口頭発表 | 2. 育種・遺伝

育種・遺伝2

Chairperson: Masaaki TANIGUCHI, Akira Ishikawa(Graduate School of Bioagricultural Sciences, Nagoya University), Shinji Sasazaki, Norihide Yokoi, Tomokazu Fukuda(Iwate University), Youko Aida
Fri. Sep 16, 2022 1:30 PM - 4:40 PM Zoom会場2 (オンライン)
II-16-19～II-16-22：谷口 雅章
II-16-23～II-16-25：石川 明
II-16-26～II-16-28：笹崎 晋史
II-16-29～II-16-31：横井 伯英
II-16-32～II-16-34：福田 智一
II-16-35～II-16-37：間 陽子

4:10 PM - 4:20 PM

[II-16-35]Immortalized sheep muscle-derived cells with the expression of CDK4 ^{R24C}, cyclin D1, and telomerase reverse transcriptase

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The sheep is an important domestic animal for meat and wool production. Genome editing of sheep might increase the efficiency as the domestic animals. However, the specificity of genome editing needs to be evaluated. Furthermore, the oocyte of sheep is relatively expensive. Instead of oocyte of sheep, we considered that immortalized cells might be a useful tool to evaluate the accuracy of genome editing. Muscle derived fibroblasts were obtained from sheep with mixed genetic background. We transduced a combination of mutant cyclin dependent kinase 4 (CDK4^{R24C}), cyclin D1, and telomerase reverse transcriptase with lentivirus-mediated gene transfer, or SV40 with retrovirus-mediated gene transfer into the primary cells to establish immortalized cells. We analyzed the gene expression and cell proliferation, cell cycle. Each transgene was confirmed to be transduced in the established cells which showed higher proliferation rate than the parental cells. However, the ratios of G1/S and G2/M of the cells did not differ from the parental cells. We are obtaining the detailed data about the biological characteristics of these cells.