

**Nov. 13, Wed. Osaka International Convention Center Room A (1003)**

07:50 – 08:00 IFAO/JSAO Opening Remarks

08:00 – 09:30 IFAO Symposium1 Acute circulatory support (ECMO, Impella, and VAD) for AMI, postcardiotomy shock, and fulminant myocarditis

**Chairs Akira Shiose (Kyushu University Graduate School of Medicine, Japan)  
Alexander Bernhardt (University Heart Center Hamburg, Germany)**

- SY01-1 Surgical Director Heart Transplantation and Mechanical Circulatory Support Program  
Keynote Alexander Bernhardt (University Heart and Vascular Center Hamburg Germany, Germany)
- SY01-2 Disparity in short- and long-term survival outcomes between pediatric and adult fulminant myocarditis treated with MCS  
Kwan-Ru Huang (Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- SY01-3 ECMO Weaning:How to Enhance Myocardial Recovery and Long Term Outcomes  
J Eduardo Rame (Children's Hospital of Philadelphia, United States)
- SY01-4 Recent Strategy of Treatment for Acute Heart Failure using MCS from ECMO to Impella and LVAD  
Hiroki Hata (Osaka University Graduate School of Medicine, Japan)
- SY01-5 ECMO Development in China  
Xiaotong Hou (Beijing Anzhen Hospital, China)
- SY01-6 Ultra-Compact ECMO System Consisting with Built-in Monitors and Its Long-term Evaluation in Animal Experiments for Up To 5 Weeks  
Nobumasa Katagiri (National Cerebral and Cardiovascular Center Research Institute, Japan)
- SY01-7 Withdrawn

09:30 – 11:00 IFAO Symposium3 Future-ability of Artificial Organs in US, Europe, Asia, and Japan

**Chairs Mark Slaughter (University of Louisville, United States)  
Yoshiyuki Taenaka (National Cerebral and Cardiovascular Center, Japan)**

- SY03-1 Academia-Industry-Government Collaboration for Medical Innovation: Focusing on Medical Devices  
Keynote Yoshiyuki Taenaka (National Cerebral and Cardiovascular Center, Japan)
- SY03-2 Ethical and epistemological questions in (bio)artificial organs  
Cecile Legallais (University of Technology of Compiègne / CNRS, France)
- SY03-3 Current status and future-ability of artificial organs in United States  
Mark Slaughter (University of Louisville, United States)
- SY03-4 Future Ability of Artificial Organs: Japanese Regulatory View  
Nobuhiro Handa (Pharmaceuticals and medical Devices Agency, Japan)
- SY03-5 Current Strategy for Medical Device Industrialization in Korea  
Kyung Sun (Korea University, Korea)
- SY03-6 Machine Perfusion in Liver Transplantation; the end of thence age?  
Glenn Bonney (Department of Hepatobiliary and Liver Transplant / SurgiCAL ProtEomics Laboratory (SCALPEL))

## Program

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13:00 – 13:50 IFAO Presidential address

Chair Shunei Kyo (Tokyo Metropolitan Geriatric Hospital and Institute of Gerontology, Japan)

IPL Artificial organ and Cardiovascular surgery ~Futurability~

**Yoshiki Sawa** (Osaka University Graduate School of Medicine, Japan)

14:00 – 15:00 IFAO Invited lecture1 Long term life support with artificial heart

Chair Hikaru Matsuda (Professor Emeritus, Osaka University, Japan)

IL01 Long term life support with Mechanical Circulatory Support

**Mandeep R. Mehra** (Harvard Medical School/ Brigham and Women's Hospital, United States)

**Nov. 13, Wed. Osaka International Convention Center Room B (1001)**

08:00 – 09:30 IFAO Symposium2 Minimally invasive mitral valve procedures: MICS, MitraClip, NeoChord, and Transcatheter Mitral Valve Replacement

Chairs Gino Gerosa (University of Padova, Italy)

Hirokuni Arai (Department of Cardiovascular Surgery, Tokyo Medical and Dental University, Japan)

SY02-1 Micro-invasive mitral valve surgery

Keynote

Gino Gerosa (University of Padova, Italy)

SY02-2 The cutting edge of minimally invasive mitral valve surgery in Japan

Kazuma Okamoto (Akashi Medical Center, Japan)

SY02-3 Stepwise mitral valve repair for Barlow disease via minimally invasive approach

Taichi Sakaguchi (Hyogo College of Medicine, Japan)

