

# Scientific Program

## Platform Presentations, Sessions 1–6 Tuesday, May 27, 2008

5:00 p.m.– 6:30 p.m.  
Concurrent Sessions

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### Platform Session 1. Neuroendocrinology

Chairs: Reid Norman, Ph.D. and Christopher Pearl, Ph.D.  
Tuesday, May 27, 2008

5:00 p.m. - 6:30 p.m.  
Location: Keauhou Boardroom

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**5:00 PM.** 5. The Role of Postnatal Estradiol in Sexual Differentiation of the Progesterone Block of the GnRH Surge in Sheep Treated Prenatally with Testosterone. Leslie Jackson, Kathleen Timmer, Douglas Foster.

**5:15 PM.** 6. Estrogen Receptor- $\beta$  Action in the Ovary, but Not in the Hypothalamic-Pituitary Axis, Is Required for the Generation of Normal Luteinizing Hormone Surges in Mice. Friederike Jayes, Karina Rodriguez, John Couse, Mariana Yates, Kenneth Korach.

**5:30 PM.** 7. Pituitary Development Relies on Notch Signaling Control of Cell Cycle Inhibitors. Pamela Monahan, Sabina Rybak, Lori Raetzman.

**5:45 PM.** 8. Fusing the Carboxy-Terminal Heptapeptide of LH $\beta$  to FSH $\beta$  Induces LH-like Intracellular Behavior of FSH in GH $_3$  Cells. Christopher Pearl, Albina Jablonka-Shariff, Irving Boime.

**6:00 PM.** 9. Localization of Kisspeptin Cells and Axonal Fibers in the Pituitary of the Male Rhesus Monkey (*Macaca mulatta*). Suresh Ramaswamy, Robert Gibbs, Tony Plant.

**6:15 PM.** 10. Dopamine D1 Receptor Blockage Potentiates AMPA-Stimulated LH Release in the Goldfish (*Carassius auratus*). Jason Popesku, Vance Trudeau.

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### Platform Session 2. Spermatogenesis, Germ Cells, and Sertoli Cells

Chairs: Dale Buck Hales, Ph.D. and Denise Archambeault  
Tuesday, May 27, 2008

5:00 p.m. - 6:30 p.m.  
Location: Session Tent

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**5:00 PM.** 11. Chemokines: Role in Germ Cell Migration and Survival. Eileen McLaughlin, Kara Gunter, Kerry Woollett, Shaun Roman.

**5:15 PM.** 12. Smad4 Is a Critical Regulator of Fetal Sertoli Cell Development and Testis Cord Expansion. Denise Archambeault, Jessica Tomaszewski, Richard Behringer, Florian Guillou, Ana Vieira, Humphrey Yao.

**5:30 PM.** 13. MicroRNAs and Spermatogenesis. Chen Xu, Ding Li, Jian Bao, Shao Cao, Yi Wang.

**5:45 PM.** 14. Conditional Inactivation of Retinoblastoma Protein (RB1) in Sertoli Cells Causes Progressive Infertility. Roopa Nalam, Claudia Andreu-Vieyra, Robert Braun, Martin Matzuk.

**6:00 PM.** 15. Sertoli Cell-Specific Modification of The Androgen Receptor DNA-Binding Domain Disrupts Sertoli Cell Function and Completion of Spermatogenesis. Charles Allan, Patrick Lim, Mark Jimenez, Jennifer Spaliviero, Kirsten McTavish, Jeff Zajac, David Handelsman.

**6:15 PM.** 16. Genetic Removal of Cyclin D2 Leads to Severe Hypogonadism and Infertility in FSH $\beta$  Null Male Mice. T. Kumar, Huizhen Wang.

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### Platform Session 3. Cloning & Reproductive Technologies

Chairs: Monika Ward, Ph.D. and Yasuhiro Yamauchi, Ph.D.  
Tuesday, May 27, 2008

5:00 p.m. - 6:30 p.m.  
Location: Keauhou III-IV

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**5:00 PM.** 17. DNA Demethylation Associated with Nuclear Reprogramming of the Somatic Cell Genome in Cell-Free Extracts from Mammalian Oocytes. Kei Miyamoto, Tomoyuki Tsukiyama, Yang Yang, Ning Li, Naojiro Minami, Masayasu Yamada, Hiroshi Imai.

**5:15 PM.** 18. Creating a CFTR Knockout Ferret Model by Nuclear Transfer Cloning. Xingshen Sun, Ziyang Yan, Yaling Yi, Ziyi Li, Diana Lei, Christopher Rogers, Juan Chen, Michael Welsh, Gregory Leno, Engelhardt John.

**5:30 PM.** 19. Increased Sensitivity to Sperm Cryopreservation in the Black-footed Ferret (*Mustela nigripes*) compared to the Domestic Ferret (*Mustela putorius furo*). Rachel Moreland Santymire, Paul Marinari, Julie S. Kreeger, David E. Wildt, JoGayle Howard.

**5:45 PM.** 20. Spermatid-Specific Thioredoxin 3 (SPTRX3) Is a Biomarker of Human Male Infertility with Predictive

Value for Decision Making in Infertility Treatment. Miriam Sutovsky, Clayton Buckman, Christophe Ozanon, Gaurishankar Mananadhar, Phil Morrissey, Antonio Miranda-Vizuete, Peter Sutovsky.

**6:00 PM.** 21. Live Offspring Obtained after ICSI with Sperm from Mice with Absence of the Y Chromosome Long Arm. Yasuhiro Yamauchi, Jonathan Riel, Andrew Ojarikre, Paul Burgoyne, Monika Ward.

