

M. Kitajima • M. Shimazu • G. Wakabayashi
K. Hoshino • M. Tanabe • S. Kawachi (Eds.)

Current Issues in Liver and Small Bowel Transplantation

**Keio University
International Symposia for
Life Sciences and Medicine**

Volume 9



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G. Wakabayashi, K. Hoshino,
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Current Issues in Liver and Small Bowel Transplantation

With 46 Figures



Springer

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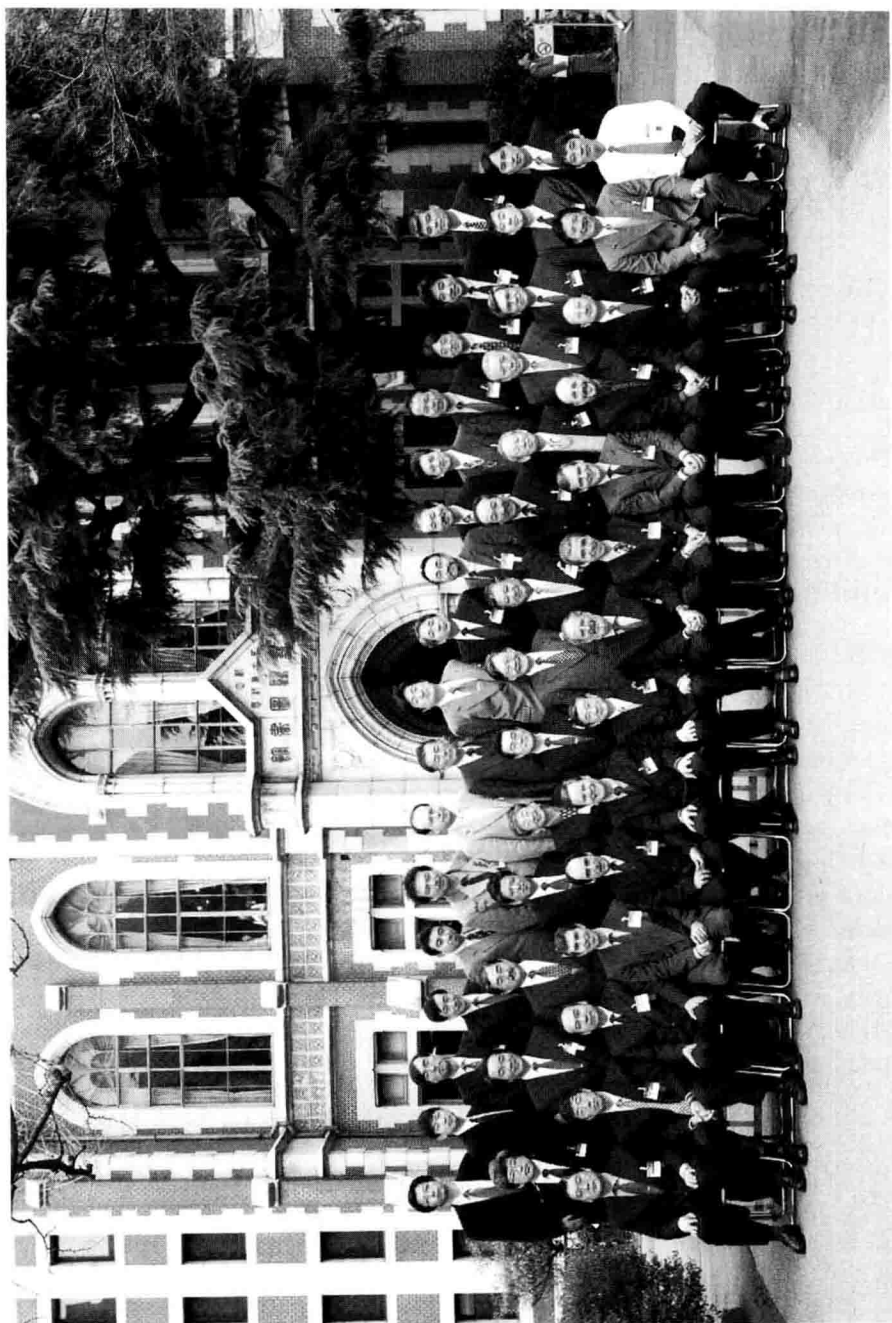
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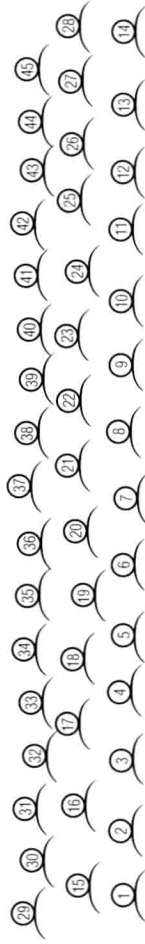
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Foreword

