January 1, 2014; 90 (1)

Clear Get All Checked Abstracts

Charlotte Schubert
WORLD OF REPRODUCTIVE BIOLOGY
Biol Reprod January 2014 90 (1) 1, 1-3;doi:10.1095/biolreprod.113.115535
Full Text **Full Text (PDF)**

Research Articles

Embryo

Benjamin B. Parrott, Satomi Kohno, Jessica A. Cloy-McCoy,and Louis J. Guillette, Jr.
Differential Incubation Temperatures Result in Dimorphic DNA Methylation Patterning of the *SOX9* and Aromatase Promoters in Gonads of Alligator (*Alligator mississippiensis*) Embryos
Biol Reprod January 2014 90 (1) 2, 1-11; published ahead of printNovember 13, 2013, doi:10.1095/biolreprod.113.111468
Abstract **Full Text** **Full Text (PDF)**

Summary: The promoter regions of aromatase (*CYP19A1*) and *SOX9*are differentially methylated in response to incubation temperature in the gonads of the American alligator, an organism undergoing temperature-dependent sex determination.

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Female Reproductive Tract

Justyna Filant, Franco J. DeMayo, James K. Pru, John P. Lydon,and Thomas E. Spencer
Fibroblast Growth Factor Receptor Two (FGFR2) Regulates Uterine Epithelial Integrity and Fertility in Mice
Biol Reprod January 2014 90 (1) 7, 1-11; published ahead of printNovember 13, 2013, doi:10.1095/biolreprod.113.114496
Abstract **Full Text** **Full Text (PDF)** **Supplemental Data**

Summary: Loss of FGFR2 in the uterus results in uterine epithelial stratification and pregnancy loss in mice.

Jemma Evans and Lois A. Salamonsen
Decidualized Human Endometrial Stromal Cells Are Sensors of Hormone Withdrawal in the Menstrual Inflammatory Cascade
Biol Reprod January 2014 90 (1) 14, 1-12; published ahead of printNovember 13, 2013, doi:10.1095/biolreprod.113.108175
Abstract **Full Text** **Full Text (PDF)**

Summary: Withdrawal of hormones from decidualized human stromal cells mediates nuclear NF-κB accumulation and secretion of inflammatory factors.

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Gamete Biology

Edward B. Nguyen, Andrew D. Westmuckett, and Kevin L. Moore
SPACA7 Is a Novel Male Germ Cell-Specific Protein Localized to the Sperm Acrosome That Is Involved in Fertilization in Mice
Biol Reprod January 2014 90 (1) 16, 1-13; published ahead of printDecember 4, 2013, doi:10.1095/biolreprod.113.111831
Abstract **Full Text** **Full Text (PDF)** **Supplemental Data**

Summary: SPACA7, a novel male germ cell-specific acrosomal protein, is released upon the acrosome reaction and facilitates cumulus dispersal and fertilization.

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Male Reproductive Tract

Jake S. Jasurda, Deborah O. Jung, Erin D. Froeter, David B. Schwartz,Torin D. Hopkins, Corrie L. Farris, Stacey McGee, Prema Narayan,and Buffy S. Ellswo
The Forkhead Transcription Factor, FOXP3: A Critical Role in Male Fertility in Mice
Biol Reprod January 2014 90 (1) 4, 1-8; published ahead of printNovember 20, 2013, doi:10.1095/biolreprod.113.112375
Abstract **Full Text** **Full Text (PDF)** **Supplemental Data**
OPEN ACCESS ARTICLE

Summary: The forkhead transcription factor FOXP3 is essential for normal pituitary gonadotropin expression and, consequently, spermatogenesis in male mice.

Prabagaran Esakky, Deborah A. Hansen, Andrea M. Drury,and Kelle H. Moley
Modulation of Cell Cycle Progression in the Spermatocyte Cell Line [GC-2spd(ts) Cell-Line] by Cigarette Smoke Condensate

(CSC) via Arylhydrocarbon Receptor-Nuclear Factor Erythroid 2-Related Factor 2 (*Ahr-Nrf2*) Pathway
Biol Reprod January 2014 90 (1) 9, 1-12; published ahead of printNovember 20, 2013, doi:10.1095/biolreprod.113.113225
Abstract **Full Text** **Full Text (PDF)**

Summary: Cigarette smoke causes cell cycle arrest in spermatocytes by regulating the downstream gene targets of the *Ahr-Nrf2* pathway.

