

December 1, 2013; 89 (6)

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Charlotte Schubert

WORLD OF REPRODUCTIVE BIOLOGY

Biol Reprod December 2013 89 (6) 129, 1-2; doi:10.1095/biolreprod.113.114348

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

Henning Schneider

Characterization of Extracellular Vesicles in Plasma of Pregnant Women Using Multicolor Flow Cytometry and Nanoparticle Tracking Analysis

Biol Reprod December 2013 89 (6) 152, 1-2; published ahead of print November 20, 2013, doi:10.1095/biolreprod.113.115998

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

Summary: The study published in *Biology of Reproduction* by Dragovic et al. is the first study using multicolor flow cytometry applying directly conjugated antibodies to phenotype trophoblast-derived extracellular vesicles (STBMs) together with extracellular vesicles (EVs) from cells circulating in the vascular compartment.

Minireview Ana D. Paixão and Barbara T. Alexander**How the Kidney Is Impacted by the Perinatal Maternal Environment to Develop Hypertension**

Biol Reprod December 2013 89 (6) 144, 1-10; published ahead of print November 13, 2013, doi:10.1095/biolreprod.113.111823

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

Summary: The impact of adverse events during gestational life, on later cardio-renal health of the offspring is highlighted, implicating the importance of fetal life on long-term health.

[Clear](#) [Get All Checked Abstracts](#)**Research Articles****Embryo** Kyle B. Dobbs, Firdous A. Khan, Miki Sakatani, James I. Moss, Manabu Ozawa, Alan D. Ealy, and Peter J. Hansen**Regulation of Pluripotency of Inner Cell Mass and Growth and Differentiation of Trophoblast of the Bovine Embryo by Colony Stimulating Factor 2**

Biol Reprod December 2013 89 (6) 141, 1-10; published ahead of print November 6, 2013, doi:10.1095/biolreprod.113.113183

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

Summary: The embryotropic glycoprotein CSF2 acts through a pathway likely independent of the beta subunit of CSF2R to improve competence of the inner cell mass to survive in a pluripotent state, while having slight effects on characteristics of trophoblast outgrowth.

 Masatoshi Ooga, Masataka G. Suzuki, and Fugaku Aoki**Involvement of DOT1L in the Remodeling of Heterochromatin Configuration During Early Preimplantation Development in Mice**

Biol Reprod December 2013 89 (6) 145, 1-10; published ahead of print October 16, 2013, doi:10.1095/biolreprod.113.113258

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

Summary: DOT1L is involved in the dynamic alteration of heterochromatin configuration during early preimplantation development.

[Clear](#) [Get All Checked Abstracts](#)**Female Reproductive Tract** Sunil Balgobin, T. Ignacio Montoya, Haolin Shi, Jesus F. Acevedo, Patrick W. Keller, Matthew Riegel, Clifford Y. Wai, and Ruth Ann Word**Estrogen Alters Remodeling of the Vaginal Wall after Surgical Injury in Guinea Pigs**

Biol Reprod December 2013 89 (6) 138, 1-10; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.112367

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

Summary: Estradiol not only increases baseline vaginal distensibility, vaginal epithelium and muscularis growth, and collagen content, but also prolonged increases in lysyl oxidase and collagen cross-links in

the vaginal muscularis after injury.

