

# Table of Contents

August 1, 2015; 93 (2)

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## World of Reproductive Biology

Charlotte Schubert

### **Theca Cell Source**

Biol Reprod August 2015 93 (2) 26, 1-1; published ahead of print May 6, 2015, doi:10.1095/biolreprod.115.131383

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

Charlotte Schubert

### **Hormones Permanently Alter DNA During Sexual Maturity, Pregnancy**

Biol Reprod August 2015 93 (2) 27, 1-2; published ahead of print May 13, 2015, doi:10.1095/biolreprod.115.131623

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

Charlotte Schubert

### **Single-Cell Analysis Yields New View of Human Recombination**

Biol Reprod August 2015 93 (2) 28, 1-1; published ahead of print May 20, 2015, doi:10.1095/biolreprod.115.131888

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

Charlotte Schubert

### **Pain Reliever Tamps Down on Testosterone**

Biol Reprod August 2015 93 (2) 29, 1-1; published ahead of print May 27, 2015, doi:10.1095/biolreprod.115.132084

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

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## Minireview

- Siti Normadhirah Amdani, Marc Yeste, Celine Jones, and Kevin Coward  
**Sperm Factors and Oocyte Activation: Current Controversies and Considerations**

Biol Reprod August 2015 93 (2) 50, 1-8; published ahead of print July 8, 2015, doi:10.1095/biolreprod.115.130609

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

**Summary:** Current theories on the identity of sperm oocyte-activating factor (SOAF) candidates.

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## Research Articles

### Female Reproductive Tract

- Masanori Ono, Takashi Kajitani, Hiroshi Uchida, Toru Arase, Hideyuki Oda, Sayaka Uchida, Kuniaki Ota, Takashi Nagashima, Hirotaka Masuda, Kaoru Miyaza  
**CD34 and CD49f Double-Positive and Lineage Marker-Negative Cells Isolated from Human Myometrium Exhibit Stem Cell-Like Properties Involved in Pregnancy-Induced Uterine Remodeling**

Biol Reprod August 2015 93 (2) 37, 1-9; published ahead of print June 24, 2015, doi:10.1095/biolreprod.114.127126

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

**Summary:** We identified cell surface markers permitting the isolation of human uterine myometrial stem/progenitor-like cells.

- Kanchan Vaswani, Keith Ashman, Sarah Reed, Carlos Salomon, Suchismita Sarker, Jose A. Arraztoa, Alejandra Pérez-Sepúlveda, Sebastian E. Illanes, David  
**Applying SWATH Mass Spectrometry to Investigate Human Cervicovaginal Fluid During the Menstrual Cycle**

Biol Reprod August 2015 93 (2) 39, 1-10; published ahead of print June 24, 2015, doi:10.1095/biolreprod.115.128231

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

**Summary:** This manuscript is a longitudinal study investigating the proteome of cervicovaginal fluids (CVF) of women across the menstrual cycle.

- Francisco M. Pinto, Aixa R. Bello, Manuel Gallardo-Castro, Francisco Valladares, Teresa A. Almeida, Manuel Tena-Sempere, and Luz Candenás  
**Analysis of the Expression of Tachykinins and Tachykinin Receptors in the Rat Uterus During Early Pregnancy**

Biol Reprod August 2015 93 (2) 51, 1-8; published ahead of print July 8, 2015, doi:10.1095/biolreprod.115.130617

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

**Summary:** The tachykinin family participates in the uterine events that occur around implantation in the early pregnant rat.

- F.S. Mesquita, R.S. Ramos, G. Pugliesi, S.C.S. Andrade, V. Van Hoeck, A. Langbeen, M.L. Oliveira, A.M. Gonella-Díaz, G. Gasparin, H. Fukumasu, L.H. Pulz

**The Receptive Endometrial Transcriptomic Signature Indicates an Earlier Shift from Proliferation to Metabolism at Early Diestrus in the Cow**

Biol Reprod August 2015 93 (2) 52, 1-12; published ahead of print July 15, 2015, doi:10.1095/biolreprod.115.129031

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

**Summary:** Size of the preovulatory follicle modulates the periovulatory endocrine environment, programs the transcriptional profile, and influences endometrial tissue phenotype in cattle.

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**Gamete Biology**

- Pei-Chih Lee, David E. Wildt, and Pierre Comizzoli  
**Nucleolar Translocation of Histone Deacetylase 2 Is Involved in Regulation of Transcriptional Silencing in the Cat Germinal Vesicle**  
Biol Reprod August 2015 93 (2) 33, 1-9; published ahead of print June 24, 2015, doi:10.1095/biolreprod.115.129106  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)  
**Summary:** HDAC2 translocates from the nucleoplasm into the nucleolus of the cat germinal vesicle at an advanced stage of folliculogenesis and is associated with silencing of global transcription.
  