Geneviève Plante, Jinjiang Fan, and Puttaswamy Manjunath
Murine Binder of SPerm Homolog 2 (BSPH2): The Black Sheep of the BSP Superfamily
Biol Reprod January 2014 90 (1) 20, 1-12; published ahead of printDecember 4, 2013, doi:10.1095/biolreprod.113.114272
Abstract **Full Text** **Full Text (PDF)**

Summary: Recombinant murine binder of sperm protein homolog 2 has similar binding characteristics to other proteins of the BSP superfamily; nevertheless, it cannot bind to phosphorylcholine liposomes or promote sperm capacitation.

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Mechanisms of Hormone Action

María José Mazón, Ana Gómez, Ozlem Yilmaz, Manuel Carrillo,and Silvia Zanuy
Administration of Follicle-Stimulating Hormone In Vivo Triggers Testicular Recrudescence of Juvenile European Sea Bass (*Dicentrarchus labrax*)
Biol Reprod January 2014 90 (1) 6, 1-10; published ahead of printNovember 20, 2013, doi:10.1095/biolreprod.113.110569
Abstract **Full Text** **Full Text (PDF)**

Summary: Injection of Fsh coding sequence or recombinant Fsh increased Fsh plasma levels, enhanced 11-KT plasma levels, promoted spermatogonia proliferation and differentiation, and initiated recrudescence in sea bass testis.

Bong Jung Kang, Tomoyuki Okutsu, Naoaki Tsutsui, Junpei Shinji,Sun-Hye Bae, and Marcy N. Wilder
Dynamics of Vitellogenin and Vitellogenesis-Inhibiting Hormone Levels in Adult and Subadult Whiteleg Shrimp, *Litopenaeus vannamei*: Relation to Molting and Eyestalk Ablation
Biol Reprod January 2014 90 (1) 12, 1-10; published ahead of printDecember 11, 2013, doi:10.1095/biolreprod.113.112243
Abstract **Full Text** **Full Text (PDF)**

Summary: The levels of vitellogenin and vitellogenesis-inhibiting hormone in hemolymph show differing changes between adults and subadults in relation to molting and eyestalk ablation.

James A. Dias, Brice Campo, Barbara A. Weaver, Julie Watts,Kerri Kluetzman, Richard M. Thomas, Béatrice Bonnet, Vincent Mutel,and Sonia M. Poli
Inhibition of Follicle-Stimulating Hormone-Induced Preovulatory Follicles in Rats Treated with a Nonsteroidal Negative Allosteric Modulator of Follicle-Stimulating Hormone Receptor
Biol Reprod January 2014 90 (1) 19, 1-11; published ahead of printNovember 27, 2013, doi:10.1095/biolreprod.113.109397
Abstract **Full Text** **Full Text (PDF)**

Summary: Inhibition of FSH-induced preovulatory follicles requires inhibition of both FSH-induced progesterone and estradiol biosynthetic pathways.

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Ovary

Keqin Yan, Peng Liu, Zhenghui Liu, Shutao Zhao, Lijing Cheng,and Daishu Han
Polyinosinic-Polycytidylic Acid Initiates Ovarian Innate Antiviral Response and Inhibits Steroidogenesis in Female Mice
Biol Reprod January 2014 90 (1) 11, 1-15; published ahead of printNovember 27, 2013, doi:10.1095/biolreprod.113.115360
Abstract **Full Text** **Full Text (PDF)**

Summary: The mouse ovary is equipped with an innate antiviral state, and the poly (I:C)-induced innate antiviral response suppresses ovarian steroidogenesis.

Ilona Kowalczyk-Zieba, Dorota Boruszewska, Emilia Sinderewicz,Dariusz Jan Skarzynski, and Izabela Woclawek-Potocka
Influence of Lysophosphatidic Acid on Nitric Oxide-Induced Luteolysis in Steroidogenic Luteal Cells in Cows
Biol Reprod January 2014 90 (1) 17, 1-11; published ahead of printDecember 4, 2013, doi:10.1095/biolreprod.113.113357
Abstract **Full Text** **Full Text (PDF)**

Summary: In the presence of lysophosphatidic acid, nitric oxide cannot induce functional and structural luteolysis of bovine steroidogenic luteal cells.

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Pregnancy

Shervi Lie, Janna L. Morrison, Olivia Williams-Wyss, Catherine M. Suter,David T. Humphreys, Susan E. Ozanne, Song Zhang,Severence M. MacLaughlin, Da

Periconceptional Undernutrition Programs Changes in Insulin-Signaling Molecules and MicroRNAs in Skeletal Muscle in Singleton and Twin Fetal Sheep

Biol Reprod January 2014 90 (1) 5, 1-10; published ahead of printNovember 20, 2013, doi:10.1095/biolreprod.113.109751

Abstract **Full Text** **Full Text (PDF)** **Supplemental Data**

Summary: Periconceptional and preimplantation undernutrition alters the abundance of insulin-signaling factors in singletons and twins, and changes in expression of specific microRNAs may underlie these changes.

