

Mini-Symposium:

Basic and epochal reproductive technologies in each species

Preface

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In recent years reproductive technologies have been developing uniquely in each species. However, it is important that we understand mechanisms that are common or specific to each species which include humans. In this Mini-Symposium, we are publishing the innovatory reviews about the latest and important technology developments.

First, Dr. Kurotaki introduces the practical reproductive techniques using the marmoset, the study of which is expected to make a great contribution to knowledge about primates. Next, I report on recent technical breakthroughs in mice, especially those concerning the production of large numbers of oocytes and the efficient utilization of the frozen sperm. Then, Dr. Hirao reviews newly elucidated mechanisms of oogenesis in the process of meiotic arrest and resumption, and culture systems developed in studies using mouse and bovine models. Lastly, Dr. Otsuki presents the specific requirements for the handling of human oocytes, especially with respect to the existence of the aggregated chromosome phase during meiosis and the practical application of nuclear transfer/mitochondrial replacement.

These techniques are continually evolving, and should always be improved. Our duty is to assimilate new knowledge and make our work and study reflect it. In this respect, one opportunity to achieve that purpose is this Mini-Symposium. I genuinely appreciate the invaluable contribution of the authors.