Hands-on Seminar on

a Novel Auxiliary Liver Transplantation Model in Rats Organized

in conjunction with the 44th Annual Meeting of the Japanese Liver Transplantation Society (JLTS)

JLTS: Japanese Liver Transplantation Society

ISEM: International Society for Experimental Microsurgery

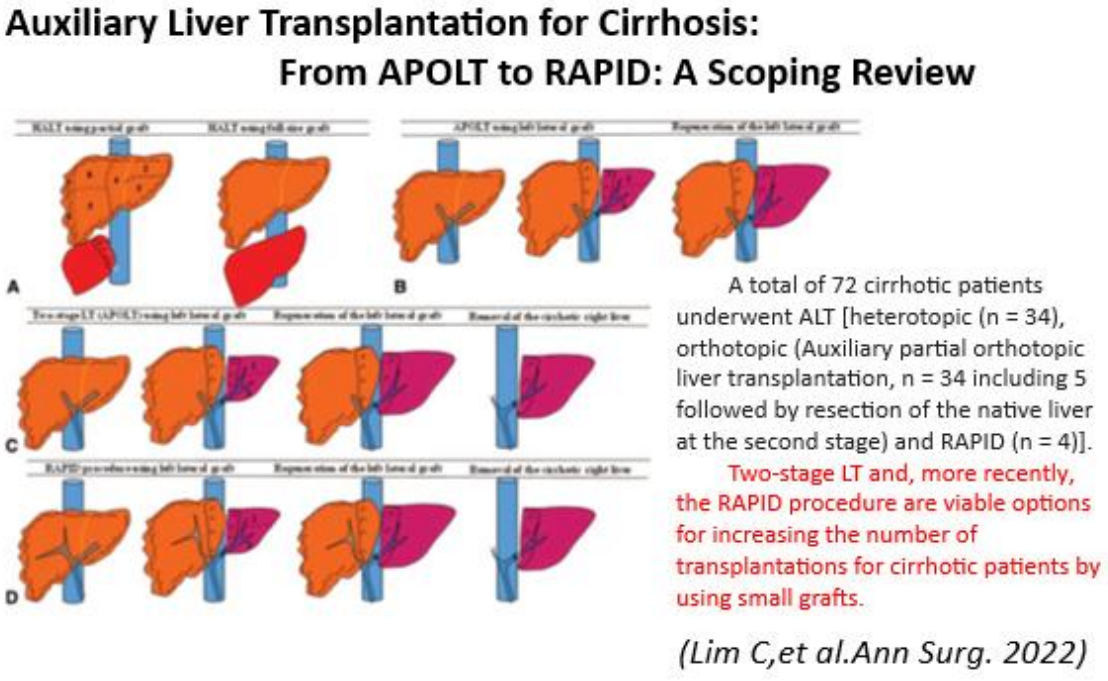
1. Background and Purpose

In recent years, novel surgical strategies based on auxiliary liver transplantation have gained increasing attention in the fields of liver transplantation and hepatopancreatobiliary surgery as potential treatments for otherwise unresectable liver diseases.

One representative concept is the RAPID procedure (Resection and Partial Liver Segment 2–3 Transplantation with Delayed Total Hepatectomy), in which a liver graft is transplanted heterotopically while preserving the native liver, followed by staged resection of the native liver. This innovative approach has already entered early clinical application.

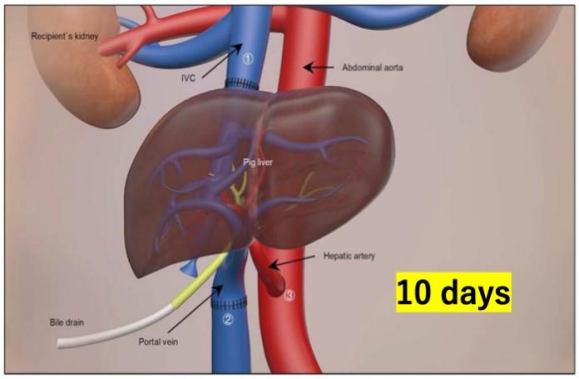
Furthermore, advances in xenogeneic liver transplantation research have led to the development of novel heterotopic liver transplantation techniques that allow graft implantation without major alterations in systemic hemodynamics. These developments suggest that the translation from experimental research to clinical application is becoming increasingly realistic.

The aim of this program is therefore to establish an experimental platform and foster the next generation of researchers through a hands-on training seminar using a survival rat model of heterotopic liver transplantation.



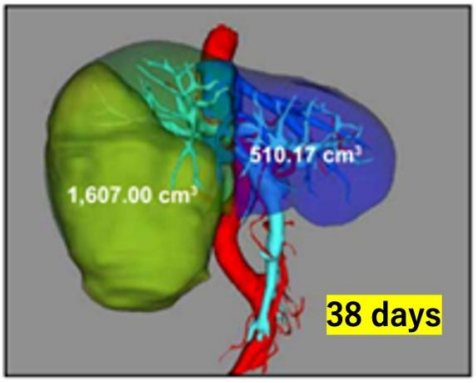
New Concept of Auxiliary Xeno-Liver Transplantation

Gene-modified pig-to-human liver xenotransplantation



(Kai-Shan Tao et al. Nature. 2025 Mar 26)

Genetically engineered pig-to-human liver xenotransplantation



(Zhang W, et al.J Hepatol. 2025 Oct 9)

2. Scientific Significance

- Establishment of a novel heterotopic liver transplantation rat model
- Potential application to RAPID surgery and xenotransplantation research
- A survival model preserving systemic hemodynamics
- Training in advanced microsurgical techniques

3. Seminar Overview

Date and Time

- June 27, 2026 (Saturday) — 16:00–19:00
- June 28, 2026 (Sunday) — 09:00–12:00

Venue

MEDDEC – Kobe Medical Device Development Center (tentative)

Number of Participants

Maximum 8 participants

(Participants should have prior experience in small-animal liver transplantation experiments)

- June 27: 4 participants
- June 28: 4 participants

Participation Fee

Approximately JPY 30,000–40,000 per participant

(animal cost, facility usage, and consumables included)

Faculty and Instruction

Participants will receive direct instruction from experts in liver transplantation and microsurgery.

Training will include:
• Step-by-step guidance even for early-stage trainees
• Real-time explanation of key technical points
• Discussion of factors leading to experimental success or failure

Highlights of This Seminar
• A rare opportunity in Japan to learn a survival heterotopic liver transplantation model
• Hands-on experimental training, not merely observation
• Opportunities to build future research collaborations and international networks

4. Management and Safety
• All experiments will be conducted in compliance with institutional regulations and animal research guidelines
• Procedures will follow the safety standards of the experimental facility
• Experienced instructors will supervise all procedures and provide stepwise guidance

5. Organizers
Takumi Fukumoto
Congress President, The 44th Annual Meeting of the Japanese Liver Transplantation Society (JLTS)
Kiyoshi Hasegawa
President, Japanese Liver Transplantation Society

ISEM (International Society for Experimental Microsurgery), Japan Chapter
Shintaro Yagi, Immediate Past President,
Eiji Kobayashi, 10th President
Masato Fujiyoshi

6. Registration
Please send your application by email to:
Shintaro Yagi　Email: shintaroyagi@gmail.com
Please include the following information:
• Full name (Japanese and English)
• Year of graduation
• Affiliation
• Experience in microsurgery
Applications will be accepted on a first-come, first-served basis.