

## EFFECT OF DONOR CELL TYPES ON THE DEVELOPMENT OF PIG EMBRYOS PRODUCED BY SOMATIC CELL NUCLEAR TRANSFER

**Nguyen Thi Nhung<sup>1</sup>, Nguyen Thi Hong<sup>1</sup>, Bui Xuan Nguyen<sup>1</sup>, Nguyen Viet Linh<sup>1,2\*</sup>**

<sup>1</sup>Institute of Biotechnology, Vietnam Academy of Science and Technology

<sup>2</sup>Graduate University of Science and Technology, Vietnam Academy of Science and Technology

\*Correspondence: nvlinh@ibt.ac.vn

Donor cell type and number of cloned embryos transferred to an individual surrogate are two major factors that affect to the successful rate of somatic cell nuclear transfer (SCNT) in pigs. The aim of this study is to compare the influence of different donor cell types on the quality of pig embryos produced by SCNT. Piezo method was used to enucleate Landrace oocytes collected after in vitro maturation and transfer donor cell. Three types of donor cell (cumulus cells of Landrace, fibroblasts of Landrace, fibroblasts of Ban) corresponding three groups 1, 2, 3 were used as donor cells. The nucleus-transferred oocyte was then electrofused by a pulse of direct current 1,5kV/cm, 100 $\mu$ s in 0.28mM Manitol. Reconstructed embryos were cultured in IVC Pyruvate-Lactate medium for the first 2-day and IVC Glucose for the next 5 days. The results showed that there were differences between the three groups in the rate of cleavage, blastocyst and the number of cells per blastocyst. The rate of blastocyst and the number of cell per blastocyst in groups 2 were higher than those in group 1 and group 3 (14.5 vs 9.9; 11.0,  $p < 0.05$ , and 44.9 vs 38.6; 36.5,  $p < 0.05$ , respectively). The rate of blastocysts in group 3 was higher than in group 1 (11.0 vs 9.9,  $p < 0.05$ , respectively) but the number of cell per blastocyst was lower than that in group 1 (36.5 vs 38.6). In conclusion, our findings suggests that both breed and cell type influences the quality of cloned embryos and Landrace's fibroblasts using as donor cell resulted in a higher cloning efficiency by comparison with Landrace's cumulus cells and Ban minipig fibroblasts.

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