Eduardo S. Ribeiro, Ralph G.S. Bruno, Alexandre M. Farias,Juan A. Hernández-Rivera, Gabriel C. Gomes, Ricardo Surjus,Luis F.V. Becker, Alyssa Birt, Troy I

Low Doses of Bovine Somatotropin Enhance Conceptus Development and Fertility in Lactating Dairy Cows

Biol Reprod January 2014 90 (1) 10, 1-12; published ahead of printNovember 27, 2013, doi:10.1095/biolreprod.113.114694

Abstract **Full Text** **Full Text (PDF)**

Summary: Supplementation with bST during the pre- and peri-implantation periods results in sustained increases in GH and IGF1, enhanced conceptus development, reduced embryonic mortality, and increased fertility in lactating dairy cows.

Michael House, Serkalem Tadesse-Telila, Errol R. Norwitz,Simona Socrate, and David L. Kaplan

Inhibitory Effect of Progesterone on Cervical Tissue Formation in a Three-Dimensional Culture System with Human Cervical Fibroblasts

Biol Reprod January 2014 90 (1) 18, 1-9; published ahead of printNovember 27, 2013, doi:10.1095/biolreprod.113.112540

Abstract **Full Text** **Full Text (PDF)**

Summary: Using a hormonally responsive, three-dimensional culture system and human cervical fibroblasts, estradiol increased formation of cervical-like tissue; this effect was opposed by progesterone.

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Reproductive Technology

Yonghong Song, Sivakumar Duraisamy, Jahabar Ali, Jaleel Kizhakkayil,Victor Doss Jacob, Mohammed Ahmed Mohammed,Mohammed A. Eltigani, Suresh An

Characteristics of Long-Term Cultures of Avian Primordial Germ Cells and Gonocytes

Biol Reprod January 2014 90 (1) 15, 1-8; published ahead of printDecember 11, 2013, doi:10.1095/biolreprod.113.113381

Abstract **Full Text** **Full Text (PDF)**

OPEN ACCESS ARTICLE

Summary: Male and female primordial germ cell lines can be efficiently derived, expanded, and grown long-term and maintain robust germline transmission.

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Testis

Genevieve E. Kerr, Julia C. Young, Katja Horvay, Helen E. Abud,and Kate L. Loveland

Regulated Wnt/Beta-Catenin Signaling Sustains Adult Spermatogenesis in Mice

Biol Reprod January 2014 90 (1) 3, 1-12; published ahead of printNovember 20, 2013, doi:10.1095/biolreprod.112.105809

Abstract **Full Text** **Full Text (PDF)** **Supplemental Data**

Summary: Contrasting models of disrupted Wnt signaling demonstrate its crucial role in normal adult spermatogenesis and facilitate identification of cell type-specific mediators of Wnt activity.

Payal Mital, Gurvinder Kaur, Barrett Bowlin, Nicky J. Paniagua,Gregory S. Korbutt, and Jannette M. Dufour

Nondividing, Postpubertal Rat Sertoli Cells Resumed Proliferation after Transplantation

Biol Reprod January 2014 90 (1) 13, 1-10; published ahead of printNovember 27, 2013, doi:10.1095/biolreprod.113.110197

Abstract **Full Text** **Full Text (PDF)**

Summary: After transplantation into rodents, postpubertal nondividing rat Sertoli cells reinitiate their proliferation; thus, transplantation can be used as a model to study Sertoli cell proliferation in vivo.

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Toxicology

Deborah A. Hansen, Prabagaran Esakky, Andrea Drury, Laura Lamb,and Kelle H. Moley

The Aryl Hydrocarbon Receptor Is Important for Proper

Seminiferous Tubule Architecture and Sperm Development in Mice

Biol Reprod January 2014 90 (1) 8, 1-12; published ahead of printOctober 30, 2013, doi:10.1095/biolreprod.113.108845

Abstract **Full Text** **Full Text (PDF)**

OPEN ACCESS ARTICLE

Summary: Deficiency of AHR results in abnormal seminiferous tubules structure, aberrant gene expression during different stages of spermatogenesis and increased vulnerability to oxidative stress, as well as abnormal mature sperm morphology.