

عنوان مقاله:

An investigation of the effect of the human embryonic stem cells conditioned medium on mouse oocytes in vitro maturation

محل انتشار:

هشتمین کنگره بین المللی و جشنواره دانشجویی طب تولید مثل و سومین کنگره بین المللی ژنتیک تولید مثل (سال: 1398)

تعداد صفحات اصل مقاله: 1

نویسندگان:

R Rezaee-Ranjbar-Sardari - *Medical Biotechnology Research Center, Ashkezar Branch, Islamic Azad University, Ashkezar, Yazd, Iran- Stem Cell Biology Research Center, Yazd Reproductive Sciences Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran- Research and Clinic*

M Dehghani Ashkezari - *Medical Biotechnology Research Center, Islamic Azad University, Ashkezar Branch, Ashkezar, Iran*

SM Seifati - *Medical Biotechnology Research Center, Islamic Azad University, Ashkezar Branch, Ashkezar, Iran*

A Khoradmehr - *Stem Cell Biology Research Center, Yazd Reproductive Sciences Institute, Shahid Sadoughi University of Medical Sciences, Yazd, Iran*

خلاصه مقاله:

Background: Secreted factors inside the medium by the cells provide an appropriate environment in the conditioned medium to support the growth of other cells. It has been reported that conditioned medium from mouse embryonic stem cells (mESCs) supports in vitro maturation (IVM) of mouse oocytes. Objective: In this study the impact of human ESCs (hESCs) conditioned medium (ESCM) was investigated on IVM of mouse oocytes. Materials and Methods: NMRI female mice, aged 4-6 weeks, were injected 5 IU of Pregnant Mare's Serum Gonadotropin (PMSG) intraperitoneally (IP). 240 germinal vesicle (GV) oocytes without cumulus cells were cultured in ESCM (test group; 120 GVs) and HES medium (control group; 120 GVs). Following microscopic study to observe metaphase II (MII) development from GVs to evaluate the oocyte IVM rate for, at 8, 16 and 24 hours, to assess their fertilization capacity, the matured oocytes were undergone in vitro fertilization (IVF). Results: Our data indicated a significant difference between the IVM rates in ESCM and HES ($p < 0.05$), whereas IVF rate was not significant between two groups ($p > 0.05$). Conclusion: There are some factors secreted by hESCs in the culture medium which supports IVM in mouse. For the future study, we aim to evaluate the effect of ESCM on human IVM. Metabolomics study is in progress for understanding the details of these results.

کلمات کلیدی:

Conditioned Medium, Human embryonic stem cell, In vitro maturation

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/912334>



