

APSAO

ANNUAL CONFERENCE OF THE ASIA-PACIFIC SOCIETY
FOR **ARTIFICIAL ORGANS**
TAIPEI, OCT 25-26, 2018

Annual Conference of the Asia-Pacific Society for **ARTIFICIAL ORGANS** OCT 26, 2018

International Convention Hall,
5 & 6F, The Second Medical Building,
Cheng Hsin General Hospital, Taipei





Welcome

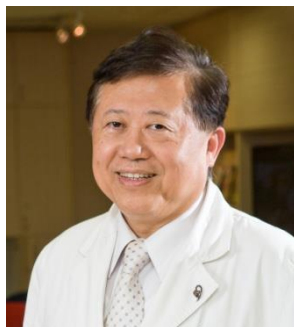
Dear Colleagues and Friends,

On behalf of the Asia-Pacific Society for Artificial Organs (APSAO) Committee, it is our privilege to welcome you to attend the 2018 APSAO Annual Conference.

In accordance with the mission of the APSAO, the annual conference is committed to promoting human well-being with a platform for multidisciplinary communication and education in areas of artificial organ research and practice.

To meet this aim, we invite experts in fields of artificial heart, artificial extra-corporeal liver support, cochlear implant and artificial retinas to not only update conference delegates on the latest advances in related technologies and skills, but also provide a showcase for discussion and exploration of issues at the frontier of our professions. We also provide the opportunity for delegates to present posters to share their experiences in the application of advanced treatment methods in the fields of artificial organs, as well as valuable academic research and cases.

We are certain your participation would greatly contribute to a high quality and successful conference. Also wishing you have a good time in Taipei.



A handwritten signature in black ink that reads 'Jeng Wei'.

Jeng Wei, Chairman of 2018 APSAO
M.D., Doctor of Science in Medicine (Columbia University, New York)
Professor of Surgery (Cardiovascular Surgery)
Director, Heart Centre, Cheng Hsin General Hospital, Taipei



Trustees of APSAO

President of APSAO

Yoshiyuki Taenaka, M.D., Ph.D.

Director, Research and Development Initiative Center,
Deputy Director, Research Institute National Cerebral
and Cardiovascular Center, Japan

Vice President of APSAO

Byung Chul Chang, M.D., Ph.D.

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University, Korea

Xiao Cheng Liu, M.D., Ph.D.

President, TEDA International Cardiovascular Hospital,
China

Chandra P. Sharma,

Adjunct Professor, MCOPS, Manipal University, India

Chairman of the Congress

Jeng Wei, M.D., M.S.D

Director, Heart Centre, Cheng Hsin General Hospital,
Taipei

Secretary-General of the Congress

Chung Yi Chang, M.D.

Department of Cardiovascular Surgery, Heart Centre,
Cheng Hsin General Hospital, Taipei



Councilors of APSAO

(in alphabetical sequence)

Akio Kishida	Professor, Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Tokyo
Cumaraswamy Sivathanan	Program Director of the Mechanical Heart Devices, National Heart Centre Consultant, Cardiovascular and Thoracic Surgery, Mount Elizabeth Medical Centre Medical Centre, Singapore
Einly Lim	Universiti Malaya, Kuala Lumpur
Geoffrey Tansley	Professor and Head of Griffith School of Engineering, Queensland
Goro Matsumiya	Professor, Dept. of Cardiovascular Surgery Chiba University Graduate School of Medicine, Chiba
Hakrishna Varma	Head, Biomedical Technology Wing, SCTIMST, Trivandrum
Ho Sung Son	Professor, Dept. of General thoracic & Cardiovascular Surgery, Korea University Medical Center, Seoul
Jae Soon Choi	Professor, Asan Institute for Life Sciences, Asan Medical Center, Biomedical Engineering Research Center, Seoul
Jeng Wei	Director, Heart center, Cheng Hsin General Hospital, Taipei
Jian Xu	Beijing Research Institute Precise Mechanics and Controls, Beijing
Julian Wong	Head, Dept. of Vascular Surgery, National University of Singapore, Singapore
Kahar Osman	Head, Dept. of Bioscience And Medical Engineering, Universiti Teknologi Malaysia, Johor
Kenichi Matsuda	Chairman and Professor, Dept. of Emergency and Critical Care Medicine, University of Yamanashi School of Medicine, Yamanashi
Kyung Sun	Professor, Korea University, Seoul
Qingyu Wu	Tsinghua University, Cardiovascular Surgery, Beijing
Shoei Shen Wang	Superintendent of Fu-Jen Catholic University Hospital
Zhongmin Liu	Professor, Cardiothoracic Surgery, President , Shanghai East Hospital, Tongji University, Shanghai