This volume of the Keio University International Symposia for Life Sciences and Medicine contains the proceedings of the ninth symposium held under the sponsorship of the Keio University Medical Science Fund. As explained in the Opening Remarks by the President of Keio University, the fund was established by the generous donation of Dr. Mitsunada Sakaguchi. The Keio University International Symposia for Life Sciences and Medicine constitute one of the core activities sponsored by the fund, the objective of which is to contribute to the international community by developing human resources, promoting scientific knowledge, and encouraging mutual exchange. Each year, the Committee of the International Symposia for Life Sciences and Medicine selects the most significant symposium topic from applications received from the Keio medical community. The publication of the proceedings is intended to publicize and disseminate the information arising from the lively discussions of the most exciting and current issues presented during the symposium. On behalf of the Committee, I am most grateful to Dr. Mitsunada Sakaguchi, who made the symposia series possible. We are also grateful to the prominent speakers for their contribution to this volume. In addition, we would like to acknowledge the efficient organizational work performed by the members of the program committee and the staff of the fund.

Naoki Aikawa, M.D., D.M.Sc., F.A.C.S.
Chairman
Committee of the International Symposia
for Life Sciences and Medicine





The 9th Keio University International Symposium for Life Sciences and Medicine

Speakers, chairpersons, and discussants at the symposium are identified in the photograph by numbers on the diagram.

1. Seiichi Suzuki 2. Sung Gyu Lee 3. Chao-Long Chen 4. René Adam 5. Olivier Goulet 6. Peter Neuhaus 7. Masaki Kitajima
8. Gary A. Levy 9. Xavier Rogiers 10. Björn Nashan 11. Alan N. Langnas 12. Sheung-Tat Fan 13. John J. Fung 14. Seigo Nishida
16. Namiki Izumi 17. Kazunori Aso 18. Susumu Satomi 19. Sachiyo Suita 20. Morito Monden 21. Hiromasa Ishii 22. Kenji Fujiwara
23. Takafumi Ichida 24. Kunio Okuda 25. Shozo Baba 26. Toshifumi Hibi 27. Yukihiro Inomata 28. Minoru Tanabe
34. Hidetoshi Matsunami 35. Tatsuto Ashizawa 39. Takashi Hashimoto 40. Motohide Shimazu 41. Atsushi Sugioka
42. Go Wakabayashi 43. Ken Hoshino 44. Hidetsugu Saito 45. Hiromichi Ikawa

Preface

In Japan, cadaveric donor liver transplantation is not common even though cadaveric organ transplantation was legally established in 1998. In contrast, the number of living donor liver transplantations is increasing, with more than 1700 cases at 43 Japanese institutes by November 2001. Indications for living donor liver transplantation are widening in Japan and have become similar to those for cadaveric donor liver transplantation in the United States and Europe. At the same time, split liver transplantation from cadaveric donors shares some technical aspects with living donor liver transplantation. Remarkable progress has been reported recently, and thus it was an auspicious time to hold a symposium on “Current issues in liver/small bowel transplantation” in Japan.

