

February 1, 2015; 92 (2)

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World of Reproductive Biology

Charlotte Schubert

X and Y Fight Club

Biol Reprod February 2015 92 (2) 29, 1-1; published ahead of print November 5, 2014, doi:10.1095/biolreprod.114.126490

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

Charlotte Schubert

Cholesterol Overload Damages Eggs

Biol Reprod February 2015 92 (2) 30, 1-1; published ahead of print November 13, 2014, doi:10.1095/biolreprod.114.126730

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

Charlotte Schubert

Switching Sexual Identity

Biol Reprod February 2015 92 (2) 31, 1-1; published ahead of print November 19, 2014, doi:10.1095/biolreprod.114.126862

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

Charlotte Schubert

Polymer Protects Against Preterm Birth

Biol Reprod February 2015 92 (2) 32, 1-1; published ahead of print November 26, 2014, doi:10.1095/biolreprod.114.127001

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

Minireview

 Qinglei Li

Inhibitory SMADs: Potential Regulators of Ovarian Function

Biol Reprod February 2015 92 (2) 50, 1-6; published ahead of print December 30, 2014, doi:10.1095/biolreprod.114.125203

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Author Biosketch](#)**Summary:** Recent evidence indicates that inhibitory SMADs are potential novel regulators of ovarian function Saffet Ozturk

Telomerase Activity and Telomere Length in Male Germ Cells

Biol Reprod February 2015 92 (2) 53, 1-11; published ahead of print January 7, 2015, doi:10.1095/biolreprod.114.124008

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Author Biosketch](#)**Summary:** This review article has analyzed all studies aimed to characterize telomere length and telomerase activity in the male germ cells.[Clear](#) [Get All Checked Abstracts](#)

Research Articles

Environment

 Clare M. Reynolds, Stephanie A. Segovia, Xiaohuan D. Zhang, Clint Gray, and Mark H. Vickers

Conjugated Linoleic Acid Supplementation During Pregnancy and Lactation Reduces Maternal High-Fat-Diet-Induced Programming of Early-Onset Puberty and Hyperlipidemia in Female Rat Offspring

Biol Reprod February 2015 92 (2) 40, 1-10; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.125047

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)**Summary:** Supplementation of a maternal high-fat diet with conjugated linoleic acid reverses programming of early-onset puberty, hyperlipidemia, aberrant hepatic inflammatory and lipid homeostasis gene expression patterns, and disrupted estrus in female offspring.[Clear](#) [Get All Checked Abstracts](#)

Female Reproductive Tract

 Yang Gao, Samantha Duran, John P. Lydon, Francesco J. DeMayo, Robert C. Burghardt, Kayla J. Bayless, Laurent Bartholin, and Qinglei Li

Constitutive Activation of Transforming Growth Factor Beta Receptor 1 in the Mouse Uterus Impairs Uterine Morphology and Function

Biol Reprod February 2015 92 (2) 34, 1-13; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.125146

[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)**Summary:** Constitutively active TGFBR1 in the mouse uterus causes defects in uterine morphology and function.

- Khaleque Newaz Khan, Michio Kitajima, Koichi Hiraki, Akira Fujishita, Masahiro Nakashima, and Hideaki Masuzaki

Involvement of Hepatocyte Growth Factor-Induced Epithelial-Mesenchymal Transition in Human Adenomyosis

Biol Reprod February 2015 92 (2) 35, 1-11; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.124891

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

Summary: Hepatocyte growth factor appears to mediate gland invagination of adenomyosis into the myometrium by inducing epithelial-mesenchymal transition at the endo-myometrial junction.

- T. Ignacio Montoya, P. Antonio Maldonado, Jesus F. Acevedo, and R. Ann Word

Effect of Vaginal or Systemic Estrogen on Dynamics of Collagen Assembly in the Rat Vaginal Wall

Biol Reprod February 2015 92 (2) 43, 1-9; published ahead of print December 23, 2014, doi:10.1095/biolreprod.114.118638

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

Summary: Local estrogen treatment increased total and cross-linked collagen content and markedly stimulated collagen mRNA in the muscularis in an inverse dose-effect relationship in this menopausal rat model.

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Gamete Biology

- Tessa Lord, Jacinta H. Martin, and R. John Aitken

Accumulation of Electrophilic Aldehydes During Postovulatory Aging of Mouse Oocytes Causes Reduced Fertility, Oxidative Stress, and Apoptosis

Biol Reprod February 2015 92 (2) 33, 1-13; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.122820

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

Summary: Electrophilic aldehydes such as 4-hydroxynonenal accumulate within the MII oocyte with increasing time post-ovulation causing a reduced capacity for fertilization and embryo development, oxidative stress, and eventual apoptosis.

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Immunology

- Pietro Presicce, Paranthaman Senthamaraiannan, Manuel Alvarez, Cesar M. Rueda, Monica Cappelletti, Lisa A. Miller, Alan H. Jobe, Claire A. Choungnet, and

Neutrophil Recruitment and Activation in Decidua with Intra-Amniotic IL-1beta in the Preterm Rhesus Macaque

Biol Reprod February 2015 92 (2) 56, 1-13; published ahead of print December 23, 2014, doi:10.1095/biolreprod.114.124420

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

Summary: Neutrophils recruited to the choriodecidua during acute chorioamnionitis are the predominant producers of proinflammatory cytokines.