SY02-4 A Novel Peel-away Type Device for Artificial Chordae Reconstruction with Tube Technique

Keiji Oi (Tokyo Medical and Dental University, Japan)

SY02-5 Current trends and experiences of minimally invasive and interventions in mitral valve surgery

Suchart Chaiyaroj (Ramathibodi Hospital, Mahidol University, Thailand)

SY02-6 Early Clinical Results of MitraClip for Severe Mitral Regurgitation

Satoshi Kainuma (Osaka University, Japan)

09:30 – 11:00 IFAO Symposium4 Artificial organs and regenerative medicine for failing organs: cardiac recovery during VAD support, decellularized valve, tissue engineering

Chairs Wolfram Zimmermann (University Medical Center Gottingen, Germany)  
Tetsuji Yamaoka (National Cerebral and Cardiovascular Center Research Institute / Kyoto University, Japan)

- SY04-1 Translation of Tissue Engineered Heart Repair from Bench-to-Bedside  
Keynote Wolfram Zimmermann (University Medical Center Göttingen, Germany)
- SY04-2 Building a new strategy for treating heart failure using cell sheet  
Shigeru Miyagawa (Osaka University, Japan)
- SY04-3 Current evidence for recellularisation of decellularised human matrices  
Samir Sarikouch (Hannover Medical School, Germany)
- SY04-4 Cardiac Remodeling Reversal in Patients with End-Stage Diffuse Coronary Artery Disease (CAD) by Intracoronary Implantation of Autologous CD34+ Cells - Phase I early and long-term results  
Fan-Yen Lee (Kaohsiung Chang Gung Memorial Hospital, Chang Gung University / Kaohsiung Chang Gung Memorial Hospital, Chang Gung University / Tri-Service General Hospital, National Defense University, Taiwan)
- SY04-5 Synthesis of polymeric fibrous nanostructured biodegradable small caliber scaffolds for cardiovascular tissue engineering  
Dionysios Markatos (University of Patras, Greece)
- SY04-6 Acellular Submillimeter-Diameter Vascular Grafts for Free Flap Survival in Rat  
Tetsuji Yamaoka (National Cerebral and Cardiovascular Center Research Institute / Kyoto University, Japan)

14:00 – 15:15 IFAO Symposium5 Hospital dialysis, Home dialysis, or Wearable dialysis

Chairs Bernd Stegmayr (Umea University, Sweden)  
Akihiro Yamashita (Hosei University, Japan)

- SY05-1 Hospital dialysis, Home dialysis  
Keynote Bernd Stegmayr (Umea University, Sweden)
- SY05-2 Superiority of Home Hemodialysis and Development of Antibacterial Nanoparticles for VA Catheters  
Tsutomu Furuzono (Kindai University, Japan)
- SY05-3 Wearable dialysis with an aid of adsorbent  
Stephen Ash (Indiana University Health Arnett and HemoCleanse Technologies, United States)
- SY05-4 Which membrane properties qualify best for home hemodialysis  
Joerg Vienken (University of Applied Sciences, Germany)
- SY05-5 Design of wearable blood purification devices, mimicking peritoneal dialysis  
Akihiro Yamashita (Hosei University, Japan)

## Program

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15:20 – 16:35 IFAO Symposium6 Perfusionist symposium: Role of perfusionist in your heart team

Chairs Bradley T Kulat (Lurie Children's Hospital of Chicago, United States)  
Motonobu Nishimura (Tottori University Faculty of Medicine / Tottori University Hospital, Japan)

- SY06-1 The Role of the Perfusionist  
Keynote Bradley T Kulat (Lurie Children's Hospital of Chicago, United States)
- SY06-2 Current Status of Extracorporeal Circulation in Cardiac Surgery in Mainland China  
Xiaotong Hou (Beijing Anzhen Hospital, China)
- SY06-3 Venoarterial-arterial extracorporeal membrane oxygenation for the patient with severe heart failure bridge to ventricular assist device  
Takeshi Goto (Hirosaki University School of Medicine and Hospital, Japan)
- SY06-4 The core ability of perfusionist in our heart team  
Hiromi Matsugami (Tottori University Hospital, Japan)
- SY06-5 The responsibilities and activities of perfusionists in our hospital in Japan  
Masashi Tagaya (National Hospital Organization Kure Medical Center, Japan)

