EMINENT SCIENTIST AND OUTSTANDING SCHOLAR OF THE YEAR 2021

ASIA

Dr. Hiroki Kajita

Dr. Hiroki Kajita, a world renowned expert in the field of Lymphology is presently working as a Project Instructor at Keio University School of Medicine, Department of Plastic and Reconstructive Surgery.

Dr. Kajita obtained his Bachelor of Medicine degree in 2011 from Keio University in Tokyo. From 2013-2017, after the Residency training at Keio University Hospital, he worked as a surgeon through the Senior Residency Program of the Department of Plastic and Reconstructive Surgery, Keio University School of Medicine. In 2018, he became a Board Certified Member of Japan Society of Plastic and Reconstructive Surgery. Since 2018, he has been also working as a Visiting Instructor at Keio University Faculty of Science and Technology, Department of Information and Computer Science. He has authored/co-authored more than 13 journal articles, 115 abstracts and 15 proceedings in the field of Plastic and Reconstructive Surgery, Radiology, and Computer Vision. He is a member of various organizations including Japan Society of Plastic and Reconstructive Surgery, Japanese Society for Reconstructive Microsurgery, The Japanese Society of Lymphology, The Japanese Lymphedema Society, Japanese Society for Lymphedema Therapy, Japanese Society of Computer Aided Surgery, The Japan Society for Simulation Surgery, The Japanese Society of Medical Imaging Technology, and Japanese Association for Medical Artificial Intelligence.

Dr. Kajita has received scientific awards including the Best Paper Award in the 9th World Symposium on Lymphedema Surgery (Spain, 2020), the Best Paper Award in the 8th World Symposium on Lymphedema Surgery (Taiwan, 2019), CAS Young Investigator Award (Silver Award) (Japan, 2020), Excellent Paper Award in the 16th Asian Conference on Computer Aided Surgery (Japan, 2020), SIG-MR Award (Japan, 2020), and Nishi Memorial Award for Young Lymphologist (Japan, 2019).

Since 2018, the major focus of Dr. Kajita's research work has been the clinical application of photoacoustic lymphangiography. Photoacoustic imaging is an emerging medical imaging technique, which provides unique scalability of optical resolution and acoustic depth of penetration, and the light-absorbing biomolecules including oxy- and deoxyhemoglobin, lipid, water, and melanin are imaged.

Using exogenous contrast agents including indocyanine green taken up by lymphatic vessels, photoacoustic lymphangiography, which has a higher spatial resolution than previous imaging modalities is achieved. Dr. Kajita achieved the clinical application of photoacoustic lymphangiography for the high-resolution three-dimensional imaging of lymphedema patients using a new prototype of a photoacoustic imaging system with a wide field of view developed by a Japanese research group. He demonstrated the anatomical information of the lymphatic vessels and adjacent veins provided by photoacoustic lymphangiography is helpful for the management of lymphedema, particularly for planning of microsurgical lymphaticovenular anastomoses to bypass the excess fluid component to the circulatory system peripherally.

Dr. Hiroki Kajita has been awarded Eminent Scientist and Outstanding Scholar of the Year 2021 by the World Scientists Forum of International Research Promotion Council based on his outstanding research contributions in the field of Lymphology and the invention of the clinical application of photoacoustic lymphangiography for the high-resolution three dimensional imaging of lymphedema patients, which has immense scope for clinical application of lymphedema patients.