
World of Reproductive Biology

Katie Gerhardt

Shedding Light on Endometriosis

Biol Reprod August 2016 95 (2) 32, 1-1; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.142950

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Reading Cancer's Prelude

Biol Reprod August 2016 95 (2) 35, 1-1; published ahead of print June 29, 2016, doi:10.1095/biolreprod.116.143115

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Vanishing Centrioles in Meiosis

Biol Reprod August 2016 95 (2) 38, 1-1; published ahead of print July 6, 2016, doi:10.1095/biolreprod.116.143354

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Menstruating Mice

Biol Reprod August 2016 95 (2) 46, 1-1; published ahead of print July 14, 2016, doi:10.1095/biolreprod.116.143511

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Minireview

- Soon Ok Kim and Diane M. Duffy

Mapping PTGERS to the Ovulatory Follicle: Regional Responses to the Ovulatory PGE2 Signal

Biol Reprod August 2016 95 (2) 33, 1-11; published ahead of print June 15, 2016, doi:10.1095/biolreprod.116.140574

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: Each compartment or each cell type within an ovulatory follicle expresses a different subset of the four PGE2 receptors (PTGERS), which facilitate regional responses to PGE2, a vital intrafollicular mediator of ovulation.

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Research Articles

Embryo

- HaiYang Wang and Nam-Hyung Kim

CDK2 Is Required for the DNA Damage Response During Porcine Early Embryonic Development

Biol Reprod August 2016 95 (2) 31, 1-13; published ahead of print June 15, 2016, doi:10.1095/biolreprod.116.140244

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: CDK2 inhibition induced accumulation of DNA damage and arrested preimplantation development through activation of the ATM-P53-P21 pathway, influencing the transcript levels of HR and NHEJ DNA repair pathways and increasing apoptosis in pig early embryos.

- Jing Guo, Hongjuan He, Hui Liu, Qi Liu, Lili Zhang, Boqi Liu, Kenkichi Sugimoto, and Qiong Wu

Aquaporin-1, a New Maternally Expressed Gene, Regulates Placental Development in the Mouse

Biol Reprod August 2016 95 (2) 40, 1-9; published ahead of print June 15, 2016, doi:10.1095/biolreprod.116.138636

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: Aquaporin-1 (*Aqp1*), which is identified as a new, placenta-specific, maternally expressed gene, is essential for placenta development and regulation by DNA methylation.

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Female Reproductive Tract

- Amanda Rodriguez, Swamy K. Tripurani, Jason C. Burton, Caterina Clementi, Irina Larina, and Stephanie A. Pangas

SMAD Signaling Is Required for Structural Integrity of the Female Reproductive Tract and Uterine Function During Early Pregnancy in Mice

Biol Reprod August 2016 95 (2) 44, 1-16; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.139477

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: Conditional deletion of the BMP-signaling Smad transcription factors, SMAD1, SMAD5, and SMAD4, in the reproductive

tract disrupts oviduct and uterus function, causing sterility and early pregnancy loss.

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Gamete Biology

- Christa R. Darr, Dickson D. Varner, Sheila Teague, Gino A. Cortopassi, Sandipan Datta, and Stuart A. Meyers
Lactate and Pyruvate Are Major Sources of Energy for Stallion Sperm with Dose Effects on Mitochondrial Function, Motility, and ROS Production

Biol Reprod August 2016 95 (2) 34, 1-11; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.140707

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: The bioenergetics of stallion sperm metabolism are further elucidated by measuring mitochondrial oxygen consumption in media with varying substrate constitutions and concentrations, indicating lactate and pyruvate as optimal sperm energy sources.

- Xiaoqiong Hao, Yakun Wang, Nana Kong, Yu Zhang, Yu Zhao, Guoliang Xia, and Meijia Zhang

Epidermal Growth Factor-Mobilized Intracellular Calcium of Cumulus Cells Decreases Natriuretic Peptide Receptor 2 Affinity for Natriuretic Peptide Type C and Induces Oocyte Meiotic Resumption in the Mouse

Biol Reprod August 2016 95 (2) 45, 1-9; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.140137

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: The decrease of the binding affinity of NPR2 for NPPC reduces NPR2 activity, which is required for epidermal growth factor-induced oocyte meiotic resumption.