**Nov. 13, Wed. Osaka International Convention Center Room C (1002)**

08:00 – 09:00 Oral Session1 Kidney

Chair Akihiro Yamashita (Hosei University, Japan)

- OE01-1 Outcome of Slovenian myeloma patients with severe renal injury treated with highcutoff hemodiafiltration 2010-2018  
Andreja Marn Pernat (University Medical Center Ljubljana / University of Ljubljana, Slovenia)
- OE01-2 Pentraxin 3 might be a useful biomarker as cardiac condition in single hemodialysis.  
Junko Goto (University of Yamanashi, Japan / Umea University, Sweden)
- OE01-3 5-years results of primary balloon angioplasty for native forearm stenotic cephalic vein during vascular access creation  
Hsu-Ting Yen (Chang Gung Memorial Hospital, Kaohsiung Medical Center, Taiwan)
- OE01-4 Biocompatible polymer-coated hemofilters have a favorable effect on diffusional function in dialysis  
Masashi Tagaya (National Hospital Organization Kure Medical Center, Japan)
- OE01-5 Location effect of the ultrafiltration pump on the solute removal performance in intermittent infusion hemodiafiltration (I-HDF).  
Masaya Watanabe (Hosei University, Japan)

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**14:00 – 15:15 Oral Session2 Regenerative medicine**

**Chair Yoshiaki Takewa (National Cerebral and Cardiovascular Center, Japan)**

- OE02-1 Advanced Maturation in Human Induced Pluripotent Stem Cell-Derived Engineered Cardiomyocyte Tissues in Terms of Contractile and Relaxation Capacity  
Hiroshi Goto (The University of Tokyo / Tokyo Women's Medical University, Japan)
- OE02-2 NOVEL SURFACE COATINGS AS BIOCOMPATIBLE RESERVOIRS TO DEPLOY BMP-2 FOR BONE REGENERATION  
Reema Anouz (Martin Luther University Halle-Wittenberg, Germany)
- OE02-3 A novel strategy to engineer pre-vascularized 3-dimensional skin substitutes to achieve efficient, functional engraftment  
Hiromi Miyazaki (Research Institute, National Defense Medical College, Japan)
- OE02-4 Regenerative therapy for liver fibrosis using IC-2-engineered mesenchymal stem cell sheets  
Yohei Kono (Tottori University, Japan)
- OE02-5 Reconstruction of an Injectable Vascularized Adipose Tissue for Soft Tissues Regeneration  
Fiona Louis (Osaka University, Japan)
- OE02-6 Can Oblique Micro Grooves on Bottom Wall of Flow Channel Sort Cells?  
Shigehiro Hashimoto (Kogakuin University, Japan)

**15:20 – 16:45 Oral Session3 MCS**

**Chair Hironori Izutani (Ehime University Graduate School of Medicine, Japan)**

- OE03-1 The atrial vortex ring influences the ventricular flow pattern in the assisted heart  
Mojgan Ghodrati (Medical University of Vienna / Ludwig Boltzmann Institute, Austria)
- OE03-2 Withdrawn
- OE03-3 Improved drainage cannula design to avoid thrombosis in Veno-arterial ECMO  
Ashkan Vatani (Monash University, Australia)
- OE03-4 Evaluation of peripheral circulation under circulatory assist with continuous-flow left ventricular assist device by laser speckle flowgraphy  
Junichi Shimamura (National Cerebral and Cardiovascular Center Research Institute / University of Tokyo, Japan)
- OE03-5 Assessment of a newly designed double tube type membrane oxygenator by computational fluid-flow and heat transfer simulation  
Teiji Oda (Shimane University Faculty of Medicine, Japan)
- OE03-6 Novel Control Unit for the Rotary Blood Pumps Aimed to Decrease LVAD Malfunction  
Dmitry Telyshev (Sechenov University, Russian Federation)
- OE03-7 A Novel Fibre Optic Pressure Sensor for the Control of Ventricular Assist Devices  
Andrew Stephens (Monash University, Australia / Baker Heart and Diabetes Institute, Australia)

11:00 – 11:40 IFAO Poster session1 Pediatric VAD1

Chair Hajime Ichikawa (National Cerebral and Cardiovascular Center, Japan)

