Biomedical Research & Therapy

ISSN: 2198-4093
www.bmrat.org

POSTER

Isolation and characterization of female germline stem cell derived from porcine ovary

Nguyen Huy Hoang*, Nguyen Thi Bao Tran*, Nguyen Van Thuan, Bui Hong Thuy

Cell Reprogramming Laboratory, School of Biotechnology, International University, Vietnam National University, Ho Chi Minh City, Vietnam

*These authors contributed equally in this work

Abstract

One of the most significant finding in stem cell area in the early 21st century is the founding of female germline stem cells (FGSCs). Establishment of FGSCs allowed new possibilities for the use of them in biotechnology and medicine. Hence, the purpose of this study was to establish, characterize the porcine female germline stem cells (pFGSCs) from porcine ovary. The result revealed the success in establishing pFGSCs from ovarian tissue. Most of the pFGSCs were round shape after in vitro culture, forming groups of cells that cluster around the ovarian cells colonies. Immunofluorescent analysis of pFGSCs showed that these cells expressed germ cell and stem cell markers such as: Vasa, Stella, c-kit and Oct4. After several weeks in in vitro culture, pFGSCs increased in number without the loss of proliferative potential. Our results suggested that pFGSCs isolated from adult mammalian ovary, under appropriate conditions, could undergo proliferation.

Keywords

female germline stem cells, pFGSCs, proliferation, immunofluorescent.

Funding

References

*For correspondence:

bhthuy@hcmiu.edu.vn

Competing interests: The authors declare that no competing interests exist.

Received: 2017-07-14
Accepted: 2017-08-05
Published: 2017-09-05