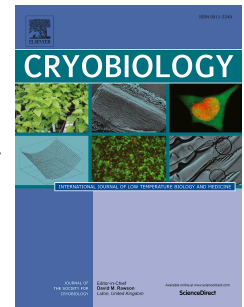


Accepted Manuscript

Effects of vitrification and transplantation on follicular development and expression of EphrinB1 and PDGFA in mouse ovaries

Erkan Gumus, Celal Kaloglu, Ismail Sari, Meral Yilmaz, Ali Cetin



PII: S0011-2240(17)30201-8

DOI: [10.1016/j.cryobiol.2017.11.006](https://doi.org/10.1016/j.cryobiol.2017.11.006)

Reference: YCRYO 3902

To appear in: *Cryobiology*

Received Date: 5 June 2017

Revised Date: 8 November 2017

Accepted Date: 14 November 2017

Please cite this article as: E. Gumus, C. Kaloglu, I. Sari, M. Yilmaz, A. Cetin, Effects of vitrification and transplantation on follicular development and expression of EphrinB1 and PDGFA in mouse ovaries, *Cryobiology* (2017), doi: 10.1016/j.cryobiol.2017.11.006.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Effects of vitrification and transplantation on follicular development and expression of EphrinB1 and PDGFA in mouse ovaries

Erkan Gumus^{1,*}, Celal Kaloglu¹, Ismail Sari², Meral Yilmaz³, Ali Cetin⁴

Departments of ¹Histology and Embryology, ²Biochemistry, and ⁴Obstetrics and Gynecology, Cumhuriyet University Faculty of Medicine, ³CUTFAM Research Center, 58140 Sivas, Turkey

***Corresponding author:** Department of Histology and Embryology Cumhuriyet University Faculty of Medicine 58140 Sivas, Turkey
Phone: +90 346 2191010
E-mail: erkangumus@yahoo.com

Abstract

The aim of this study was to assess the follicular development and the patterns of EphrinB1 and PDGFA immunostaining in vitrified mouse ovarian tissue (OT) with and without transplantation. Histological evaluation was performed on fresh and vitrified OTs, whether transplanted or not. RT-PCR was performed on fresh and vitrified ovarian samples (OSs) and vitrified OS graft. Vitrification alone did not significantly reduce the normal primordial, primary, and secondary follicles except antral ones ($p>0.05$). However, transplantation decreased all the follicle types. The EphrinB1 immunoexpression showed high intensity in all follicular types in vitrified OT and the significant increased was detected in secondary and antral follicles ($p<0.05$). PDGFA protein immunoexpression of primordial and primary follicles was decreased in vitrified OT ($p<0.05$). However, the lowest immunoexpression of EphrinB1 and PDGFA was detected after transplantation ($p<0.05$). The levels of *ephrinb1* and *pdgfa* mRNA expressions in vitrified OS and vitrified OS grafts were found as comparable to the fresh OS. In conclusion, vitrification has no detrimental effect on the follicles at the different developmental stages, majority of ovarian follicular loss takes place after transplantation rather than vitrification. Overall, vitrification and grafting do not change the *ephrinb1* and *pdgfa* gene expressions. In addition, EphrinB1 and PDGFA are expressed during different stages of folliculogenesis in a different manner in fresh, vitrified, or grafted

Download English Version:

<https://daneshyari.com/en/article/8464377>

Download Persian Version:

<https://daneshyari.com/article/8464377>

[Daneshyari.com](https://daneshyari.com)