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November 1, 2015; 93 (5)

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# World of Reproductive Biology

#### Charlotte Schubert

### Girls: Find a Mate Like Your Mother!?!

Biol Reprod November 2015 93 (5) 105, 1-1; published ahead of printAugust 5, 2015, doi:10.1095/biolreprod.115.134163

Full Text Full Text (PDF)

### Charlotte Schubert

# SNPs That Sap Fertility-A Systematic Approach

Biol Reprod November 2015 93 (5) 106, 1-1; published ahead of printAugust 12, 2015, doi:10.1095/biolreprod.115.134445

Full Text Full Text (PDF)

#### Charlotte Schubert

### Macrophages Make the Man-in Mice

Biol Reprod November 2015 93 (5) 107, 1-1; published ahead of printAugust 19, 2015, doi:10.1095/biolreprod.115.134809

Full Text Full Text (PDF)

### Charlotte Schubert

# Single Cell Analysis Probes Variability in Gene Expression in Early Human Embryo

Biol Reprod November 2015 93 (5) 108, 1-1; published ahead of printAugust 26, 2015, doi:10.1095/biolreprod.115.134999

Full Text Full Text (PDF)

# **Minireview**

John K. Findlay, Karla J. Hutt, Martha Hickey, and Richard A. Anderson

# How Is the Number of Primordial Follicles in the Ovarian Reserve Established?

Biol Reprod November 2015 93 (5) 111, 1-7; published ahead of printSeptember 30, 2015, doi:10.1095/biolreprod.115.133652

Abstract Full Text Full Text (PDF) Author Biosketches

**Summary:** This review outlines the regulatory steps that determine the number of primordial follicles containing oocytes in the ovarian reserve at birth.

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# **Research Articles**

# **Female Reproductive Tract**

Kottawattage S.A. Kottawatta, Kam-Hei So, Suranga P. Kodithuwakku, Ernest H.Y. Ng, William S.B. Yeung, and Kai-Fai Lee

### MicroRNA-212 Regulates the Expression of Olfactomedin 1 and C-Terminal Binding Protein 1 in Human Endometrial Epithelial Cells to Enhance Spheroid Attachment In Vitro

Biol Reprod November 2015 93 (5) 109, 1-10; published ahead of printSeptember 16, 2015, doi:10.1095/biolreprod.115.131334

Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** hCG regulates miRNA-212 expression which in turn modulates OLFM1 and CTBP1 expressions in regulating spheroids (blastocyst surrogate) attachment onto human fallopian and endometrial epithelial cells.

Jaesung Peter Choi, Yu Zheng, Katherine A. Skulte, David J. Handelsman, and Ulla Simanainen

**Development and Characterization of Uterine Glandular** 

### **Epithelium Specific Androgen Receptor Knockout Mouse Model**

Biol Reprod November 2015 93 (5) 120, 1-11; published ahead of printOctober 14, 2015, doi:10.1095/biolreprod.115.132241

Abstract Full Text (PDF) Supplemental Data

**Summary:** Androgens via AR can support full uterine growth and glandular epithelial development, warranting further investigations on AR and cross talk involving AR in different uterine cells.

Chad L. Cowles, Yi-Ying Wu, Scott D. Barnett, Michael T. Lee, Heather R. Burkin, and Iain L.O. Buxton

# Alternatively Spliced Human TREK-1 Variants Alter TREK-1 Channel Function and Localization

Biol Reprod November 2015 93 (5) 122, 1-11; published ahead of printSeptember 23, 2015, doi:10.1095/biolreprod.115.129791

Abstract Full Text Full Text (PDF) Supplemental Data
OPEN ACCESS ARTICLE

**Summary:** Coexpression of uterine smooth muscle variants of the TREK-1 potassium channel with native TREK-1 suggests functional impairment of TREK-1 current consistent with loss of myocyte quiescence.

Honglu Diao, Rong Li, Ahmed E. El Zowalaty, Shuo Xiao, Fei Zhao,Elizabeth A. Dudley, and Xiaoqin Ye

# Deletion of Lysophosphatidic Acid Receptor 3 (*Lpar3*) Disrupts Fine Local Balance of Progesterone and Estrogen Signaling in Mouse Uterus During Implantation

Biol Reprod November 2015 93 (5) 123, 1-9; published ahead of printOctober 7, 2015, doi:10.1095/biolreprod.115.131110

Abstract Full Text Full Text (PDF)

**Summary:** *Lpar3* regulates the balance of progesterone and estrogen action in the uterine epithelium during embryo implantation.

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### **Gamete Biology**

Myrina Boulais, Philippe Soudant, Nelly Le Goïc, Claudie Quéré, Pierre Boudry, and Marc Suquet

# Involvement of Mitochondrial Activity and OXPHOS in ATP Synthesis During the Motility Phase of Spermatozoa in the Pacific Oyster, *Crassostrea gigas*

Biol Reprod November 2015 93 (5) 118, 1-7; published ahead of printSeptember 30, 2015, doi:10.1095/biolreprod.115.128538

Abstract Full Text Full Text (PDF)

**Summary:** Oxidative phosphorylation sustains high intracellular ATP content during the 24-h motile phase of Pacific oyster spermatozoa, but ATP content is not the main factor controlling the end of movement.

Adriana Cassina, Patricia Silveira, Lidia Cantu, Jose Maria Montes, Rafael Radi, and Rossana Sapiro

### Defective Human Sperm Cells Are Associated with Mitochondrial Dysfunction and Oxidant Production

Biol Reprod November 2015 93 (5) 119, 1-10; published ahead of printOctober 7, 2015, doi:10.1095/biolreprod.115.130989

Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** Mitochondrial function correlates to sperm motility and the production of reactive oxygen species by human sperm.