Friday, Oct 26, 2018

Time	Program	
0800-0820	Registration	
0820-0830	Welcome Address Shou Dong Lee (Superintendent, Cheng Hsin General Hospital) Yoshiyuki Taenaka (President, The Asia-Pacific Society for Artificial Organs) Jeng Wei (Director, Heart Center, Cheng Hsin General Hospital)	
0830-1030	Session 1-1 : Artificial Heart	Moderators
0830-0900	Preclinical Research of VAD: From Outer Space to Heart <i>Xiao Cheng Liu</i>	Minoru Ono Jeng Wei
0900-0930	HeartMate II LVAD Experience in Japan <i>Taiki Higo</i>	Yoshiyuki Taenaka Shoei Shen Wang
0930-1000	Latest Trends in Mechanical Circulatory Support <i>Andrew Boyle</i>	Takashi Nishimura Chien Sung Tsai
1000-1030	Heartmate III LVAD -Manchester and European Experience <i>Rajamiyer Venkateswaran</i>	Chung Yi Chang Chun Che Shih
1030-1045	Coffee Break	
1045-1145	Session 2 : Artificial Extracorporeal Liver Support	
1045-1115	A Review of Literature on Molecular Adsorbents Recirculatory System <i>Raghavendra Mayya</i>	Tetsuji Yamaoka Rey Heng Hu
1115-1145	Liver dialysis <i>Yi Ting Chen</i>	Rey Heng Hu Chin Su Liu
1145-1200	Group Photo time	
1200-1245	Luncheon	
1245-1345	Session 3 : Cochlear Implant	
1245-1315	Overview of CI in Poland <i>Piotr H. Skarzynski</i>	Akio Kishida Lieber Po Hung Li
1315-1345	Cochlear Implantation <i>Kuang Chao Chen</i>	Akio Kishida Piotr H. Skarzynski



Friday, Oct 26, 2018

Time	Program	Moderators
1345-1445	Session 4 : Artificial Retinas	
1345-1415	Bioelectronic Medicine: Treating Diseases with Miniaturized Biomimetic Devices <i>Wen Tai Liu</i>	Shih Jen Chen Tai Chi Lin
1415-1445	Outcome of Argus II Artificial Vision-report of 3 Patients in Taiwan <i>Shih Jen Chen</i>	Wen Tai Liu Tai Chi Lin
1445-1500	Coffee Break	
1500-1600	Session 1-2: Artificial Heart	
1500-1530	The Current s Status of Heart Replacement Therapy <i>Yoshifumi Naka</i>	Feng Chun Tsai Ping Chun Li
1530-1600	A Less Invasive Implantation Technique and Strategy for Continuous-flow Left Ventricular Assist Devices: State of the Art <i>Jens Garbade</i>	Yih Sharng Chen Pyng Jing Lin
1600-1730	Session 5: Free Paper Time	
	<ol style="list-style-type: none"> 1. Takashi Nishimura/ Native Heart Load Control System (NHLCS) for Continuous-flow LVAD 2. Tetsuji Yamaoka/ Short-term Evaluation of Anticoagulant-free Poly(ether ether ketone) (PEEK) Mechanical Heart Valve in a Porcine Aortic Valve Replacement Model 3. Yoshiaki Takewa/ Development of a Novel Tissue-engineered Heart Valve 4. Daniel Timms/ BiVACOR Rotary Total Artificial Heart 5. Tomonori Tsukiya/ Development of an Extracorporeal Ventricular Assist Device with a Novel Hydrodynamically-levitated Centrifugal Blood Pump 6. Nobumasa Katagiri/ A Compact Durable ECMO System and Long Term Evaluation In Chronic Animal Experiments 7. Kento Koyashiki/ Development of Navigator Molecule to Switch the Metabolic Pathway of Beta-2-microglobulin in the Blood 	Toru Masuzawa Geoff Tansley Fan Yen Lee
1730	Closing Remark Jeng Wei	



