

# ISEM



# 2023 GENOA

## THE 16<sup>TH</sup> CONGRESS OF THE INTERNATIONAL SOCIETY FOR EXPERIMENTAL MICROSURGERY

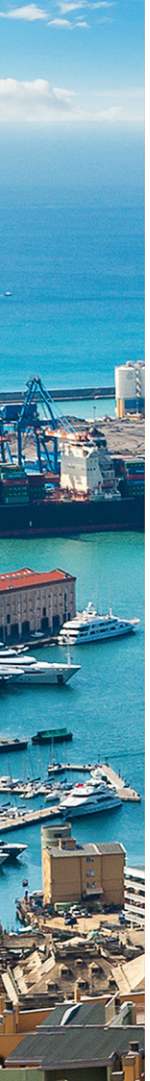
Francesco Boccardo  
President of the Congress

### 22<sup>ND</sup>-24<sup>TH</sup> JUNE 2023

[www.isem-Genoa2023.com](http://www.isem-Genoa2023.com)








Dear ISEM Members,  
I am very pleased and honored to invite you to Genoa for the 16th Congress of the International Society for Experimental Microsurgery (ISEM), which will be held from 22<sup>nd</sup> to 24<sup>th</sup> June 2023.

On the Gulf of Genoa in the Ligurian Sea, Genoa has historically been one of the most important ports on the Mediterranean. Genoa was the capital of one of the most powerful maritime republics for over seven centuries, from the 11th century to 1797. It was also nicknamed *la Superba* ("The Proud One") by Petrarch due to its glories on the seas and impressive landmarks. The historical center, also known as old town, of Genoa is one of the largest and most-densely populated in Europe. Part of it was also inscribed on the World Heritage List (UNESCO) in 2006 as *Genoa: Le Strade Nuove* and the system of the *Palazzi dei Rolli*. Genoa's historical city centre is also known for its narrow lanes and streets that the locals call "*caruggi*". Genoa is also home to the

University of Genoa, which has a history going back to the 15th century, when it was known as *Genuense Athenaeum*. The city's rich cultural history in art, music and cuisine allowed it to become the 2004 European Capital of Culture. The city also hosts the Italian Institute of Technology (IIT), which was established in 2003 jointly by the Italian Ministry of Education, Universities and Research and the Italian Minister of Economy and Finance, to promote excellence in basic and applied research. The main fields of research of the Institute are Neuroscience, Robotics, Nanotechnology, Drug discovery.

Our Society is mainly devoted to experimental and clinical researches mainly focused on microsurgery and we all well know that "Experiment is the sole judge of scientific truth" (Richard P. Feynman). The topics will include New advances in lymphology and lymphatic microsurgery, Newly developed experimental models, Bioengineering and regenerative medicine, Advances



in organ and tissue transplantations, Genetic and molecular processes, Technological biomedical innovations, Simulation systems, Nanomaterials, Robotic microsurgery, New technologies in general surgery and surgical specialties, Clinical and translational microsurgery, Training and education in microsurgery, Lymphedema patient associations in Europe and in the World.

Together with the Scientific Committee, I will work to organize a scientific program rich of novelties, multidisciplinary contributions, debates between renowned experts and participants coming from all over the world, dynamic and interactive sessions, giving to the youngest researchers an opportunity to actively participate in the heart of the congress, presenting their own contributions and draw inspirations for their daily scientific activities. Our effort will be focused to put specialists from different surgical and medical disciplines together because we are firmly convinced

that it is through the interdisciplinary collaboration that the highest peaks can be reached.

Joining the 16th ISEM Congress you will have the opportunity to enjoy our city as well and there will be also wonderful convivial occasions to be all together and share moments of relaxation and harmony.

Looking forward to meeting plenty of you in Genoa.

