On behalf of the Japan Society for Organ Preservation and Medical Biology (JSOPMB), I express my sincere appreciation to Dragos Cretoiu, Editor-in-Chief of *Cell Medicine*, for providing us with an excellent opportunity to publish the data that were presented at the annual meeting of the JSOPMB. I also thank Samantha M. Portis, Managing Editor of Cell Medicine, for the detailed editing of our articles. I am very sure that the relationship between *Cell Medicine* and JSOPMB has enhanced the motivation of JSOPMB members as well as board members and will continue to do so in the future, while also encouraging young Japanese researchers to join this organization.

One of the extremely important missions of the annual meeting of the JSOPMB is to exchange new research outcomes and create new therapeutic concepts. The JSOPMB always encourages and motivates young investigators. The JSOPMB was founded in 1974 for the study of organ preservation and developed widely in the 1990s with the participation of researchers in various fields, including medicine, pharmacology, engineering, veterinary medicine, and basic science. Currently, the JSOPMB has more than 700 members and is run under the direction of Professor Takashi Kenmochi, the president of the JSOPMB.

Excellent presentations from the 43rd annual meeting of the JSOPMB, held between 26–27 November 2016, in Tokyo, Japan, under the supervision of Dr Toshihiko Hirano (Professor, Department of Clinical Pharmacology, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan), were selected and given an opportunity to be published in this special issue of Cell Medicine. Five of these presentations are herein published in this special JSOPMB issue.

Onoshima et al. developed a microfluidic chip for depositing single cells in micro-wells using simple micropipette operation. The chip will serve as a tool for single-cell patterning in an easy-to-use manner.

Miyamoto et al. investigated the effects of temperature during long-term storage (8 years at −80°C and in LN2 phase) on the quality of various cells (HepG2, HH, NIH-3T3, and STO cells) using culture medium containing 10% dimethyl sulfoxide (DMSO), Cell Banker 1, and Cell Banker 2. Among these solutions, Cell Banker 1 showed the highest efficiency.

Stem cell research was a major topic of interest. There were two articles regarding stem cells. Miyagi-Shiohira et al. showed the development of cancer through induced pluripotent stem cell (iPSC) technology. They generated ‘induced fibroblast-like (iF) cells’ by the transient overexpression of reprogramming factors. Although the morphology of iF cells were fibroblastic, iF cells are unlikely to show adipogenic/osteogenic differentiation. Moreover, iF cells have the ability to form tumors and behave similarly to pancreatic cancer cells. The technology used in the generation of iPSCs is also associated with the risk of generating cancer-like cells. Tsugata et al. evaluated the role of early growth response 1 (EGR1) on pancreatic endoderm differentiation. Their data suggest that the downregulation of EGR1 in the early phase can efficiently induce the differentiation of iPSCs into insulin-producing cells.

There was one article regarding pancreatic islet purification. Ebi et al. evaluated islet purification methods for making a continuous density gradient and loading tissue. One method involved loading digested tissue on top of a continuous density gradient (‘top loading’ (TL)). The other method involved mixing digested tissue with low-density solution and then making a continuous gradient (‘mixed loading’ (ML)). There were no significant differences between the two purification methods, suggesting the equivalency of these two methods of islet purification.

The theme of this JSOPMB issue is ‘Transplantation and Organ Preservation’. The board members and I are looking forward to seeing further progress with the JSOPMB in conjunction with *Cell Medicine*.

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