Poster Presentation (6F, Poster Area)

- P1.** *The Mechanical Impact on Blood of High and Low Flow Rates in Extracorporeal Membrane Oxygenation*
Hoi Houg (Chris) Chan, Katrina K Ki, Margaret R Passmore, Jacky Y Suen, John F Fraser
Innovative Cardiovascular and Engineering Technology Laboratory and Griffith University, Australia
- P2.** *Openheart Project – Improving International Collaboration in the Field of Mechanical Circulatory Support through an Open-source Research Community*
Sam Liao, Jo Pauls, Geoff Tansley
Innovative Cardiovascular Engineering and Technology Laboratory (ICETLAB), Critical Care Research Group, The Prince Charles Hospital, Australia. The Queensland University of Technology, Brisbane, Australia. School of Medicine, The University of Queensland, Australia. School of Engineering and Built Environment, Griffith University, Australia.
- P3.** *Anatomical Fitting of an Intraventricular Ballin Pump*
Alice C. Boone, Shaun D. Gregory, Geoff D. Tansley
School of Engineering and Built Environment, Griffith University, Southport, Australia
- P4.** *Current Trends of the Insurance System in Japan of Reimbursement Prices for New Medical Devices*
Eiki Akagawa, Eisuke Tatsumi
National Cerebral and Cardiovascular Center , Japan
- P5.** *In-vitro Detoxification Function of Bamboo Charcoal Beads for Purifying Blood*
Ming Fa Hsieh
Chung Yuan Christian University, Taoyuan
- P6.** *Identification of Circulating Cells Captured on Peptide-modified Acellular Blood Bessel*
Yu I Hsu, Atsushi Mahara, Tetsuji Yamaoka
National Cerebral and Cardiovascular Center, Japan
- P7.** *In-vitro Comparison of Left Ventricular Pressure-Volume Area and Myocardial Blood Flow with Volume-Displacement and Rotary Left Ventricular Assist Devices*
Eric L. Wu^{1, 2}, Geoff D. Tansley^{1, 3}, John F. Fraser^{1, 2}, Shaun D. Gregory^{1, 2, 3, 4}
1-Innovative Cardiovascular Engineering and Technology Laboratory (ICETLAB), Critical Care Research Group, The Prince Charles Hospital, Brisbane, Australia
2–School of Medicine, The University of Queensland, Brisbane, Australia
3–School of Engineering and Built Environment, Griffith University, Southport, Australia
4–Department of Mechanical and Aerospace Engineering, Monash University, Melbourne, Australia



Social Program (invited only)