**Francesco Boccardo**

President of the Congress



**ISEM  
2023  
GENOA**

## THURSDAY 22

### 14:30 **OPENING OF THE CONGRESS**

Congress President & ISEM President welcome

### 14:50 **SESSION I "NEWLY DEVELOPED EXPERIMENTAL MODELS -TRANSLATIONAL RESEARCH"**

CHAIRMEN: **Norbert Németh** (Hungary) – **Mihai Oltean** (Sweden) – **Rene H. Tolba** (Germany)

14:55 Investigation of factors influencing the regeneration of vascular anastomoses (Keynote)

**Norbert Németh** (Hungary)

15:10 3R (Reduce, Replace Refine of Animal) Models in Teaching for Microsurgery (Keynote)

**Rene H. Tolba** (Germany)

15:25 Effects of multiorgan abdominal ischemic preconditioning on experimental kidney transplantation

**JC. Abate, I. Ivanoff, N. Arnal, M. Machuca, R. Papa-Gobbi, L. Vecchio, P. Stringa, N. Lausada** (Argentina)

15:35 Rat model of transplant of the abdominal rectus fascia (TxARF)

**J. Moreira** (Argentina)

15:45 Transplant vasculopathy characterization after aortic transplantation using a full mismatch between donor and recipient strains

**R. Zahreddine** (France)

15:55 Prospection of applied research for hydrogen therapy using pig models

**S. Iwai, M Sano, E. Kobayashi** (Japan)





16:05 From bed-to-bench and back again: patient-derived intestinal organoids as avatars for personalized and regenerative medicine (Keynote)

**Angelita Costantino** (Italy)

16:15 Translational research: present and future (Keynote)

**Stefano Puleo** (Italy)

16:30 COFFEE BREAK

17:00 **SESSION II "BIOENGINEERING AND REGENERATIVE MEDICINE-WOUND CARE AND ROLE OF THE LYMPHATIC SYSTEM"**

CHAIRMEN: **Eiji Kobayashi** (Japan) - **Zheng Jenny Zhang** (USA) - **Mats Hellström** (Sweden)

17:05 Bioengineering and Regenerative Medicine - with the view points of experimental microsurgery (Keynote)

**Eiji Kobayashi** (Japan)

17:20 Bioengineered tissue transplantation for novel female infertility treatments (Keynote)



**Mats Hellström** (Sweden)

17:35 An early assessment of bioengineered uterus tissue grafts used for partial uterus repair in the sheep model

**E. Sehic** (Sweden)

17:45 Effects of the intraoperative tissue desiccation and the administration of BGP-15 on microvascular anastomoses' regeneration in the rat

**LA. Fazekas, L. Dan, A. Peto, D. Handari, A. Varga, B. Barath, AA. Matrai, CS. Filler, T. Juhasz, IK. Bacskay, N. Nemeth** (Hungary)

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- 17:55 Uterus bioengineering: the creation of an acellular primate uterus scaffold  
**L. De Miguel-Gomez, E. Sehic, J. Ahlstrom, M. Oltean, M. Brannstrom, M. Hellstrom** (Sweden)
- 18:05 Translational Research: present and future (Keynote)  
**Tonia Luca** (Italy)
- 18:20 New concepts in wound management and wound healing products (Keynote)  
**Teresa Cannavale, Devon Romano** (Italy)
- 18:35 Targeting cell stress responses to mitigate tissue injury and promote regeneration (Keynote)  
**Zheng Jenny Zhang** (USA)
- 18:50 End of the Scientific Sessions of the day
- 18:55 **OPENING CEREMONY** Welcome Messages  
City Hall, Region, University, Hospital, Regional Association of Physicians  
Presentation of "Sun Lee Award" and "Lars Erik Gelin Award" Winners
- 19:15 **WELCOME CONCERT** Abiatari Ketevan's
- 20:00 **WELCOME COCKTAIL**



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FRIDAY 23

## 08:30 **SESSION III "ADVANCES IN ORGAN AND TISSUE TRANSPLANTATIONS"**

CHAIRMEN: **Wei Li** (China) - **Mihai Oltean** (Sweden) - **Shintaro Yagi** (Japan)

08:35 Biomarkers after organ transplantation: Recent developments and continuing needs (Keynote)  
**Mihai Oltean** (Sweden)

