

# BIOLOGY OF REPRODUCTION

VOLUME 96, NUMBER 1  
JANUARY 2017

## Contents

### Editorial

- A New Era in Publishing *Biology of Reproduction*  
*Franco DeMayo and Tom Spencer* ..... 1

### Review

- Signaling mechanisms in mammalian sperm motility  
*Maria João Freitas, Srinivasan Vijayaraghavan and Margarida Fardilha* ..... 2
- Contributions to the dynamics of cervix remodeling prior to term and preterm birth  
*Steven M. Yellon* ..... 13

### Female Reproductive Tract

- Comprehensive RNA sequencing of healthy human endometrium at two time points of the menstrual cycle  
*Benjamin Sigurgeirsson, Hanna Åmark, Anders Jemt, Dorina Ujvari, Magnus Westgren, Joakim Lundeberg and Sebastian Gidlöf* ..... 24

- De- and recellularization of the pig uterus: a bioengineering pilot study  
*Hannes Campo, Pedro M. Baptista, Nuria López-Pérez, Amparo Faus, Irene Cervelló and Carlos Simón* ..... 34

- Interaction of macrophages and endometrial cells induces epithelial–mesenchymal transition-like processes in adenomyosis  
*Min An, Dong Li, Ming Yuan, Qiuju Li, Lu Zhang and Guoyun Wang* ..... 46

- Cystic endometrial hyperplasia–pyometra syndrome in bitches: identification of hemodynamic, inflammatory, and cell proliferation changes  
*Gisele Almeida Lima Veiga, Ricardo Henrique Miziara, Daniel Souza Ramos Angriman, Paula Carvalho Papa, Bruno Cogliati and Camila Infantosi Vannucchi* ..... 58

- Role of Stro1<sup>+</sup>/CD44<sup>+</sup> stem cells in myometrial physiology and uterine remodeling during pregnancy  
*Aymara Mas, Lauren Prusinski, Qiwei Yang, Patricia Diaz-Gimeno, Lelyand Stone, Michael P. Diamond, Carlos Simón and Ayman Al-Hendy* ..... 70

- Effects of vaginal conjugated equine estrogens and ospemifene on the rat vaginal wall and lower urinary tract  
*P. Antonio. Maldonado, T. Ignacio Montoya, Jesus F. Acevedo, Patrick W. Keller and R. Ann Word* ..... 81

### Gamete Biology

- Defining the human sperm microtubulome: an integrated genomics approach  
*Fanny Jumeau, Frédéric Chalmel, Francisco-Jose Fernandez-Gomez, Céline Carpentier, Hélène Obriot, Meryem Tardivel, Marie-Laure Caillet-Boudin, Jean-Marc Rigot, Nathalie Rives, Luc Buée, Nicolas Sergeant and Valérie Mitchell* ..... 93

- Electrophilic aldehyde products of lipid peroxidation selectively adduct to heat shock protein 90 and arylsulfatase A in stallion spermatozoa  
*Sally E. Hall, R. John Aitken, Brett Nixon, Nathan D. Smith and Zamira Gibb* ..... 107

- Dose-dependent functions of fibroblast growth factor 9 regulate the fate of murine XY primordial germ cells  
*Ferhat Ulu, Sung-Min Kim, Toshifumi Yokoyama and Yukiko Yamazaki* ..... 122

### Immunology

- Immune response to a model shared placenta/tumor-associated antigen reduces cancer risk in parous mice  
*Susmita Jasti, Mina Farahbakhsh, Sean Nguyen, Brian K. Petroff and Margaret G. Petroff* ..... 134

Natural killer-cell deficiency alters placental development in rats

*Stephen J. Renaud, Regan L. Scott, Damayanti Chakraborty, Mohammad A. K. Rumi and Michael J. Soares...* 145

#### **Male Reproductive Tract**

Developmental expression of the dynamin family of mechanoenzymes in the mouse epididymis

*Wei Zhou, Geoffry N. De Iuliis, Adrian P. Turner, Andrew T. Reid, Amanda L. Anderson, Adam McCluskey, Eileen A. McLaughlin and Brett Nixon.....* 159

#### **Neuroendocrinology**

Nutritional programming of accelerated puberty in heifers: alterations in DNA methylation in the arcuate nucleus

*Bruna R. C. Alves, Rodolfo C. Cardoso, Ryan Doan, Youwen Zhang, Scott V. Dindot, Gary L. Williams and Marcel Amstalden .....* 174

#### **Pregnancy**

Stimulatory effects of fibroblast growth factor 2 on proliferation and migration of uterine luminal epithelial cells during early pregnancy

*Whasun Lim, Hyocheol Bae, Fuller W. Bazer and Gwonhwa Song.....* 185

Vitamin D suppresses oxidative stress-induced microparticle release by human umbilical vein endothelial cells

*Xiuyue Jia, Jie Xu, Yang Gu, Xin Gu, Weimin Li and Yuping Wang .....* 199

Ovine uterine space restriction causes dysregulation of the renin–angiotensin system in fetal kidneys

*Rachel A. Kranch-Shorthouse, Adam S. Bauer, Ronald R. Magness, Gladys E. Lopez, Jeffrey L. Segar, Sharon E. Blohowiak and Pamela J. Kling .....* 211

#### **Reproductive Technology**

Adeno-associated virus-mediated delivery of genes to mouse spermatogonial stem cells

*Satoshi Watanabe, Mito Kanatsu-Shinohara, Narumi Ogonuki, Shogo Matoba, Atsuo Ogura and Takashi Shinohara .....* 221

#### **Testis**

Acidification of uterine epithelium during embryo implantation in mice

*Shuo Xiao, Rong Li, Ahmed E. El Zowalaty, Honglu Diao, Fei Zhao, Yongwon Choi and Xiaoqin Ye .....* 232

Testicular adenosine to inosine RNA editing in the mouse is mediated by ADARB1

*Elizabeth M. Snyder, Konstantin Licht and Robert E. Braun .....* 244

#### **Toxicology**

Acetamiprid inhibits testosterone synthesis by affecting the mitochondrial function and cytoplasmic adenosine triphosphate production in rat Leydig cells

*Deying Kong, Jidong Zhang, Xiaohui Hou, Shibin Zhang, Jun Tan, Yuanshou Chen, Weirong Yang, Junwei Zeng, Yong Han, Xiaohong Liu, Delin Xu and Renlian Cai .....* 254