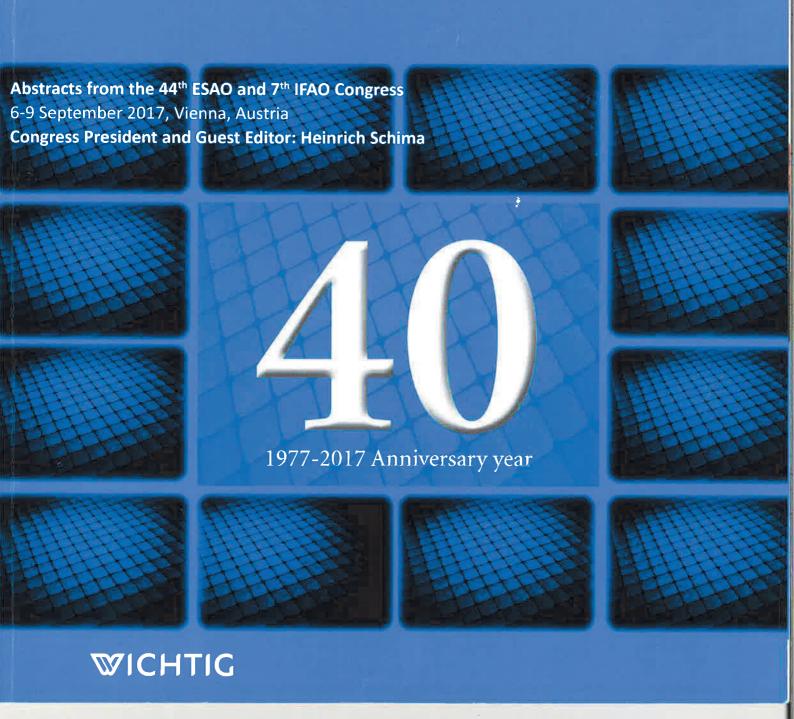
Volume 40 Number 8 August 2017

# IJAO

# The International Journal of Artificial Organs

Organ and tissue replacement: from bench to bedside



## IIAO General Information

#### The International Journal of Artificial Organs

#### **Publication data**

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#### Official Journal of the European Society for Artificial Organs

#### Aims and scope

The International Journal of Artificial Organs (IJAO) is the official Journal of the European Society for Artificial Organs (ESAO). The International Journal of Artificial Organs publishes monthly peer-reviewed research and clinical, experimental and theoretical contributions to the field of artificial and bioartificial organs and medical devices. The mission of the journal is to foster the development and clinical application of artificial and bioartificial organs, medical devices or procedures, to treat organ and tissue functional deficits.

The topics of interest range from the initial concept and interdisciplinary research to clinical application, and are grouped in the following independent sections managed by highly qualified Section Editors:

#### Apheresis, dialysis and liver support

This section focuses on devices and procedures for blood detoxification processes using membranes or sorbents, such as hemodialysis, hemofiltration, hemodiafiltration, plasmapheresis, immune apheresis, leukoapheresis, and processes for plasma procurement and the preparation of plasma derivatives. The section includes systems for blood detoxification and support of liver metabolic failure.

#### Cardiac assist devices and artificial heart

This section deals with left ventricular assist devices, trans-apical by-pass, extracorporeal heart assist devices, total artificial heart, valve implants, vascular prostheses, and organ perfusion equipment and techniques.

#### Artificial lung, ECMO and respiratory support

This section focuses on prostheses and procedures for the treatment of acute and chronic respiratory failure, development and clinical use of ECMO systems.

#### Sensory organs and neural stimulation

This section covers artificial and bioartificial tissues and organs to replace/correct sensory deficits (e.g., ear, eye etc.), as well as nerve and central nervous system

#### Tissue engineering, bioartificial organs and regenerative medicine

This section focuses on the development, characterization and use of bioengineered tissues and organs, and on techniques to investigate and promote tissue or organ self-regeneration including cell therapies.

#### Biomaterials and nanotechnology

This section deals with the development, manufacturing, modification, and characterization of synthetic and natural materials with controlled properties, down to the nanometer scale, that make them capable of contacting body fluids and cells for prosthetic and therapeutic applications.

#### Personalized medicine and individualized care

This section covers genomic, proteomic, metabolomic and computational characterization of pathological conditions, and on how this information may be used to custom tailored treatments based on artificial, bioartificial and tissue engineered organs.

#### Mechanical prostheses, robotics and medical technology

This section deals with the development and clinical use of mechanical prostheses and robotic systems, as well with new and emerging medical technologies for assistance of patients with organ or tissue failure, in need of rehabilitation and disease prevention.