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Gamete Biology

- Catherine D. Thaler, Haruhiko Miyata, Leah T. Haimo, and Richard A. Cardullo
Waveform Generation Is Controlled by Phosphorylation and Swimming Direction Is Controlled by Ca²⁺ in Sperm from the Mosquito *Culex quinquefasciatus*
 Biol Reprod December 2013 89 (6) 135, 1-11; published ahead of print October 9, 2013, doi:10.1095/biolreprod.113.109488
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: Calcium and MAPK regulate motility of mosquito sperm.
- Shu Ly Lim, Enkhjargal Tsend-Ayush, R. Daniel Kortschak, Reuben Jacob, Carmela Ricciardelli, Martin K. Oehler, and Frank Grütznert
Conservation and Expression of PIWI-Interacting RNA Pathway Genes in Male and Female Adult Gonad of Amniotes
 Biol Reprod December 2013 89 (6) 136, 1-13; published ahead of print October 9, 2013, doi:10.1095/biolreprod.113.111211
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: PIWI-interacting RNA pathway gene expression is conserved in the supporting and germ cells of adult male and female amniote gonads.
- Lynne C. O'Shea, Carmel Hensey, and Trudee Fair
Progesterone Regulation of AVEN Protects Bovine Oocytes from Apoptosis During Meiotic Maturation
 Biol Reprod December 2013 89 (6) 146, 1-13; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.111880
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)
Summary: AVEN is a mediator of the antiapoptotic actions of cumulus cell-derived progesterone in bovine oocytes during meiotic maturation.
- Natak C. Douglas, Ripla Arora, Cayla Yiyu Chen, Mark V. Sauer, and Virginia E. Papaioannou
Investigating the Role of *Tbx4* in the Female Germline in Mice
 Biol Reprod December 2013 89 (6) 148, 1-10; published ahead of print October 2, 2013, doi:10.1095/biolreprod.113.107649
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: Postnatal oocyte-specific deletion of *Tbx4* does not obviously impair fertility but reduces primordial germ cell number.

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Male Reproductive Tract

- Julia S. Barthold, Yanping Wang, Alan Robbins, Jack Pike, Erin McDowell, Kamin J. Johnson, and Suzanne M. McCahan
Transcriptome Analysis of the Dihydrotestosterone-Exposed Fetal Rat Gubernaculum Identifies Common Androgen and Insulin-Like 3 Targets
 Biol Reprod December 2013 89 (6) 143, 1-12; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.112953
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: Exposure of the developing fetal rat gubernaculum to dihydrotestosterone in vitro produces a transcriptome response characterized by overrepresentation of Wnt signaling pathway genes and strong overlap with the effects of INSL3.

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Mechanisms of Hormone Action

- Sunil K. Halder, Kevin G. Osteen, and Ayman Al-Hendy
1,25-Dihydroxyvitamin D3 Reduces Extracellular Matrix-Associated Protein Expression in Human Uterine Fibroid Cells
 Biol Reprod December 2013 89 (6) 150, 1-13; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.107714
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Figure](#)
Summary: 1,25-dihydroxyvitamin D3 is an antifibrotic agent that suppresses major extracellular matrix-associated protein expression in human uterine fibroid cells and might be useful as an alternative therapeutic option for fibroid treatment.

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Ovary

- Gerald J. Pepe, Terrie J. Lynch, and Eugene D. Albrecht
Regulation of Baboon Fetal Ovarian Development by Placental Estrogen: Onset of Puberty Is Delayed in Offspring Deprived of Estrogen In Utero
 Biol Reprod December 2013 89 (6) 132, 1-8; published ahead of print October 16, 2013, doi:10.1095/biolreprod.112.107318

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

Summary: Fetal ovarian development and timely onset of puberty in the primate is programmed by fetal exposure to estrogen.

- Joseph K. Folger, Fermin Jimenez-Krassel, James J. Ireland, Lihua Lv, and George W. Smith

Regulation of Granulosa Cell Cocaine and Amphetamine Regulated Transcript (CART) Binding and Effect of CART Signaling Inhibitor on Granulosa Cell Estradiol Production During Dominant Follicle Selection in Cattle

Biol Reprod December 2013 89 (6) 137, 1-8; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.111609

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

Summary: Cocaine and amphetamine regulated transcript (CARTPT)-binding sites are temporally and hormonally regulated, and CARTPT signaling is required for the decrease in estradiol associated with atresia of subordinate follicles during a follicular wave.

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Pregnancy

- Yi-Zhou Jiang, Kai Wang, Yan Li, Cai-Feng Dai, Ping Wang, Christina Kendziorski, Dong-Bao Chen, and Jing Zheng

Enhanced Cellular Responses and Distinct Gene Profiles in Human Fetoplacental Artery Endothelial Cells under Chronic Low Oxygen

Biol Reprod December 2013 89 (6) 133, 1-10; published ahead of print October 23, 2013, doi:10.1095/biolreprod.113.110551

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

Summary: Chronic low oxygen enhances human endothelial cell proliferation and migration and alters gene expression.

