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Recent progress of animal cloning

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Abstract

It was reported that adult somatic cells could be reprogrammed in enucleated oocytes and developed to a normal sheep after nuclear transfer in 1997. But, it is also clarified that the successful rate of animal cloning is still very limited. One of the possible reasons for the low success is the failure of reprogramming of somatic cells in ooplasm after nuclear transfer. Failure of the reprogramming of somatic cell nuclei in ooplasm causes variedabnormalities to SCNT embryos in every developmental stage, including both preimplantation and postimplantation stages, and resulted in the low successful rate at birth. But the mechanism of reprogramming or reprogramming factors in the enucleated oocytes are still unclear.I will review the recent progress of animal cloning in this talk. Especially, whether goodembryos can be selected before embryo transfer, and how to raise the viability of clonedembryos after implantation will be discussed.

Biography

Yoko Kato has completed her Ph.D at the age of 29 years by Prof.Tsunoda from KinkiUniversity and worked as visiting scientist at Prof. Azim Surani's laboratory in U.K. for ahalf year and at Prof. Richard Schultz's laboratory in U.S.A. for one year. She is now a professor of Kinki University from 2009. She has published more than 90 original papers,40 review papers in scientific journals and 10 book chapters. Her research group succeeded to produce cloned bovine for the first time from adult somatic cells by nuclear transfer in 1998.