- PE01-1 Dynamic lactate change can be a marker for perfusion used in ECMO care of pediatric cardiogenic shock  
Kwan-Ru Huang (Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan)
- PE01-2 The Clinical Outcomes of Pediatric Fulminant Myocarditis Supported by Ventricular Assist Device  
Takuji Watanabe (Osaka University Graduate School of Medicine, Japan)
- PE01-3 Withdrawn
- PE01-4 Venoaerterial extracorporeal membrane oxygenation as the first line mechanical support for Pediatric fulminant myocarditis  
Shu-chien Huang (National Taiwan University Hospital, Taiwan)
- PE01-5 Ten-year-experience of interhospital extracorporeal membrane oxygenation transport for pediatric patients  
Ruey-Hung Tai (National Taiwan University Hospital, Taiwan)

11:00 – 11:40 IFAO Poster session2 Pediatric VAD 2

Chair Takayoshi Ueno (Osaka University Graduate School of Medicine, Japan)

- PE02-1 Outcomes of long-term support with implantable VAD as bridge to transplant in adolescent patients: A single institution experience  
Yuji Tominaga (Seirei Hamamatsu General Hospital, Japan)
- PE02-2 Role of left ventricular assist device therapy for children with heart failure and restrictive cardiomyopathy  
Kanta Araki (Osaka University, Japan)
- PE02-3 Infectious complications in pediatric Ventricular Assist Devices: Single centre Experience  
Tiziana Fragasso (Children's Hospital Bambino Gesù, Italy)
- PE02-4 Longest pediatric biventricular assist device support in the world  
Motoki Komori (National Cerebral and Cardiovascular Center, Japan)
- PE02-5 The Clinical Utility of Ventricular Assist Device Log Files  
Sam Emmanuel (St Vincent's Hospital, Australia)

11:00 – 11:40 IFAO Poster session3 Pediatric VAD 3

Chair Yasutaka Hirata (The University of Tokyo, Japan)

- PE03-1 Withdrawn
- PE03-2 Thromboelastography Platelet Mapping monitoring in long-term mechanical circulatory support devices in children  
Alessandra Rizza (Bambino Gesù Children's Hospital, Italy)

PE03-3 Utilize intra-aortic balloon pump for left ventricle decompression in pediatric peripheral extracorporeal membrane oxygenation

Ying-Jui Lin (Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine / Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Taiwan)

PE03-4 Mechanical circulatory support for pediatric cardiogenic shock

Naoki Okuda (Osaka University Graduate School of Medicine, Japan)

**11:00 – 11:40 IFAO Poster session4 Valves**

**Chair Hiroyuki Nishi (Osaka General Medical Center, Japan)**

PE04-1 Mechanical Hardness of Calcified Lesions in Aortic Stenosis and Prediction in Computed Tomography

Takashi Shirakawa (Kansai Rosai Hospital / Osaka University Graduate School of Medicine, Japan)

PE04-2 Poly(ether-ether-ketone) (PEEK) mechanical heart valve with poly(2-methacryloyloxyethyl phosphorylcholine) (PMPC)-grafted surface

Tetsuji Yamaoka (National Cerebral and Cardiovascular Center (NCVC) Research Institute, Japan)

PE04-3 Dynamics of a pulmonary ePTFE valve by using a multi-camera high-speed 3D reconstruction system

Yasuyuki Shiraishi (Institute of Development, Aging and Cancer, Tohoku University, Japan)

PE04-4 Results of right thoracotomy MICS-AVR in our hospital

Hideki Tanioka (Osaka University, Japan)

**11:00 – 11:40 IFAO Poster session5 Artificial kidney**

**Chair Tadashi Tomo (Clinical Engineering Research Center Faculty of Medicine, Oita University, Japan)**

PE05-1 Impact of three-dimensional tortuous pore structure on polyethersulfone membrane morphology and mass transfer properties from a manufacturing perspective

Makoto Fukuda (Kindai University, Japan)

PE05-2 Development and clinical evaluation of a novel automatic ascites filtration and concentration equipment

Toshiya Okahisa (Tokushima University Graduate School, Japan)

PE05-3 Evaluation of the difference in removal efficiency and biocompatibility between pre- and post-dilution on-line hemodiafiltration

Yoshitaka Kurihara (Hashimoto Clinic, Japan)

PE05-4 Novel artificial oxygen carriers for normothermic preservation of explanted kidneys

Katja Bettina Ferenz (University of Duisburg-Essen, University Hospital Essen, Germany)

PE05-5 Inference of cardiomyocyte beating function in hemodialysis treatment

Hiroyuki Hamada (Kyushu University, Japan)