08:50 Microsurgery and experimental solid organ transplantation (Keynote)  
**Pablo Stringa** (Argentina)

09:05 Following-up blood flow, microcirculatory and micro-rheological alterations during the early wound healing phase of local and rotated musculocutaneous flaps in the rat  
**G. Kincses, AO. Flasko, LA. Fazekas, A. Varga, AA. Matrai, XL. Nguyen, K. Barabasi, N. Nemeth**

09:15 Road map for learning the mouse orthotopic liver transplantation technique  
**K. Tanaka** (Japan)

09:25 Intestinal autophagy and apoptosis during static cold storage with and without luminal preservation  
**B. Jasmine, A. Casselbrant, M. Hellström, M. Oltean** (Sweden)

09:35 Effect of mTOR inhibitor on liver regeneration after hepatectomy and partial liver transplantation  
**M. Hirata** (Japan)



09:45 Clinical and experimental microsurgery in liver transplantation (Keynote)

**Shintaro Yagi** (Japan)

10:00 COFFEE BREAK

10:30 **SESSION IV "ISCHEMIA-REPERFUSION IN MICROSURGERY - TECHNOLOGICAL BIOMEDICAL INNOVATIONS"**

CHAIRMEN: **Alberto Ballestín** (France) - **Stefano Puleo** (Italy) - **Pablo Stringa** (Argentina)

10:35 Microsurgical free tissue transfers, ischemia-reperfusion injury and how adjuvant therapies can improve the results (Keynote)

**Alberto Ballestín** (France)

10:50 Beneficial effect of PACAP 1-38 and BGP-15 on ischemia-reperfusion injury of groin flaps in the rat

**AO. Flasko, LA. Fazekas, A. Peto, A. Varga, AA. Matrai, WM. Al-Smadi, D. Reglodi, IK. Bacskay, T. Juhasz, N. Nemeth** (Hungary)

11:00 Optimizing machine perfusion protocols to enable ex-situ organ treatment

**D. Dondossola** (Italy)

11:10 Acute microcirculatory hemorheological and metabolic effects of severe renal ischemia-reperfusion and ischemic pre-conditioning in the rat

**DM. Adorjan, L. Fazekas, A. Varga, AA. Matrai, K. Barabasi, K. Peto, N. Nemeth** (Hungary)

11:20 Impact of postoperative ischemia after neuro-oncological resective surgery (Keynote)

**Alberto Ballestín** (France)





11:35 **SESSION V "ROBOTIC MICROSURGERY AND ARTIFICIAL INTELLIGENCE (AI) ASSISTED MICROSURGERY"**

CHAIRMEN: **Leonardo De Mattos** (Brazil) – **Francesco Boccardo** (Italy)

11:40 Transoral Laser Microsurgery Technologies: The past, the present and the future (Keynote)

**Leonardo De Mattos** (Brazil)

11:55 Robotic Intravenous Access (Keynote)

**Maria Koskinopoulou** (Greece)

12:10 Videomics of the Upper Aero-Digestive Tract (Keynote)

**Muhammad Adeel Azam** (Pakistan)

12:25 Novel Technologies for Microsurgery Robots (Keynote)

**Ajay Gunalan** (India)

12:40 Autonomous Robotic System for Laser Microsurgery (Keynote)

**Shunlei Li** (China)

12:55 Protecting Users and Data through Zero Trust security solutions (Keynote)

**Lino Gambella** (Italy)

13:10 Microsurgical robot experience: from pre-clinical studies to clinical cases

**Giulio Menichini** (Italy)

13:25 LUNCH – ISEM BOARD



14:30 **SESSION VI "RESEARCH AND NEW CHALLENGES IN LYMPHOLOGY AND LYMPHATIC MICROSURGERY"**

CHAIRMEN: **Miguel Amore** (Argentina) - **Evangelos Dimakakos** (Greece) - **Sandro Michelini** (Italy)

14:35 New concepts of genetics in Lymphology (Keynote)