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Male Reproductive Tract

- Wenling Tu, Yunqiang Liu, Ying Shen, Yuanlong Yan, Xianding Wang, Dong Yang, Lei Li, Yongxin Ma, Dachang Tao, Sizhong Zhang, and Yuan Yang

Genome-Wide Loci Linked to Non-Obstructive Azoospermia Susceptibility May Be Independent of Reduced Sperm Production in Males with Normozoospermia

Biol Reprod February 2015 92 (2) 41, 1-6; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.125237

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

Summary: Nonobstructive azoospermia susceptibility loci are independent from reduced sperm production in normozoospermic men.

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Neuroendocrinology

- Tselmeg Mijiddorj, Haruhiko Kanasaki, Unurjargal Sukhbaatar, Aki Oride, and Satoru Kyo

DS1, a Delta Subunit-Containing GABA_A Receptor Agonist, Increases Gonadotropin Subunit Gene Expression in Mouse Pituitary Gonadotrophs

Biol Reprod February 2015 92 (2) 45, 1-8; published ahead of print December 17, 2014, doi:10.1095/biolreprod.114.123893

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

Summary: The GABA_A alpha4beta3delta receptor agonist DS1 can stimulate gonadotropin subunit gene expression in association with the ERK signaling pathway.

- Bruna R.C. Alves, Rodolfo C. Cardoso, Ligia D. Prezotto, Jennifer F. Thorson, Michelle Bedenbaugh, Sarah M. Sharpton, Alain Caraty, Duane H. Keisler, Luis C
- Elevated Body Weight Gain During the Juvenile Period Alters**

Neuropeptide Y-Gonadotropin-Releasing Hormone Circuitry in Prepubertal Heifers

Biol Reprod February 2015 92 (2) 46, 1-10; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.124636

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

Summary: Elevated body weight gain during the juvenile period decreases *NPY* mRNA abundance in the arcuate nucleus and reduces *NPY* projections to GnRH neurons, but it does not alter *NPY* projections to kisspeptin neurons in prepubertal heifers.

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Pregnancy

- Luiz E. Henkes, James K. Pru, Ryan L. Ashley, Russell V. Anthony, D.N. Rao Veeramachaneni, Katherine C. Gates, and Thomas R. Hansen
Embryo Mortality in *Isg15*^{-/-} Mice Is Exacerbated by Environmental Stress
 Biol Reprod February 2015 92 (2) 36, 1-10; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.122002
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)
Summary: Embryo mortality in pregnant *Isg15*^{-/-} mice is exacerbated by environmental insults like maternal hypoxia that may be a result of impaired early decidualization and formation of the labyrinth.
- Madhu Chauhan, Meena Balakrishnan, Chellakkan S. Blesson, and Chandra Yallampalli
Adrenomedullin2 (ADM2)/Intermedin (IMD) in Rat Ovary: Changes in Estrous Cycle and Pregnancy and Its Role in Ovulation and Steroidogenesis
 Biol Reprod February 2015 92 (2) 39, 1-9; published ahead of print November 13, 2014, doi:10.1095/biolreprod.113.112854
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)
Summary: ADM2 facilitates ovulation and early placentation via its endocrine actions in rat ovary.
- Kelsey E. Brooks, Gregory W. Burns, and Thomas E. Spencer
Peroxisome Proliferator Activator Receptor Gamma (PPARG) Regulates Conceptus Elongation in Sheep
 Biol Reprod February 2015 92 (2) 42, 1-13; published ahead of print December 17, 2014, doi:10.1095/biolreprod.114.123877
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: PPARG regulates conceptus elongation and trophectoderm survival and metabolism in sheep.
- Kristiina L. Aasa, Bruno Zavan, Rayana L. Luna, Philip G. Wong, Nicole M. Ventura, M. Yat Tse, Peter Carmeliet, Michael A. Adams, Stephen C. Pang, and B.
Placental Growth Factor Influences Maternal Cardiovascular Adaptation to Pregnancy in Mice
 Biol Reprod February 2015 92 (2) 44, 1-10; published ahead of print December 23, 2014, doi:10.1095/biolreprod.114.124677
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: Placental growth factor is associated with maternal gestational cardiovascular adaptation.
- Kelsey Brooks and Thomas E. Spencer
Biological Roles of Interferon Tau (IFNT) and Type I IFN Receptors in Elongation of the Ovine Conceptus
 Biol Reprod February 2015 92 (2) 47, 1-10; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.124156
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Table](#)
Summary: Conceptus elongation and trophectoderm survival is compromised by interferon tau loss-of-function, and the embryotrophic actions of interferon tau are primarily mediated by the endometrium.
- Monique Y. Rennie, Anum Rahman, Kathie J. Whiteley, John G. Sled, and S. Lee Adamson
Site-Specific Increases in Utero- and Fetoplacental Arterial Vascular Resistance in *eNOS*-Deficient Mice Due to Impaired Arterial Enlargement
 Biol Reprod February 2015 92 (2) 48, 1-11; published ahead of print December 17, 2014, doi:10.1095/biolreprod.114.123968
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)
OPEN ACCESS ARTICLE
Summary: Micro-CT showed that 90% of uteroplacental arterial resistance was at the radial arteries and that *eNOS* deficiency reduced uterine, radial, and spiral artery diameters by 30%, doubling uteroplacental resistance, but had less fetoplacental effects.
- Laís Rosa Viana and Maria Cristina Cintra Gomes-Marcondes
A Leucine-Rich Diet Modulates the Tumor-Induced Down-Regulation of the MAPK/ERK and PI3K/Akt/mTOR Signaling Pathways and Maintains the Expression of the Ubiquitin-Proteasome Pathway in the Placental Tissue of NMRI Mice