Cristian A. Pocognoni, María Victoria Berberián, and Luis S. Mayorga

# ESCRT (Endosomal Sorting Complex Required for Transport) Machinery Is Essential for Acrosomal Exocytosis in Human Sperm

Biol Reprod November 2015 93 (5) 124, 1-12; published ahead of printOctober 21, 2015, doi:10.1095/biolreprod.115.132001

Abstract Full Text (PDF) Supplemental Data

**Summary:** The endosomal sorting complex required for transport (ESCRT) machinery is essential for the secretion of the acrosomal

granule in human sperm, implicating these multifunctional complexes in an exocytic event crucial for fertilization.

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### **Immunology**

Cecily V. Bishop, Fuhua Xu, Theodore A. Molskness, Richard L. Stouffer, and Jon D. Hennebold

Dynamics of Immune Cell Types Within the Macaque Corpus Luteum During the Menstrual Cycle: Role of Progesterone

Biol Reprod November 2015 93 (5) 112, 1-10; published ahead of printSeptember 23, 2015, doi:10.1095/biolreprod.115.132753

Abstract Full Text (PDF) Supplemental Data

**Summary:** The increase in numbers of natural killer cells, neutrophils, and macrophages after a decline in progesterone synthesis/action is consistent with a role in onset of structural luteolysis in primates during the menstrual cycle.

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### **Male Reproductive Tract**

Marion Mandon, Louis Hermo, and Daniel G. Cyr

# Isolated Rat Epididymal Basal Cells Share Common Properties with Adult Stem Cells

Biol Reprod November 2015 93 (5) 115, 1-15; published ahead of printSeptember 23, 2015, doi:10.1095/biolreprod.115.133967

Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** Isolated epididymal basal cells share common properties with adult stem cells with respect to gene expression and in vitro differentiation.

Michelle L. Brinkmeier, Krista A. Geister, Morgan Jones, Meriam Waqas, Ivan Maillard, and Sally A. Camper

# The Histone Methyltransferase Gene Absent, Small, or Homeotic Discs-1 Like Is Required for Normal Hox Gene Expression and Fertility in Mice

Biol Reprod November 2015 93 (5) 121, 1-12; published ahead of printSeptember 2, 2015, doi:10.1095/biolreprod.115.131516

Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** The histone methyltranserfase gene *Ash11* regulates female and male fertility by facilitating postnatal development of the uterine glands, which are essential for implantation, and by promoting epididymal development necessary to support sperm maturation.

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### **Mechanisms of Hormone Action**

Madhu Chauhan, Uma Yallampalli, Manu Banadakappa,and Chandrasekhar Yallampalli

Involvement of Receptor Activity-Modifying Protein 3 (RAMP3) in the Vascular Actions of Adrenomedullin in Rat Mesenteric Artery Smooth Muscle Cells

Biol Reprod November 2015 93 (5) 116, 1-8; published ahead of printSeptember 30, 2015, doi:10.1095/biolreprod.115.134585

Abstract Full Text Full Text (PDF)

**Summary:** The current study demonstrates that the relative potency of CALCB induced cAMP generation and RAMP3 associates with CALCRL to form a functional receptor for adrenomedulin actions in vascular smooth muscle cells in rat mesenteric artery.

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### **Ovary**

Safia Malki, Marla E. Tharp, and Alex Bortvin

A Whole-Mount Approach for Accurate Quantitative and Spatial Assessment of Fetal Oocyte Dynamics in Mice

Biol Reprod November 2015 93 (5) 113, 1-9; published ahead of printSeptember 30, 2015, doi:10.1095/biolreprod.115.132118

Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** The combination of embryonic ovary whole-mount immunostaining, tissue clearing, and confocal microscopy improves the study of mouse oocyte dynamics during fetal development.

 Wei-Ting Hung, Xioman Hong, Lane K. Christenson, and Lynda K. McGinnis Extracellular Vesicles from Bovine Follicular Fluid Support Cumulus Expansion

Biol Reprod November 2015 93 (5) 117, 1-9; published ahead of printSeptember 30, 2015, doi:10.1095/biolreprod.115.132977

Abstract Full Text (PDF) Supplemental Data

**Summary:** Extracellular vesicles (EV) from antral follicular fluid support cumulus cell expansion and up-regulate select genes with known association to cumulus expansion and ovulation.

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### **Pituitary**

Felipe Espigares, Silvia Zanuy, and Ana Gómez

Kiss2 as a Regulator of Lh and Fsh Secretion via Paracrine/Autocrine Signaling in the Teleost Fish European Sea Bass (*Dicentrarchus labrax*)

Biol Reprod November 2015 93 (5) 114, 1-12; published ahead of printSeptember 23, 2015, doi:10.1095/biolreprod.115.131029

Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** Kiss2 may act either as a hypophysiotropic neuropeptide, or as an autocrine/paracrine factor, inducing Lh release in the European sea bass.

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# **Toxicology**

Daniel J. Spade, Susan J. Hall, Shelby Wilson, and Kim Boekelheide
 Di-n-Butyl Phthalate Induces Multinucleated Germ Cells in the Rat Fetal Testis Through a Nonproliferative Mechanism
 Biol Reprod November 2015 93 (5) 110, 1-10; published ahead of printSeptember 23, 2015, doi:10.1095/biolreprod.115.131615
 Abstract Full Text Full Text (PDF) Supplemental Data

**Summary:** Multinucleated germ cells induced by late gestational di-*n*-butyl phthalate exposure are not proliferative, indicating they arise through collapse of germ cells independent of nuclear division.

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