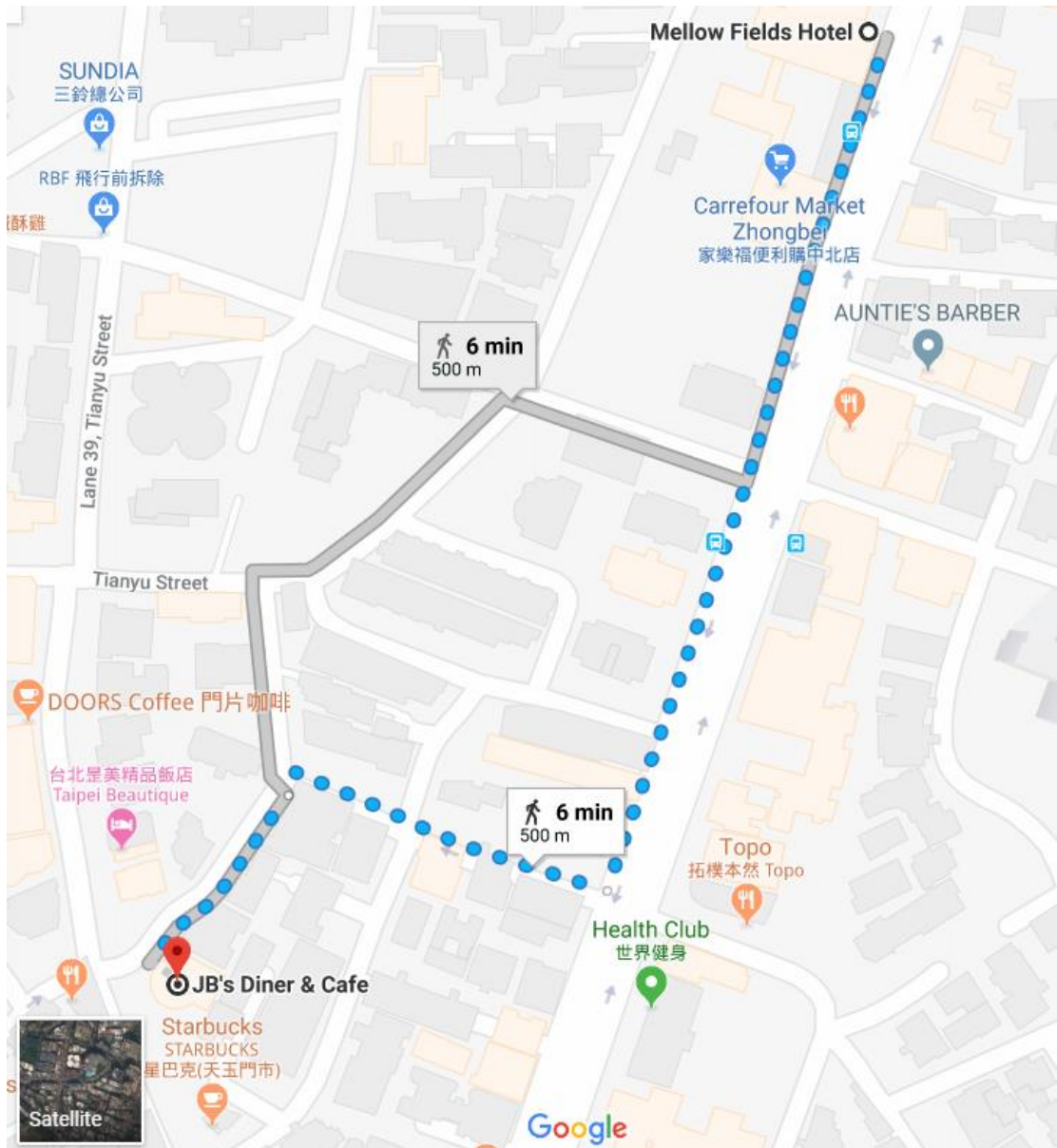
Thursday, Oct 25, 2018

18:00-20:30

Welcome Dinner

18:00, JB's Diner

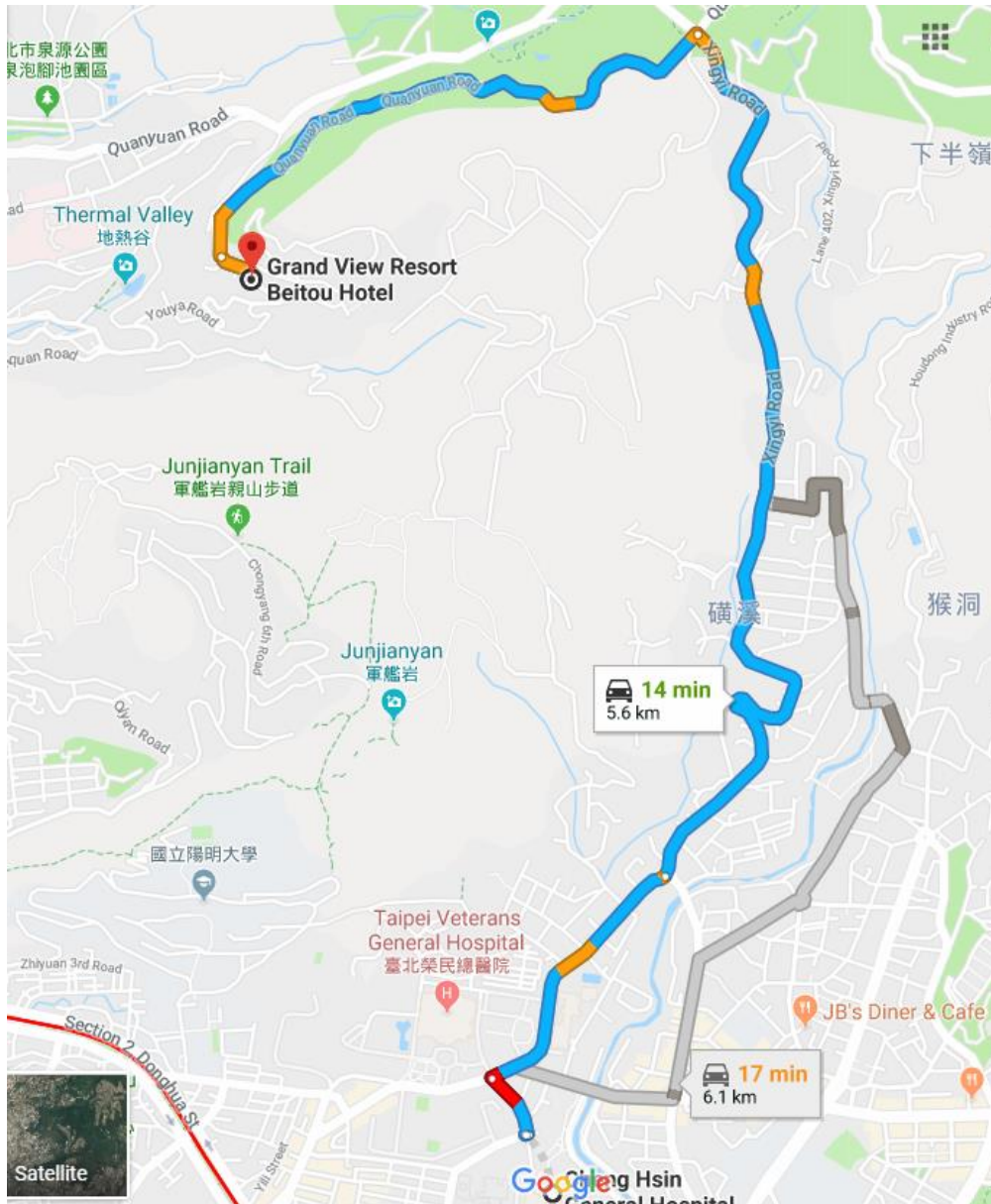
- No.2, Aly. 16, Ln. 38, Tianyu St., Shilin Dist., Taipei
- 台北市士林區天玉街38巷16弄2號
- TEL: +886-2-2876-1588





Social Program (invited only)

Friday, Oct 26, 2018	
18:30 21:30	Gala Dinner 1830, Grand View Resort Beitou, Taipei <ul style="list-style-type: none">• No. 30, Youya Rd., Beitou, Taipei• 北投麗禧酒店, 台北市北投區幽雅路30號• TEL:+886-2-2898-8888
Meeting point: 1745, Cheng Hsin General Hospital	





Sponsors/Exhibitors
(in alphabetical sequence)



Edwards



Medtronic





Congress Information

Venue

5 & 6F, International Convention Hall, the Second Medical Building, Cheng Hsin General Hospital
No. 45 Cheng Hsin St., Beitou 112, Taipei

Congress Language

Official congress language is English.
Simultaneous translation will not be provided.

Registration Fee

Members: No registration fee required.
Non-members / new members (registered after January 2018): NT\$6,000

Exhibition Time

Friday, 26 Oct 2018 08:00-17:30

Organization

Executive General

Kuo Chen Lee, M.D.
Department of Cardiovascular Surgery,
Heart Centre, Cheng Hsin General Hospital

Secretariat

Hou Sheng Yang, Yi Chen Wu
I Chen Chen, Chiu Yueh Chen
Wei Hsiu Huang
Anne Chen, Huei Chun Chen, Ching Hui Cheng,
Hsin Yi Huang
Chia Han Chu
Liang Yu Sang, Chary Lee, Wei Ting Hung,
Ching Chiu Wu

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