**Sandro Michelini** (Italy)

14:50 Anatomical Researches in Lymphology (Keynote)

**Amore Miguel** (Argentina)

15:05 3D Ultrasonography in Lymphology (Keynote)

**Marina Cestari** (Italy)

15:20 Lymphatic system and the kidney: basic researches and clinical implications (Keynote)

**Dario Roccatello** (Italy)

15:35 Clinical Lymphology (Keynote)

**Evangelos Dimakakos** (Greece)

15:50 The Use of Fluorescence in Lymphatic Microsurgery (Keynote)

**Sara Dessalvi** (Italy)

16:00 Research and New Challenges in Neonatal and Pediatric Lymphology (Keynote)

**Carlo Bellini** (Italy)

16:15 New educational challenges in Lymphology (Keynote)

**Elodie Stasi** (Italy)



16:30 COFFEE BREAK

17:00 **SESSION VII "TRAINING AND EDUCATION IN MICROSURGERY"**

CHAIRMEN: **Yelena Akelina** (USA) - **Edna Montero** (Brazil) - **Norbert Németh** (Hungary)

17:05 The importance of Microsurgery in my surgical career (Keynote)

**Antonio Di Cataldo** (Italy)

17:20 News from Microsurgery Lab Columbia University; training more and more transplant surgeons!

Virtual Micro course: Utopia and Reality? (Keynote)

**Yelena Akelina** (USA)

17:35 General surgery and microsurgery education activities for Japanese Veterinary Students

**S. Iwai, E. Kobayashi** (Japan)

17:45 Debrecen Medical Students' Surgery Club: an extracurricular manual skill development activity and a contest of basic microsurgical performance

**A. Varga, NJ. Nellamkhuzi, LA. Fazekas, AA. Matrai, T. Lesznyak, E. Vanyolos, N. Nemeth** (Hungary)

17:55 A learning curve for orthotopic liver transplant microsurgery in mice

**K. Tanaka** (Japan)

18:05 Virtual Reality in Microsurgery Training (Keynote)

**Rene H. Tolba** (Germany)







18:20 Microsurgery education and transplant model in small animals (Keynote)

**Edna Montero** (Brazil)

18:35 Animal models and education in experimental microsurgery (Keynote)

**Natalia Lausada** (Argentina)

18:50 End of the Scientific Sessions of the day

20:30 GALA DINNER

**(Robert Zhong Award)**



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SATURDAY 24

## 08:30 **SESSION VIII "TRANSLATIONAL RESEARCHES IN LYMPHOLOGY"**

CHAIRMEN: **Corrado Campisi** (Italy) - **Evangelos Dimakakos** (Greece)


08:35 A long surgical career in Lymphology and Microsurgery (Keynote)  
**Corradino Campisi** (Italy)

08:50 Clinical implications of pathological anatomical findings in lymphology (Keynote)  
**Ezio Fulcheri** (Italy)

09:05 Update in Lymphatic Scintigraphy and the use of SPET-CT (Keynote)  
**Giuseppe Villa** (Italy)

09:20 Aligned nanofibrillar collagen scaffolds implantation (BioBridge™) after popliteal lymphnode excision in rabbits  
**Jose Luis Campos Sanchez** (Spain)

09:30 From bench to bedside in microsurgical and mini-invasive treatment of lymphedema (Keynote)  
**Corrado Campisi** (Italy)



09:45 Microsurgical prevention of arm lymphedema in ALD for breast cancer  
**P. Fregatti, F. Murelli, F. Depaoli, C. Cornacchia, D. Friedman** (Italy)

09:55 Patient with lymphedema: which possibilities of treatment nowadays based on translational researches?  
(Keynote)  
**Francesco Boccardo** (Italy)

10:10 **SESSION IX "THE OFFICIAL ISEM JOURNAL EUR SURG RES - TIPS FROM THE EDITORIAL BOARD"**  
CHAIRMEN: **Frank Dor** (United Kingdom), **Mihai Oltean** (Sweden), **Rene Tolba** (Germany)

