE16-8 Analysis of in vitro performance of PLA based materials for tissue engineering applications

Ramya Ahuja (Indian Institute of Technology, India)