- Anastazia Samborski, Alexander Graf, Stefan Krebs, Barbara Kessler, Myriam Reichenbach, Horst-Dieter Reichenbach, Susanne E. Ulbrich, and Stefan Bauers

Transcriptome Changes in the Porcine Endometrium During the Preattachment Phase

Biol Reprod December 2013 89 (6) 134, 1-16; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.112177

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

Summary: RNA-sequencing of porcine endometria from Day 12 of pregnancy and the corresponding day of the estrous cycle revealed specific gene expression changes, which were analyzed with bioinformatics tools and compared to RNA-Seq data obtained for Day 14 of pregnancy.

- Sean Leonard, Patricia D.A. Lima, B. Anne Croy, and Coral L. Murrant

Gestational Modification of Murine Spiral Arteries Does Not Reduce Their Drug-Induced Vasoconstrictive Responses In Vivo

Biol Reprod December 2013 89 (6) 139, 1-10; published ahead of print October 30, 2013, doi:10.1095/biolreprod.113.113688

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

Summary: Spiral artery reactivity assessed in vivo indicates that they retain their reactivity following gestational modification.

- Rebecca A. Dragovic, Jennifer H. Southcombe, Dionne S. Tannetta, Christopher W.G. Redman, and Ian L. Sargent

Multicolor Flow Cytometry and Nanoparticle Tracking Analysis of Extracellular Vesicles in the Plasma of Normal Pregnant and Pre-eclamptic Women

Biol Reprod December 2013 89 (6) 151, 1-12; published ahead of print November 13, 2013, doi:10.1095/biolreprod.113.113266

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

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Summary: Pregnancy alters the composition of circulating extracellular vesicles.

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Reproductive Technology

- Ellen Anckaert, Flor Sánchez, Katy Billooye, and Johan Smitz

Dynamics of Imprinted DNA Methylation and Gene Transcription for Imprinting Establishment in Mouse Oocytes in Relation to Culture Duration Variability

Biol Reprod December 2013 89 (6) 130, 1-8; published ahead of print October 9, 2013, doi:10.1095/biolreprod.113.111641

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

Summary: Extension rather than shortening of in vitro follicle culture is associated with imprinting mutations.

- Mito Kanatsu-Shinohara, Yoshifumi Mori, and Takashi Shinohara

Enrichment of Mouse Spermatogonial Stem Cells Based on Aldehyde Dehydrogenase Activity

Biol Reprod December 2013 89 (6) 140, 1-10; published ahead of print November 6, 2013, doi:10.1095/biolreprod.113.114629

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

Summary: A method to enrich spermatogonial stem cells was developed based on their aldehyde dehydrogenase activity.

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Testis

- Yuan Liang, Yushu Dong, Jie Zhao, and Wei Li
YES1 Activation Elicited by Heat Stress Is Anti-Apoptotic in Mouse Pachytene Spermatocytes
Biol Reprod December 2013 89 (6) 131, 1-11; published ahead of print October 16, 2013, doi:10.1095/biolreprod.113.112235
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: Activation of YES1 tyrosine kinase in pachytene spermatocytes is required to maintain apoptotic balance in response to meiotic heat stress.
- Wangjie Xu, Peng Fang, Zijue Zhu, Jingbo Dai, Dongsheng Nie, Zhong Chen, Qiaojing Qin, Lianyun Wang, Zhaoxia Wang, and Zhongdong Qiao
Cigarette Smoking Exposure Alters *Pepp1* DNA Methylation and Protein Profile Involved in MAPK Signaling Pathway in Mice Testis
Biol Reprod December 2013 89 (6) 142, 1-11; published ahead of print November 6, 2013, doi:10.1095/biolreprod.113.111245
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: From altered protein profile by cigarette smoking, we suggest that epigenetical *Pepp1* inactivation may affect activation of ERK and disturb spermatogenesis of mice.
- Catriona Paul, Makoto Nagano, and Bernard Robaire
Aging Results in Molecular Changes in an Enriched Population of Undifferentiated Rat Spermatogonia
Biol Reprod December 2013 89 (6) 147, 1-10; published ahead of print November 13, 2013, doi:10.1095/biolreprod.113.112995
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)
Summary: Undifferentiated spermatogonia have an altered gene expression signature with age that is associated with their decreased quantity and quality.

Additions and Corrections

ADDITIONS AND CORRECTIONS

Biol Reprod December 2013 89 (6) 149, 1-1; published ahead of print November 13, 2013, doi:10.1095/biolreprod.113.115741
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