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Immunology

- Heloisa M. Rutigliano, Aaron J. Thomas, Amanda Wilhelm, Benjamin R. Sessions, Brady A. Hicks, Donald H. Schlafer, Kenneth L. White, and Christopher J. D
Trophoblast Major Histocompatibility Complex Class I Expression Is Associated with Immune-Mediated Rejection of Bovine Fetuses Produced by Cloning

Biol Reprod August 2016 95 (2) 39, 1-9; published ahead of print July 6, 2016, doi:10.1095/biolreprod.115.136523

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
[OPEN ACCESS ARTICLE](#)

Summary: Major histocompatibility complex class I compatibility between a fetus and dam reduces the maternal immune response against bovine concepti produced by somatic cell nuclear transfer.

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Pregnancy

- Julie A.W. Stille, Rongbin Guan, Donna A. Santillan, Bryan F. Mitchell, Kathryn G. Lamping, and Deborah L. Segaloff
Differential Regulation of Human and Mouse Myometrial Contractile Activity by FSH as a Function of FSH Receptor Density

Biol Reprod August 2016 95 (2) 36, 1-10; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.141648

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)

Summary: The relative expression of FSH receptor in myometrium, low in nonpregnant tissue and through most of pregnancy but up-regulated at term pregnancy, governs a switch between FSH mediating quiescence vs. stimulation of uterine contractile activity.

- Jun Tanaka, Akira Kitashoji, Yuki Fukunaga, Junichi Kashihara, Atsushi Nakano, and Akihito Kamizono

Intravenous Immunoglobulin Suppresses Abortion Relates to an Increase in the CD44^{bright} NK Subset in Recurrent Pregnancy Loss Model Mice

Biol Reprod August 2016 95 (2) 37, 1-10; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.138438

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
[OPEN ACCESS ARTICLE](#)

Summary: Intravenous immunoglobulin suppresses the increase in the number of CD44^{bright} uterine NK cells attenuating the abortion rate, in unexplained recurrent pregnancy loss model mice.

- Aline R. Lorenzon-Ojea, Cristiane R. Guzzo, Mirhan Kapidzic, Susan J. Fisher, and Estela Bevilacqua

Stromal Cell-Derived Factor 2: A Novel Protein that Interferes in Endoplasmic Reticulum Stress Pathway in Human Placental Cells

Biol Reprod August 2016 95 (2) 41, 1-11; published ahead of print June 22, 2016, doi:10.1095/biolreprod.115.138164

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: SDF2 is a novel factor able to disturb the expression of ER stress pathway proteins and control cell survival in trophoblast cells.

- Amar S. More, Jay S. Mishra, Gary D. Hankins, and Sathish Kumar

Prenatal Testosterone Exposure Decreases Aldosterone Production but Maintains Normal Plasma Volume and Increases Blood Pressure in Adult Female Rats

Biol Reprod August 2016 95 (2) 42, 1-11; published ahead of print July 6, 2016, doi:10.1095/biolreprod.116.141705

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)

Summary: Prenatal testosterone exposure induces hypertension associated with decreased plasma aldosterone levels and normal plasma volume; increased angiotensin II and vasopressin levels and heightened AGTR1 signaling may maintain plasma volume and mediate hypertension.

- Monique Y. Rennie, Kathie J. Whiteley, S. Lee Adamson, and John G. Sled

Quantification of Gestational Changes in the Uteroplacental Vascular Tree Reveals Vessel Specific Hemodynamic Roles During Pregnancy in Mice

Biol Reprod August 2016 95 (2) 43, 1-9; published ahead of print June 22, 2016, doi:10.1095/biolreprod.116.140681

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)

Summary: Uteroplacental vessel morphology dictates functional roles: narrowing radial arteries contribute 91% of resistance and pressure drop, enlarging spiral arteries decrease resistance (by 47%), and enlarging maternal canals maintain low exit flow velocities.

- Thomas W. Geary, Gregory W. Burns, Joao G.N. Moraes, James I. Moss, Anna C. Denicol, Kyle B. Dobbs, M. Sofia Ortega, Peter J. Hansen, Michael E. Wehr

Identification of Beef Heifers with Superior Uterine Capacity for Pregnancy

Biol Reprod August 2016 95 (2) 47, 1-12; published ahead of print July 14, 2016, doi:10.1095/biolreprod.116.141390

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)

Summary: Differences in capacity for pregnancy success in heifers fertility-classified by serial embryo transfer manifests between Days 14 and 28 when pregnancy recognition signaling, and conceptus elongation and implantation must occur for the establishment of pregnancy.