



OvaScience Co-Founders' Review of Female Infertility Published in Cell Metabolism

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-- Findings Highlight that Egg Quality Decreases With Age Due to Reduced Mitochondrial Function --

CAMBRIDGE, Mass.--(BUSINESS WIRE)--Jun. 4, 2013-- [OvaScienceSM](#), (NASDAQ: OVAS), a life sciences company focused on the discovery, development and commercialization of new treatments for infertility, announced today the publication of an in-depth review article regarding female infertility due to aging and poor egg quality. The article is authored by the Company's scientific Co-Founders, fertility expert [Jonathan L. Tilly](#), Ph.D., of Massachusetts General Hospital and Harvard Medical School, and mitochondrial expert [David A. Sinclair](#), Ph.D., of Harvard Medical School.

The article, titled "Germline Energetics, Aging and Female Infertility," published today in the June issue of *Cell Metabolism*, offers a comprehensive overview of the direct relationship between aging and egg quality. It proposes that some of the most significant advances in fertility will come from advances in understanding why we age. Mitochondria are an important energy source for all cells, and a decline in cellular energetics is known to be a major player in the aging process. The authors conclude that reduced mitochondrial function leads to poor egg quality, poor embryo development and pregnancy failures. The review also addresses current strategies being explored to safely and effectively overcome the negative effects of maternal aging on *in vitro* fertilization (IVF) outcomes.

Importantly, this article describes the biology and utility of oogonial stem cells (OSCs), also called "egg precursor cells" (EggPCSM), which can serve as a source of mitochondria for enhancing egg and embryo quality and the rationale for leveraging these cells to improve fertility. The authors note the close similarity in both morphology and function between oocyte, or immature egg, mitochondria and EggPC mitochondria, suggesting that the use of EggPCs as a source of mitochondria for rejuvenation of eggs would be compatible with the natural processes of mitochondrial transfer between mother and baby. In addition, EggPC mitochondria are more likely to be free of cumulative damage than mitochondria from other cells in the body. Preliminary results from studies of human EggPCs presented by Dr. Tilly at the recent annual meeting of the Society for Gynecologic Investigation (SGI) and the 2013 SGI Summit lend credence to this conclusion. These observations support OvaScience's approach to addressing female infertility by utilizing its EggPC technology platform to develop products that improve egg quality, and thereby the success of IVF.

"Given the rapidly growing, and now quite extensive, body of preclinical and clinical proof-of-concept data discussed in this article showing how important optimal mitochondrial function is to egg quality, the prospects of using EggPC-based technologies for safely improving IVF are exciting to consider," said Dr. Tilly, a Massachusetts General Hospital-based Professor of Obstetrics, Gynecology and Reproductive Biology at Harvard Medical School.

"Although progress has been made in connecting the dots in infertility, we are still working to fully explore the bioenergetic and longevity pathways that impact female fertility," said Dr. Sinclair, Professor, Department of Genetics, Harvard Medical School, Co-Joint Professor, Department of Physiology and Pharmacology, University of New South Wales and Co-Director, Paul F. Glenn Laboratories for the Biological Mechanisms of Aging. "Thus, these data can be viewed as opening chapters in a saga that may one day offer unprecedented opportunities for the clinical management of egg quality, fertilization and pre-implantation embryogenesis in human assisted reproduction. We believe OvaScience's approach to improving egg quality provides one of the most promising examples of potential future chapters in addressing female infertility."

About OvaScience

OvaScience (NASDAQ: OVAS) is a life sciences company focused on the discovery, development and commercialization of new treatments for infertility. The Company's patented technology is based on the discovery of egg precursor cells (EggPCSM), which are found in the ovaries. By applying proprietary technology to identify and purify EggPCs, AUGMENTSM aims to improve egg quality and increase the success of *in vitro* fertilization (IVF). OvaScience's team of scientists, physicians and advisers includes recognized leaders in the field of reproductive medicine. For more information, please visit www.ovascience.com and connect with us on [Twitter](#) and [Facebook](#).

Forward-Looking Statements

This press release includes forward-looking statements about the prospects for the Company's technology in addressing female infertility, the Company's strategy, future plans and prospects, including statements regarding the development and planned launch of the Company's product candidates, including AUGMENT. Any statements in this release about our strategy, plans, prospects and future expectations, financial position and operations, and other statements containing the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target,"

"aim," "potential," "will," "would," "could," "should," "continue," and similar expressions, constitute forward-looking statements for the purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including risks related to: our expectations regarding the regulatory approvals required for AUGMENT; the science underlying our two product candidates, which is unproven; our ability to obtain, maintain and protect intellectual property utilized by our products; our ability to obtain additional funding to support our activities; our dependence on third parties; the successful development of, and ability to obtain regulatory approval for, our product candidates; our ability to commercialize our product candidates, including AUGMENT, on the timeline we expect, if at all; competition from others; and our short operating history; as well as those risks more fully discussed in the "Risk Factors" section of our most recently filed Quarterly Report on Form 10-Q or Annual Report on Form 10-K. The forward-looking statements contained in this press release reflect our current views with respect to future events. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements in the future, we specifically disclaim any obligation to do so. These forward-looking statements should not be relied upon as representing our view as of any date subsequent to the date hereof.

Source: OvaScience, Inc.

OvaScience, Inc.
Theresa McNeely, 617-299-7356
Head of Corporate Communications
tmcneely@ovascience.com