

Accepted Manuscript

Despite the donor's age, human adipose-derived stem cells enhance the maturation and development rates of porcine oocytes in a co-culture system

Erif Maha Nugraha Setyawan, Hyun Ju Oh, Min Jung Kim, Geon A. Kim, Seok Hee Lee, Yoo Bin Choi, Ki Hae Ra, Byeong Chun Lee



PII: S0093-691X(17)30614-3

DOI: [10.1016/j.theriogenology.2017.12.024](https://doi.org/10.1016/j.theriogenology.2017.12.024)

Reference: THE 14394

To appear in: *Theriogenology*

Received Date: 21 September 2017

Revised Date: 4 December 2017

Accepted Date: 11 December 2017

Please cite this article as: Nugraha Setyawan EM, Oh HJ, Kim MJ, Kim GA, Lee SH, Choi YB, Ra KH, Lee BC, Despite the donor's age, human adipose-derived stem cells enhance the maturation and development rates of porcine oocytes in a co-culture system, *Theriogenology* (2018), doi: 10.1016/j.theriogenology.2017.12.024.

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.

Despite the donor's age, human adipose-derived stem cells enhance the maturation and development rates of porcine oocytes in a co-culture system

Erif Maha Nugraha Setyawan¹, Hyun Ju Oh¹, Min Jung Kim¹, Geon A Kim¹, Seok Hee Lee¹, Yoo Bin Choi¹, Ki Hae Ra¹ and Byeong Chun Lee^{1*}

¹ Department of Theriogenology and Biotechnology, College of Veterinary Medicine, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea

*Correspondence: Department of Theriogenology and Biotechnology, College of Veterinary Medicine, Seoul National University, 599 Gwanak-ro, Gwanak-gu, Seoul 08826, Korea
Phone: +822-880-1269; Fax: +822-873-1269; e-mail address: bclee@snu.ac.kr

Download English Version:

<https://daneshyari.com/en/article/8426762>

Download Persian Version:

<https://daneshyari.com/article/8426762>

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