

Japan Academy Prize to:

Masakuni SUZUKI
 Chief Director, The Suzuki Memorial Hospital
 Chief Administrator, The Midwifery School of
 Suzuki Memorial Hospital
 Professor Emeritus, Tohoku University



for “Establishment and Dissemination of the
 Human *in vitro* Fertilization Technique in
 Japan”

Outline of the work:

For more than 30 years, Masakuni Suzuki, M.D., has been the frontrunner in the field of assisted reproductive technology (ART) in Japan. The world’s first baby was born via *in vitro* fertilization and embryo transfer (IVF-ET) in 1978 based on the technique developed by Edwards and Steptoe. Dr. Suzuki reported on the first baby born via IVF-ET in Japan in 1983, when he was the Chair of the Department of Gynecology and Obstetrics at the Tohoku University School of Medicine. His success captured widespread media attention and ignited a controversial debate. Despite the increasing interest in IVF-ET therapy in medical institutions, treatment outcomes in 1980s varied by hospital, suggesting the lack of technical expertise and training. Dr. Suzuki organized and implemented seven hands-on workshops on infertility therapy, starting in 1989. As a result of these workshops, the number of hospitals performing IVF-ET increased from 125 to 511 by 2000 and to 589 by 2012.

Soon after Dr. Suzuki’s first success, others have written books about ART that primarily targeted a lay audience. Given his belief that dissemination of accurate scientific information and techniques was urgently needed, Dr. Suzuki published *In Vitro Fertilization–Embryo Transfer: Basics and Clinical Practice* [in Japanese] (Tokyo, Japan: Kanehara, 1985). This book was the first of its kind in Japan written for medical professionals.

After retiring as Professor Emeritus in 1985, Dr. Suzuki founded Suzuki Hospital (currently, Suzuki Memorial Hospital) in Iwanuma, Miyagi, a hospital dedicated to infertility treatment, becoming its first executive director. As of September 30, 2014, there have been 12,039 patients who have undergone ART at this hospital and have given birth to 1,418 babies.

In addition to IVF-ET, Dr. Suzuki opened the door for other types of ART in Japan. In 1992, he reported Japan’s first successful case of microscopic insemination, which is currently the mainstay of therapy for male infertility due to oligospermia or asthenozoospermia. He also published on the first successful case of IVF-ET using a frozen-thawed oocyte in 2001. He has successfully maintained the survival of cryopreserved oocytes, which were vulnerable to osmotic stress. This technique provides hope for future pregnancy in women undergoing bilateral oophorectomy.

Japan is experiencing a drastic population decrease; in 2050, a 25% reduction is expected compared to the

peak in 2004. It is estimated that ART was involved in 37,953 births in Japan in 2012 alone, with a total of 341,750 for the period of 1983 to 2012. Dr. Suzuki's lifelong work on ART has made a significant impact on the future of our nation.

Selected Publications

Journal Articles

1. Suzuki M, Hoshi K, Hoshiai H, Saito A, Momono K, Mori R, Kyono K, Tsuiki A, Imaizumi H, Nagaïke F, Uehara S, Naganuma T, Hirose Y. Pregnancy obtained by in vitro fertilization and embryo transfer. *Jpn. J. Fert. Steril.* 1983; 28: 439–443.
2. Youkaichiya T, Kyono K, Momono K, Hoshi K, Suzuki M. A survey of attitudes of infertile women toward in vitro fertilization and embryo transfer [in Japanese]. *Jpn. J. Fert. Steril.* 1983; 28: 571.
3. Suzuki M, Hoshiai H, Hoshi K, Saito A, Uehara S, Tuiki A. In vitro fertilization and embryo transfer at Tohoku University, Sendai, Japan. *J. In Vitro Fert. Transf.* 1984; 1: 82.
4. Odawara Y, Tachibana I, Suzuki M, Chida S, Hiruta M. Study of the usefulness of zona opening in severe male infertility [in Japanese]. *J. Fert. Implant.* 1993; 10: 279-281.
5. Suzuki M, Tachibana I, Noda T, Imaizumi H. Spontaneous pregnancy and delivery by a mother who was born via in vitro fertilization/embryo transfer (IVF/ET). *Tohoku J. Exp. Med.* 2009; 218: 81.

Books

6. Suzuki M. *In Vitro Fertilization and Embryo Transfer: a documentary account of success* [in Japanese]. Tokyo, Japan: Kyoritsu; 1983.
7. Suzuki M. *In Vitro Fertilization–Embryo Transfer: Basics and Clinical Practice* [in Japanese]. Tokyo, Japan: Kanehara; 1985.
8. Suzuki M. *Prof. Suzuki Talks About Infertility and IVF-ET* [in Japanese]. Tokyo, Japan: Shufunotomo; 1991.