- Mónica Boj, François Chauvigné, and Joan Cerdà  
**Coordinated Action of Aquaporins Regulates Sperm Motility in a Marine Teleost**  
Biol Reprod August 2015 93 (2) 40, 1-11; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.131524  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)  
**Summary:** The coordinated action of aquaporins mediates the spermatozoon intracellular Ca<sup>2+</sup> wave, the activation of a mitochondrial detoxification mechanism, and the initiation and maintenance of sperm motility in a marine teleost.
  
- Thomas Desvignes, Thaovi Nguyen, Franck Chesnel, Aurélien Bouleau, Christian Fauvel, and Julien Bobe  
**X-Linked Retinitis Pigmentosa 2 Is a Novel Maternal-Effect Gene Required for Left-Right Asymmetry in Zebrafish**  
Biol Reprod August 2015 93 (2) 42, 1-11; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.130575  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)  
**Summary:** Maternally inherited *rp2* mRNA is required for left-right asymmetry in zebrafish.
  
- Katie M. Lowther and Lisa M. Mehlmann  
**Embryonic Poly(A)-Binding Protein Is Required During Early Stages of Mouse Oocyte Development for Chromatin Organization, Transcriptional Silencing, and Meiotic Competence**  
Biol Reprod August 2015 93 (2) 43, 1-9; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.131359  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)  
**Summary:** EPAB is an oocyte-specific translational regulator that is important during oocyte growth for the acquisition of meiotic competence.
  
- Jun Ma, Yusuke Fukuda, and Richard M. Schultz  
**Mobilization of Dormant *Chot7* mRNA Promotes Deadenylation of Maternal Transcripts During Mouse Oocyte Maturation**  
Biol Reprod August 2015 93 (2) 48, 1-12; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.130344  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Figures](#)  
**Summary:** Maternal mRNA encoding CNOT7, a deadenylase, is recruited during mouse oocyte maturation and is involved in the transition from mRNA stability to instability.

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**Neuroendocrinology**

- Wei Xiang, Baoyun Zhang, Fenglin Lv, Yunxia Ma, Hang Chen, Long Chen, Fang Yang, Pingqing Wang, and Mingxing Chu  
**The Inhibitory Effects of RFamide-Related Peptide 3 on Luteinizing Hormone Release Involves an Estradiol-Dependent Manner in Prepubertal but Not in Adult Female Mice**  
Biol Reprod August 2015 93 (2) 30, 1-9; published ahead of print June 10, 2015, doi:10.1095/biolreprod.115.128777  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)  
**Summary:** RFamide-related peptide 3, a hypothalamic neuropeptide, inhibits gonadotropin release dependent on estradiol status, which is associated with developmental stages.

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#### Ovary

- Stephany El-Hayek and Hugh J. Clarke  
**Follicle-Stimulating Hormone Increases Gap Junctional Communication Between Somatic and Germ-Line Follicular Compartments During Murine Oogenesis**  
Biol Reprod August 2015 93 (2) 47, 1-10; published ahead of print June 10, 2015, doi:10.1095/biolreprod.115.129569  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)  
  
**Summary:** FSH increases gap junctional communication between the growing oocyte and surrounding somatic follicular granulosa cells.

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#### Pregnancy

- Stephanie Kaiser, Yvonne Koch, Elisabeth Kühnel, Neha Sharma, Alexandra Gellhaus, Peter Kuckenberger, Hubert Schorle, and Elke Winterhager  
**Reduced Gene Dosage of *Tfap2c* Impairs Trophoblast Lineage Differentiation and Alters Maternal Blood Spaces in the Mouse Placenta**  
Biol Reprod August 2015 93 (2) 31, 1-13; published ahead of print June 10, 2015, doi:10.1095/biolreprod.114.126474  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)  
  
**Summary:** Loss of one allele of *Tfap2c* alters placental phenotype at midgestation and maternal sinusoids that, when combined with large hemorrhages in late pregnancy, may be the reason for 40% loss of live born pups.
- Kelsey Brooks, Gregory Burns, and Thomas E. Spencer  
**Biological Roles of Hydroxysteroid (11-Beta) Dehydrogenase 1 (HSD11B1), HSD11B2, and Glucocorticoid Receptor (NR3C1) in Sheep Conceptus Elongation**  
Biol Reprod August 2015 93 (2) 38, 1-12; published ahead of print June 17, 2015, doi:10.1095/biolreprod.115.130757  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)  
  
**Summary:** HSD11B1 is essential for conceptus elongation and regulates trophoblast survival in sheep.
- Rulan Bai, Kazuya Kusama, Toshihiro Sakurai, Hanako Bai, Changshou Wang, Jinfeng Zhang, Mariko Kuse, Atsushi Ideta, Yoshito Aoyagi, Kiyoshi Okuda, and  
**The Role of Endometrial Selectins and Their Ligands on Bovine Conceptus Attachment to the Uterine Epithelium During Peri-Implantation Period**  
Biol Reprod August 2015 93 (2) 46, 1-11; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.128652  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)  
  
