Next-Generation Supermicrosurgery Consortium

23rd Virtual Conference The Future of Surgery

TUE, Feb 18, 2025, 18:00-20:00 (JST)



The latest insights on super microsurgery 23 - Aesthetic and Reconstructive Surgery for Giant Vascular

and Lymphatic Malformations [Surgical Video Demonstration -

Isao Koshima, M.D., Ph.D.

Professor and Center Chief, Department of Plastic and Reconstructive Surgery, International Center for Lymphedema, Hiroshima University Hospital

2. Invited Lecture

The Plasticity of Vascular and Lymphatic Endothelial Cells and Its Mechanisms

Yoshiaki Kubota, M.D., Ph.D.

Professor Department of Anatomy [Kubota Lab], Keio University School of Medicine

3. Q&A, Panel Discussion

Panelist: Prof. Koshima, Prof. Kubota, Dr. Chavre Sachin (India), Dr. Jung-Ju Huang (Taiwan), Dr. Fouad Alomari (Saudi Arabia)

We may also have additional special guests participating. Please look forward to it!

Registration and Fees: https://cpk.jp/reg/2

Participation fees for organizations such as companies and public institutions are as follows: 15,000 yen per person, 28,000 yen for two people, and 40,000 yen for three people.

* Special frequency ticket are also available. Please contact the secretariat.

* Free for healthcare professionals, academia, and students (excluding adult students).

Seminar venue URL: https://cpk.jp/s/2162



Registration



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Outline

The vascular and lymphatic systems form distinct networks throughout the body, each serving independent functions. Blood vessels primarily transport oxygen from the lungs to peripheral tissues, while lymphatic vessels collect interstitial fluid not fully recovered by capillaries and return it to the bloodstream via the venous angle. However, lymphatic endothelial cells originate from venous endothelial cells during embryogenesis, and both systems share many signaling molecules.

Moreover, comparing venules and collecting lymphatic vessels reveals that their histological features are difficult to distinguish without immunostaining for marker molecules. This raises the question of how these two systems differentiate from each other and maintain their independence—an area with many unresolved aspects. In this lecture, we will discuss recent findings from our laboratory, including the role of the tumor suppressor gene Flcn as a "gatekeeper molecule." Flcn suppresses the expression of **Prox1**, a master transcription factor for lymphatic endothelial differentiation, in venous endothelial cells, thereby regulating the plasticity between venous and lymphatic endothelial cells. Additionally, we will present evidence that tip cells of vascular endothelial cells during development exhibit high plasticity toward lymphatic endothelial differentiation.

These fundamental studies are expected to contribute to advancements in understanding and treating conditions such as lymphedema and advanced cancer in the future.

President Isao Koshima (Professor in the Department of Plastic and Reconstructive Surgery at Hiroshima University Hospital) of this research society will present the latest findings and global trends in connection with the invited lecture. The session will feature a surgical video demonstration showcasing key techniques. This time, I will be giving a lecture on "Aesthetic and Reconstructive Surgery for Giant Vascular and Lymphatic Malformations [Surgical Video Demonstration]." After the lecture, there will be a lively online panel discussion with the speakers.

We hope you will join us for this informative event!

Supprementary Information [Career & Achievements]

Yoshiaki Kubota, M.D., Ph.D.

Professor Department of Anatomy [Kubota Lab], Keio University School of Medicine



2000 Graduated from the Keio University School of Medicine.

- 2000–2002 Resident, Department of Plastic and Reconstructive Surgery, Keio University School of Medicine.
- 2001–2002 Worked in the Department of Plastic and Reconstructive Surgery, Saiseikai Central Hospital, Tokyo.

2003 Enrolled in the Doctoral Program, Keio University Graduate School of Medicine. 2006 Received Doctor of Medicine (M.D., Ph.D.) from Keio University.

2006–10/2008 Non-tenured instructor, Dept of Cell Differentiation, School of Medicine, Keio University

11/2008–03/2013 Tenure track assistant professor, Center for Integrated Medical Research (Keio Kanrinmaru Project), School of Medicine, Keio University

12/2011-07/2012 Visiting Researcher, National Institutes of Health (USA), Laboratory of Stem Cell and Neurovascular Development and Patterning.

04/2013-04/2015 Principal Investigator (Associate professor), The Laboratory of Vascular

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