Biol Reprod February 2015 92 (2) 49, 1-8; published ahead of print November 13, 2014, doi:10.1095/biolreprod.114.123307

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

Summary: MAC16 tumor growth produces placental cell signaling down-regulation in tumor-bearing dams, whereas a leucine-rich diet minimized the deleterious effects of the tumor burden on placental activity.

- Xiaoqiu Wang, Greg A. Johnson, Robert C. Burghardt, Guoyao Wu, and Fuller W. Bazer

Uterine Histotroph and Conceptus Development. I. Cooperative Effects of Arginine and Secreted Phosphoprotein 1 on Proliferation of Ovine Trophectoderm Cells via Activation of the PDK1-Akt/PKB-TSC2-MTORC1 Signaling Cascade

Biol Reprod February 2015 92 (2) 51, 1-10; published ahead of print December 30, 2014, doi:10.1095/biolreprod.114.125971

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

Summary: During early pregnancy, arginine and SPP1 at physiological concentrations act cooperatively to enhance survival, growth, and development of ovine conceptuses.

- Kunju Sathishkumar, Meena P. Balakrishnan, and Chandrasekhar Yallampalli

Enhanced Mesenteric Arterial Responsiveness to Angiotensin II Is Androgen Receptor-Dependent in Prenatally Protein-Restricted Adult Female Rat Offspring

Biol Reprod February 2015 92 (2) 55, 1-6; published ahead of print December 30, 2014, doi:10.1095/biolreprod.114.126482

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

Summary: Elevated testosterone levels in adult protein-restricted females induce hypertension via enhanced vascular responses to angiotensin II, providing a molecular mechanism linking prenatal protein restriction and programmed hypertension.

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Reproductive Technology

- Xiao Chen, Aiyun Li, Wencheng Chen, Julong Wei, Jinluan Fu, and Aiguo Wang

Differential Gene Expression in Uterine Endometrium During Implantation in Pigs

Biol Reprod February 2015 92 (2) 52, 1-14; published ahead of print December 17, 2014, doi:10.1095/biolreprod.114.123075

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

Summary: The present study detected the differently expressed genes in uterine endometrial attachment sites and intersites at Gestation Days 13, 18 and 24, and identified 87 candidate genes for litter size in pigs through QTL location.

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Testis

- Cathryn A. Hogarth, Samuel Arnold, Travis Kent, Debra Mitchell, Nina Isoherranen, and Michael D. Griswold

Processive Pulses of Retinoic Acid Propel Asynchronous and Continuous Murine Sperm Production

Biol Reprod February 2015 92 (2) 37, 1-11; published ahead of print December 17, 2014, doi:10.1095/biolreprod.114.126326

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

Summary: Pulses of RA are generated within testis tubules at Stages VIII-IX of the cycle of the seminiferous epithelium.

- Pingping Song, Shasha Zou, Tingting Chen, Jianhua Chen, Yanan Wang, Juanjuan Yang, Zhijian Song, Huayu Jiang, Huijuan Shi, Yiran Huang, Zheng Li, Yong

Endothelial Nitric Oxide Synthase (eNOS) T-786C, 4a4b, and G894T Polymorphisms and Male Infertility: Study for Idiopathic Asthenozoospermia and Meta-Analysis

Biol Reprod February 2015 92 (2) 38, 1-9; published ahead of print December 10, 2014, doi:10.1095/biolreprod.114.123240

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

Summary: Genetic evidence indicates *eNOS* gene as a risk factor for idiopathic AZS and male infertility.

- Brian P. Hermann, Kazadi N. Mutoji, Ellen K. Velte, Daijin Ko, Jon M. Oatley, Christopher B. Geyer, and John R. McCarrey

Transcriptional and Translational Heterogeneity among Neonatal Mouse Spermatogonia

Biol Reprod February 2015 92 (2) 54, 1-12; published ahead of print January 7, 2015, doi:10.1095/biolreprod.114.125757

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

Summary: Spermatogonia in neonatal mouse testes exhibit substantial heterogeneity at the mRNA and protein levels, indicative of multiple distinct subpopulations that may have different functional capacities.