We were honored to hold a very fruitful symposium sponsored by the Keio University Medical Science Fund and to bring together top-rank transplant surgeons from Japan and other countries. It was a productive and rewarding time for all participants. We were able to share our experience through excellent presentations followed by active discussions and insightful comments. At the symposium, we focused on current issues in liver transplantation such as widening indications for viral hepatitis and malignant tumors. We also discussed technical aspects and physiological problems in split/living donor liver transplant, novel strategies in immunosuppression, and the current status and future prospects in small bowel transplantation. This book contains the papers from all the distinguished guest speakers, focusing on the topics discussed at the symposium.

It has been a year since the symposium ended; however, the topics we discussed are still very important and the papers in this book remain informative to all who are working in this field. The editors are grateful to the distinguished guest speakers for submitting their important papers for publication in this volume. We would like to take this opportunity to express

our deep gratitude to Dr. Mitsunada Sakaguchi, an alumnus of the School of Medicine, Keio University, for his generous donation that made possible the creation of the Keio University Medical Science Fund.

February 2002
Masaki Kitajima
Motohide Shimazu
Go Wakabayashi

Opening Remarks

Prof. Yasuhiko Torii

President, Keio University

Chairman, Keio University Medical Science Fund

Ladies and Gentlemen:

On behalf of the whole of Keio University, I have very great pleasure in welcoming you all to the 9th Keio University International Symposium for Life Sciences and Medicine. I am particularly grateful to the distinguished scientists who have traveled such long distances to participate in this meeting.

The topic of our symposium this year is Current Issues in Liver/Small Bowel Transplantation. Although remarkable progress and breakthroughs are reported almost every day in the field of organ transplantation, it is also true that there are still many who suffer from end-stage liver and small bowel disease. The present time therefore seems an opportune moment to hold a related symposium at Keio University, and all speakers kindly accepted our invitation to contribute to a symposium on Liver/Small Bowel Transplantation. I feel certain that this unique meeting will prove both exciting and successful.

Keio University, the oldest university among the 604 universities in Japan, was founded in 1858 by Yukichi Fukuzawa. He was a pioneer of modern civilization in Japan. Fukuzawa was a member of the very first mission of the Tokugawa Shogunate government to the United States in 1860 and to European countries in 1862. Before that time, the Shogun had closed Japan's doors to the outside world in a period of self-isolation lasting almost 300 years, until the American Admiral Perry knocked on our door. Fukuzawa realized during his visits to the United States and Europe as a member of the official Japanese mission that education was crucially important to the future of Japan. How highly his achievements were valued by the Japanese Government is reflected in the fact that his portrait is printed on the Japanese 10,000 yen bank note. Thus, Keio has its origins in international exchanges: indeed, international exchanges such as this symposium have been one of the most important academic and social missions of Keio University since its foundation.

In the fall of 1994, Dr. Mitsunada Sakaguchi, an alumnus of the 1940 class of our medical school, donated five billion yen to the university. He expressed the wish that his fund should be used to encourage research in life sciences and medicine at Keio University and to promote worldwide advancements in science. I fully agreed with his proposal, and thus launched the Keio University Medical Science Fund in April 1995. The International Symposium for Life Sciences and Medicine has been organized as one of several projects supported by the fund. In 1999, Dr. Sakaguchi made an additional donation of two billion yen.

We are now witnessing the dawn of the 21st century and the third millennium. We realize that society faces many problems that will be carried over into the new century. Many new and unknown difficulties also await us. I believe that exploring new horizons in life sciences is one of the most vital tasks facing us at the dawn of the 21st century. It is equally important to ensure that the knowledge gained through such pursuits will be used in a way that brings genuine happiness to humankind.

It is thus more than a pleasure, indeed it is an honor, for me to be able to meet the distinguished medical researchers and clinicians from world-renowned institutions gathered here, and to share in a frank and valuable exchange of views. I am also grateful for the efforts made by the organizing committee, chaired by Dr. Masaki Kitajima, who has devoted himself to ensuring that this symposium is an auspicious and enjoyable event. I do hope that the meeting will prove a truly fruitful and productive one for you all.

Let me close by wishing everyone gathered here further success in their research and clinical work. Thank you very much.

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Part 1

Technical Aspects and Physiological Problems in Split/Living Donor Liver Transplantation