10:15 Getting your paper published - an editor's perspective  
**Frank Dor** (United Kingdom)

10:30 Piecing it together: practical tips on writing a manuscript  
**Mihai Oltean** (Sweden)



10:45 How to review a manuscript  
**René Tolba** (Germany)

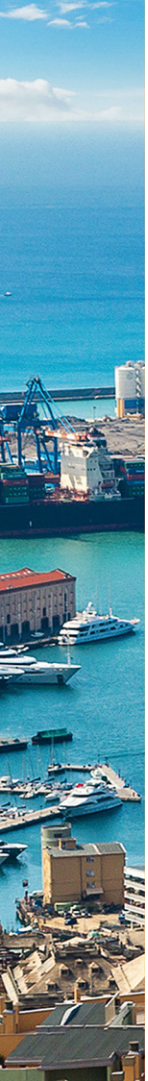
11:00 **SESSION X EXPERIMENTAL MODELS, TRAINING, NEW TECHNOLOGIES, CLINICAL AND TRANSLATIONAL  
MICROSURGERY**

CHAIRMEN: **Sara Dessalvi** (Italy) - **Natalia Lausada** (Argentina) - **Ryosuke Gabata** (Japan)

11:05 Routine use of ICG to enhance operative safety in emergency laparoscopic cholecystectomy:  
an observational prospective study  
**A. Pesce, N. Fabbri, CV. Feo** (Italy)



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- 11:15 Spatiotemporal transcriptomics analysis of central venous stenosis suggests TNF-alfa as a potential therapeutic target in CKD rats  
**S. Lotfollahzadeh** (USA)
- 11:25 Our experience in establishing the rat liver transplantation model at Kanazawa University  
**K. Katano** (Japan)
- 11:35 Hemodynamic, hemorheological and morphological comparison of various microsurgically created arterio-venous shunts as experimental heart failure models in rats  
**LA. Fazekas, B. Bernat, B. Barath, A. Varga, AA. Matrai, O. Shaked, OP. Fiebai, WM. Al-Smadi, CS. Filler, T. Juhasz, D. Priksz, B. Juhasz, Z. Szilvassy, N. Nemeth** (Hungary)
- 11:45 Microsurgical arterio-venous malformation model on the saphenous vessels in the rat  
**WM. Al-Smadi, LA. Fazekas, A. Varga, AA. Matrai, S. Aslan, B. Bernat, AES. Beqain, MQM. Al-Khafaji, D. Priksz, T. Juhasz, Z. Szilvassy, N. Nemeth** (Hungary)
- 11:55 Training for microsurgery and steps to clinical practice – Role of ISEM Japan Chapter  
**R. Gabata** (Japan)
- 12:05 Experimental microsurgery course oriented to solid organ transplantation  
**N. Lausada, RJ. Serradilla, J. Minneto, D. Abaca, H. Reijenstein, AA. Moreno, P. Stringa, G. Zalazar, S. Nahirñak, M Dip, C Raimondi, O Inventarza, OF Hernández** (Argentina)
- 12:15 Brain death and intestinal transplantation: results of an experimental model in rats  
**L. Vecchio Dezillio, I. Ivanoff Marinoff, JC. Abate, M. Rumbo, P. Stringa, N. Lausada** (Argentina)



- 12:25 Regenerative technologies in skin lesions - Human skin bioprinting systematic review  
**Jakub Jachimczyk, Magdalena Kołodziej, Urszula Janiuk** (Poland)
- 12:35 End of the Scientific Sessions of the day
- 12:45 Final greetings and thanks - **END OF THE CONGRESS**
- 13:00 **GENERAL ASSEMBLY**
- 13:30 **PACKED LUNCH**
- OPEN COFFEE (during the morning)



## CONGRESS VENUE

### ■ Palazzo Ducale

Piazza Giacomo Matteotti, 9  
16123 Genoa

The Palazzo Ducale in Genoa is one of the main historical buildings and museums of the Ligurian capital, formerly the seat of the dogate of the ancient Republic.

## ORGANIZING SECRETARIAT

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