**Summary:** Endometrial L-selectin (SELL), regulated by epidermal growth factor (EGF) and basic fibroblast growth factor (bFGF), is involved in bovine conceptus attachment to uterine endometrium.
- Qin Xue, Pinxian Chen, Xiongxiang Li, Guiping Zhang, Andrew J. Patterson, and Jiandong Luo  
**Maternal High-Fat Diet Causes a Sex-Dependent Increase in AGTR2 Expression and Cardiac Dysfunction in Adult Male Rat Offspring**  
Biol Reprod August 2015 93 (2) 49, 1-12; published ahead of print July 8, 2015, doi:10.1095/biolreprod.115.129916  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#) [Supplemental Data](#)  
  
**Summary:** AGTR2 plays a key role in maternal high-fat, diet-induced cardiovascular dysfunction in offspring, making it a target of therapeutic intervention.

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#### Reproductive Technology

- Hee Jung Choi, Hyung Chul Lee, Kyung Soo Kang, Hyo Gun Lee, Tamao Ono, Hiroki Nagai, Guojun Sheng, and Jae Yong Han  
**Production of Interspecific Germline Chimeras via Embryo Replacement**  
Biol Reprod August 2015 93 (2) 36, 1-7; published ahead of print June 10, 2015, doi:10.1095/biolreprod.114.127365  
[Abstract](#) [Full Text](#) [Full Text \(PDF\)](#)  
**OPEN ACCESS ARTICLE**  
  
**Summary:** Host primordial germ cells (PGCs) incorporate into a donor embryo after embryo replacement at HH stage 10.

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#### Testis

- Barbara Nicol and Humphrey H.-C. Yao  
**Gonadal Identity in the Absence of Pro-Testis Factor SOX9 and Pro-Ovary Factor Beta-Catenin in Mice**  
Biol Reprod August 2015 93 (2) 35, 1-12; published ahead of print June

24, 2015, doi:10.1095/biolreprod.115.131276

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

**Summary:** Testis differentiation occurs in the absence of SOX9 and beta-catenin in XX and XY fetal gonads, with masculinization more pronounced in an XY genetic context due to the expression of SRY and several SRY target genes other than Sox9.

- Amy T. Desaulniers, Rebecca A. Cederberg, Ginger A. Mills, J. Joe Ford, Clay A. Lents, and Brett R. White

**LH-Independent Testosterone Secretion Is Mediated by the Interaction Between GNRH2 and Its Receptor Within Porcine Testes**

Biol Reprod August 2015 93 (2) 45, 1-9; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.128082

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

**Summary:** GNRH2 mediates LH-independent secretion of testosterone within the porcine testis.

#### Toxicology

- Ryohei Ichimura, Miwa Takahashi, Tomomi Morikawa, Kaoru Inoue, Kazunori Kuwata, Kento Usuda, Makoto Yokosuka, Gen Watanabe, and Midori Yoshida

**The Critical Hormone-Sensitive Window for the Development of Delayed Effects Extends to 10 Days after Birth in Female Rats Postnatally Exposed to 17alpha-Ethinylestradiol**

Biol Reprod August 2015 93 (2) 32, 1-11; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.129650

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

**Summary:** Single exposure to 17alpha-ethinylestradiol at Postnatal Day 10 depressed anterior hypothalamus expression of KiSS1 mRNA and LH surge, consequently inducing estrous cycling in young adult rats.

- Wenwen Liu, Bei Yang, Lei Wu, Weiyong Zou, Xiaoling Pan, Ting Zou, Fangming Liu, Liping Xia, Xiang Wang, and Dalei Zhang

**Involvement of NRF2 in Perfluorooctanoic Acid-Induced Testicular Damage in Male Mice**

Biol Reprod August 2015 93 (2) 41, 1-7; published ahead of print June 24, 2015, doi:10.1095/biolreprod.115.128819

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

**Summary:** Perfluorooctanoic acid disrupts spermatogenesis through inducing developmental impairment and inhibiting NRF2-mediated antioxidant response in the testis of mice.

#### Additions and Corrections

##### ADDITIONS AND CORRECTIONS

Biol Reprod August 2015 93 (2) 34, 1-1; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.132480

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#### IN MEMORIAM

Franco J. DeMayo and Thomas E. Spencer

**In Memoriam**

**Stanley R. Glasser, Ph.D.**

**1926–2015**

Biol Reprod August 2015 93 (2) 44, 1-2; published ahead of print July 1, 2015, doi:10.1095/biolreprod.115.133082

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