## Program

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**11:00 – 11:40 IFAO Poster session6 Regenerative therapy (orthopedics)**  
**Chair Akira Myoui (Medical Center for Translational Research, Osaka University Hospital, Japan)**

PE06-1 Withdrawn

PE06-2 Effect of dynamic protein corona of magnetic hydroxyapatite scaffold on promotion of osteoblast proliferation

Yao Wu (Sichuan University, China)

PE06-3 Preparation of decellularized ligament and tendon sheets for reconstruction of periodontal ligament

Naoko Nakamura (Shibaura Institute of Technology, Japan)

PE06-4 A comparative study on the effects of various concentrations of low and high molecular weight hyaluronic acid on human chondrocyte cell metabolism in vitro

George Jacob (Ks Hegde Medical Academy, India)

**11:00 – 11:40 IFAO Poster session7 Tissue engineerings**  
**Chair Toshihide Mizuno (National Cerebral and Cardiovascular Center, Japan)**

PE07-1 Development of in vivo tissue engineered decellularized connective tissue for tubular vascular grafts and vascular patches

Masashi Yamanami (Kyoto Prefectural University of Medicine, Japan)

PE07-2 Construction of 3D tissue models using layer-by-layer cell coating technique for drug development and regenerative medicine

Takami Akagi (Osaka University, Japan)

PE07-3 Effects of ethanol and glutaraldehyde treatments on mechanical properties of porcine pericardium

Tomoya Inoue (Kyoto Prefectural University of Medicine, Japan)

PE07-4 Evaluation of Polylactic acid as a biomaterial for cardiovascular stent and tissue engineering applications

Ramya Ahuja (Indian Institute of Technology, India)

PE07-5 A case of covered Cheatham-Platinum(CP) stent implantation for the treatment of native coarctation of Aorta.

Dawei Feng (Shaanxi Provincial People's Hospital, China)

**11:00 – 11:50 IFAO Poster session8 Regenerative therapy/others**  
**Chair Itsunari Minami (Osaka University, Japan)**

PE08-1 Genetic instability should be checked in clinical application for pluripotent stem cell-derived clinical products?

Hanayuki Okura (Fujita Health University, Japan)

PE08-2 Current technical status of the detection methods of potential mass formation caused by impurities of PSCs-derived products.

Hanayuki Okura (Fujita Health University, Japan)

PE08-3 Development of an implantable immunomodulatory material based on cell moving for cancer treatment

Tsuyoshi Kimura (Tokyo Medical and Dental Univeristy, Japan)

PE08-4 Novel Therapeutic Modalities for Cardiovascular Disorders

Mia Karam (American University of Beirut, Lebanon)



PE08-5 Total Liquid Ventilation with Oxygen Fine Bubble Dispersion Prevents from Acute Lung Injury in Rats

Kenta Kakiuchi (Waseda University, Japan)

PE08-6 Preparation of magnetic field susceptible hydrogels for inducing the 3D lumen formation of epithelial cells

Masaya Yamamoto (Tohoku University, Japan)

## 11月13日(水) 大阪国際会議場 萌芽研究ポスター会場 (12F ホワイエ)

### 15:00 – 17:00 萌芽研究ポスターセッション 1

**座長 梅津 光生 (早稲田大学創造理工学部総合機械工学科)**

YP01-1 人間ドックへの腸音図システムの導入

木原 悠助 (徳島大学医学部医学科 Student Lab)

YP01-2 在宅医療を想定した遠隔医療支援システムの研究

尾崎 詢季 (東京工科大学医療保健学部 臨床工学科)

YP01-3 模擬的動脈圧に対応した準自動循環制御システムの基礎検証

小坂 美穂 (近畿大学病院臨床工学部)

YP01-4 ウシ心膜を用いた経カテーテル僧帽弁尖の開発と拍動循環シミュレータによる機能評価

森脇 涼 (早稲田大学大学院創造理工学研究科総合機械工学専攻)

YP01-5 遠心ポンプ内の気泡動態変化を早期検知できる多点モニタリングシステムの開発

平松 侃大 (広島国際大学保健医療学部医療技術学科臨床工学専攻/広島大学病院 心臓血管外科)

### 15:00 – 17:00 萌芽研究ポスターセッション 2

**座長 巽 英介 (国立循環器病研究センター人工臓器部)**

YP02-1 腎血流補助用カテーテル式血液ポンプの多目的最適化—目的関数に関する検討—

荒居 誠一 (東京電機大学大学院理工学研究科電子・機械工学専攻)

