

Mini-Symposium on Post ICSI events: Choreography of Fertilization

Preface

Yukihiro TERADA

Mini-symposium editor
 Department of Obstetrics and Gynecology
 Tohoku University School of Medicine
 E-mail: terada@mail.tains.tohoku.ac.jp

Assisted Reproductive Technique (ART) has achieved innovative progress as a cure for human sterility. However, we have little information about the molecular and cellular basis of ART. Fertilization is a “once-in-a-lifetime event” as the egg and sperm create a new life according to the “choreography” of fertilization. We have invented a technique to bypass a part of this choreography, intracytoplasmic sperm injection (ICSI), and ICSI, with swift and surprising success, has become a common therapy for infertility.

The goal of fertilization is not the sperm entry into the oocyte, but is the fusion of male and female genomes followed by the first mitotic spindle formation. With regard to some troubles in sperm entry into oocyte, we overcome fertilization failure by ICSI. However, a

significant number of clinical cases of fertilization failure remain, even after ICSI. As shown in the figure below, male and female genomes have to complete a number of tasks to reach the goal of fertilization, after sperm entry. Although these processes are called “post-ICSI events in fertilization: PIEIF”, we have little information about the molecular and cellular basis of PIEIF.

Four internationally renowned researchers with excellent knowledge about PIEIF, have been invited to this symposium. Each topic is pointed out in the figure, and readers can recognize where they are. I am convinced that this symposium offer useful information on ART for coming generations.

Enjoy the “Choreography of male life and female life”.