#### Author information and manuscripts submission

Full author information and tutorials are available online at www.artificial-organs.com. Submissions accepted online at www.editorialmanager.com/ijao

Editorial enquiries: andrea.remuzzi@marionegri.it Production enquiries: production@wichtig.com

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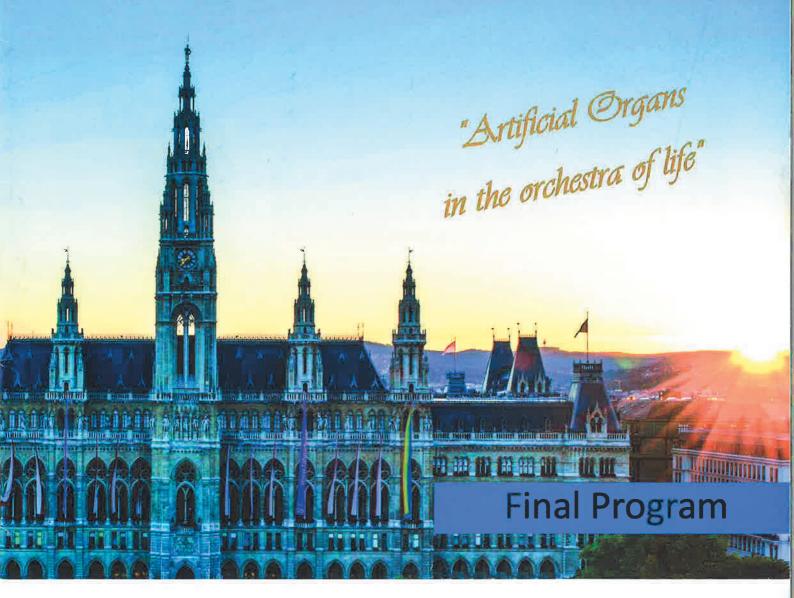
# ESAO and IFAO 2017



44<sup>th</sup> Annual Congress of the **European Society for Artificial Organs** 



7<sup>th</sup> Congress of the **International Federation for Artificial Organs** 











Friday, September 8	/ 09:30-10:00 /	Hall 1

Chair	K. Dasse; Louisville, US	
PL2	Plenary Session 2	

The Bionic Hand: Coupling the Brain to 09:30 PL3 **Prostheses** 

O. Aszmann; Vienna, AT

**Mechanical Cardiac Support and Cardiac** 10:00 PL4 Rhythm Management: A Marriage of two **Technologies** M. Hess; Minneapolis, US

#### Friday, September 8 / 11:00-12:30 / Hall 2

A22 Symposium: Numerical Modelling: Design, Optimization and Functional Characterization of VAD's

Chair 1	. F.	Consolo; Milan, IT
Chair 2	. L.	Wiegmann; Zürich, CH
11:00	O84	Past and Future of Blood Damage Modelling in Biofluid Mechanics Laboratory L. Goubergrits; Berlin, DE
11:12	O85	Strain-Based Blood Damage Modeling – Current Status and Future Perspectives L. Pauli; Aachen, DE

O86 Computational fluid dynamic analyses and 11:24 in vitro assessment of a novel microfluidic flow-based assay

A. Dimasi; Milano, IT

O87 Numerical modeling of the thrombogenic 11:36 potential of altered hemodynamics at the left ventricular apex-LVAD interface based on non-invasive patient-specific imaging techniques

F. Consolo; Milano, IT

Numerical design improvement and 11:48 088 experimental testing of a small VAD

K. Fraser; Bath, GB

O89 Influence of pump design variations on 12:00 hydraulic performance and blood damage: a computational fluid dynamics analysis L. Wiegmann; Zurich, CH

O90 Robust computational tools to improve the

development process of mechanical circulatory support

T. Kaufmann; Aachen, DE

12:24 Summary

12:12

#### Friday, September 8 / 11:00-12:30 / Hall 4

Emerging Applications in Extracorporeal B22 **Therapies** 

K. Derfler; Vienna, AT Chair 1 Y. Wu; Seattle, US Chair 2

Lp(a), a risk factor for cardiovascular 11:00 IL disease a successful treatment with LDL apheresis

K. Derfler; Vienna, AT

Extracorporeal therapies in the stem cell 11:30 IL transplantation setting

V. Witt; Vienna, AT

Selective apheresis of C-reactive protein: a 11:50 | IL new treatment option for myocardial infarction, stroke, pancreatitis, Crohn's disease, after bypass surgery and rheumatic diseases A. Sheriff; Berlin, DE

12:10 IL CytoSorb in liver failure B. Tyczynski; Essen, DE

#### Friday, September 8 / 11:00-12:30 / Hall 3

#### C22 Symposium: Nanomedicine

Chair 1 T. Groth; Halle, GE

G. Gallego-Ferrer; Valencia, ES Chair 2

**Two Decades of Commercializing** 11:00 IL **Nanomedicine for Artificial Organs** T. Webster; Boston, US

3D Printing of Advanced Photopolymers in 11:25 IL Tissue Engineering

S. Baudis; Vienna, AT

**O91** Immobilization strategies with 11:45 glycosaminoglycans-polymeric drug conjugate on biomaterials for antiinflammatory purposes

H. Al-Khoury; Halle (Saale), DE

O92 Electrospinning of fibres for nanomedical 12:00 applications

A. Repanas; Halle (Saale), DE

O93 Vascular grafts with defined fiber 12:15 orientations

C. Grasl; Vienna, AT