YP02-2 補助人工心臓評価用模擬循環装置における人工弁の形状および弾性率と圧力波形の検討

石神 えみこ (桐蔭横浜大学医用工学部生命医工学科)

YP02-3 マルチカメラシステムによる高分子製心臓代用弁可視化の再現精度

岩元 直樹 (東北大学大学院医工学研究科医工学専攻)

YP02-4 遠心血液ポンプにおけるインペラの吐出角がポンプの諸特性に与える影響

小椋 長征 (横浜国立大学大学院理工学府)

YP02-5 画像解析による高せん断応力下の損傷赤血球検知法の提案

井上 雅喬 (芝浦工業大学理工学研究科システム理工学専攻)

### 15:00 – 17:00 萌芽研究ポスターセッション 3

**座長 徳永 滋彦 (JCHO 九州病院心臓血管外科)**

YP03-1 動圧浮上遠心血液ポンプの軸受性能を推定可能なニューラルネットワークの構築

濱川 滉大 (東京理科大学大学院理工学研究科機械工学専攻)

YP03-2 植込み型補助人工心臓駆動停止による心臓と全身への影響

渡部 開智 (奈良県立医科大学医学部医学科)

YP03-3 当動物実験施設におけるLVAD急性実験モデルの変遷

関 晴永 (東京医科歯科大学大学院 心臓血管外科)

## Program

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- YP03-4 大動脈解離シミュレーションモデルの開発  
盛田 良介 (東北大学大学院医工学研究科医工学専攻)
- YP03-5 腹膜透析を模倣した新規血液浄化装置の検討  
大坪 佑生 (法政大学大学院理工学研究科応用化学専攻)

### 15:00 – 17:00 萌芽研究ポスターセッション 4

座長 赤川 英毅 (国立循環器病研究センター)

- YP04-1 逆流モデルを組み込み可能な拍動循環シミュレータを用いた小児用吸収性僧帽弁形成リングの性能評価  
西村 剛毅 (早稲田大学大学院創造理工学研究科総合機械工学専攻)
- YP04-2 逆濾過方式の I-HDF 療法における除水ポンプの位置が溶質除去性能に与える影響  
渡辺 誠也 (法政大学 生命科学部 環境応用化学科)
- YP04-3 微細管路系による流体剪断負荷と von Willebrand factor 損傷に関する特性評価の基礎検討  
館崎 祐馬 (東北大学大学院医工学研究科医工学専攻人工臓器医工学講座)
- YP04-4 外来診察の際に使用可能な腸音図システムの試作開発  
勝見 大誠 (徳島大学医学部医学科 StudentLab)
- YP04-5 仮想患者シミュレータに用いる血行動態制御モデルのための新しい心拍数制御アルゴリズムの提案  
藤本 実和 (広島国際大学保健医療学部医療技術学科臨床工学専攻)

### 15:00 – 17:00 萌芽研究ポスターセッション 5

座長 酒井 康行 (東京大学大学院工学系研究科・化学システム工学専攻)

- YP05-1 抗感染性カテーテルの創出を目指したアパタイトナノ材料の調製および抗菌メカニズムの検討  
大下 真璃 (近畿大学大学院生物理工学研究科)
- YP05-2 血液中で硬化するプレフィールド型骨ペーストの開発  
陳 曦 (筑波大学大学院数理物質科学研究科物質・材料工学専攻/物質・材料研究機構)
- YP05-3 Development of gelatin methacrylate and hydroxyethyl methacrylate hydrogel microwells for  $\beta$  cell implantation  
Sarun Tulakarnwong (東京大学大学院工学系研究科バイオエンジニアリング専攻)
- YP05-4 接着細胞の自己凝集化技術 (CAT) を用いた毛細血管含有ファイバー組織体の作製  
橋本 真悟 (岡山理科大学大学院工学研究科応用化学専攻/岡山理科大学フロンティア理工学研究所)
- YP05-5 細胞老化抑制を目指したマイトファジー誘導ナノキャリアの開発  
竹間 恒佑 (首都大学東京大学院都市環境科学研究科)
- YP05-6 成長因子を用いない血管新生誘導ゼラチンハイドロゲルの設計と機能評価  
水野 陽介 (筑波大学大学院数理物質科学研究科物質・材料工学専攻)