**6:15 PM.** 22. ZK255933: A Synthetic Meiosis Activating Sterol (MAS) Improves Various Fertility Parameters in IVF. Bernhard Lindenthal, Thorsten Blume, Ursula Ganzner, Margrit Hillmann, Walter Klose, Reinhard Nubbemeyer, Michael Peters, Monika Lessl, Katja Prella, Roland Reimann, Andrea Rotgeri, Susanne Schwenke, Thomas Steger-Hartmann.

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**Platform Session 4. Implantation and Pregnancy I: Peri-Implantation Period of Pregnancy**

Chairs: Fuller Bazer, Ph.D. and Rebecca C. Bott  
Tuesday, May 27, 2008

5:00 p.m. - 6:30 p.m.  
Location: Keauhou I

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**5:00 PM.** 23. Secreted Phosphoprotein 1 (SPP1, Osteopontin) Mediates Porcine Conceptus Adhesion Through Specific Integrin Receptors on Conceptus Trophectoderm and Uterine Luminal Epithelium. David Erikson, Robert Burghardt, Laurie Jaeger, Kayla Bayless, Greg Johnson.

**5:15 PM.** 24. Proteomic Identification of Proprotein Convertase 6 Substrates in Human Endometrial Stromal Cells During Decidualization. Guiying Nie, Lynette Kilpatrick, Andrew Stephens, Jenny Chen, Peter Stanton, Lois Salamonsen.

**5:30 PM.** 25. Ezrin And EBP50 Are Up-Regulated in Rat Uterine Epithelial Cells at the Time of Implantation, Except for Cells Within the Implantation Chamber. Laura Venuto, Laura Lindsay, Christopher Murphy.

**5:45 PM.** 26. A Model for Human Embryo Implantation Using Trophoblast Generated from Embryonic Stem Cells. Ramya Udayashankar, Claire Kershaw-Young, Elizabeth Tuckerman, Duncan Baker, Susan Laird, Tin Li, Harry Moore.

**6:00 PM.** 27. Role of PTGS2 and PTGES in Receptivity and Initiation of Decidualization in Rat Endometrium. Carolina Gillio-Meina, Thomas Kennedy.

**6:15 PM.** 28. Reduced Hedgehog Signaling in the Uterine Stroma Causes Deferred Implantation and Embryonic Loss. Susan Quirk, Rebecca Harman, Yi Ren, Robert Cowan.

**Platform Session 5. Gene Expression and Development**

Chairs: Kelwyn Thomas, Ph.D. and Wei Hu, Ph.D.  
Tuesday, May 27, 2008

5:00 p.m. - 6:30 p.m.  
Location: Keauhou II

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**5:00 PM.** 29. Mouse Oocytes License Induction of Oocyte Maturation and Cumulus Expansion: BMP15 and GDF9 Promote Epidermal Growth Factor Receptor (EGFR) Expression in Cumulus Cells. You-Qiang Su, Koji Sugiura, John Eppig.

**5:15 PM.** 30. UBC9, a SUMO Conjugating Enzyme, Is Localized to Speckled Bodies. Motomasa Ihara, Paula Stein, Richard Schultz.

**5:30 PM.** 31. Regulation of Spermiogenesis and Sperm Fertilization by G-protein Gated GIRK 2 K<sup>+</sup> Inward-Rectifying Ion Channels. Kelwyn Thomas, Dae-Yong Sung, Peter Sutovsky, Clarke Millette, Winston Thompson, Peter MacLeish.

**5:45 PM.** 32. Culture Influences on the Expression of RNA-binding Proteins (RBP) and their Targets During Preimplantation Development. Michele Calder, Andrew Watson.

**6:00 PM.** 33. Ectopic Expression of FIGLA in Male Germ Cells Represses Testis-specific Genes and Disrupts Fertility in Transgenic Mice. Wei Hu, Lyn Gauthier, Boris Baibakov, Jurrien Dean.

**6:15 PM.** 34. *Bos taurus* microRNA-181a Promotes Translational Silencing of Nucleoplamin 2. Brandon Linngelfter, Jianbo Yao.

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**Platform Session 6. Uterine Physiology & Pathophysiology**

Chairs: Beverly Chilton, Ph.D. and Niamh Forde, Ph.D.  
Tuesday, May 27, 2008

5:00 p.m. - 6:30 p.m.  
Location: Bayview Meeting Rooms

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**5:00 PM.** 35. Prolonged Progesterone Exposure in the Absence of Conceptus Factors Has Predicted Effects on Uterine Physiology, But Does Not Support Uterine Gland Development or *Spp1* and *Fgf7* Expression in Pigs. Daniel Bailey, Kathrin Dunlap, Gwonhwa Song, Haijun Gao, David Erikson, Fuller Bazer, Guoyao Wu, Robert Burghardt, Greg Johnson.

**5:15 PM.** 36. Is Interleukin 1 $\alpha$  a Luteotropic or Luteolytic Agent in Cattle? Dariusz Skarzynski, Magdalena Majewska, Mamamdou Bah, Joanna Hapunik, Katarzyna Piotrowska, Kiyoshi Okuda.

**5:30 PM.** 37. Effect of Pregnancy and Progesterone on Gene Expression in the Uterine Endometrium of Cattle. Niamh Forde, Fiona Carter, Trudee Fair, Mark Crowe, Alex Evans, Thomas Spencer, Fuller Bazer, Peadar O'Gaora, Rachael McBride, Maurice Boland, Pat Lonergan, James Roche.

**5:45 PM.** 38. Pituitary Prolactin Mediates Estrogen-induced Cellular Proliferation in the Uterine Stroma and Myometrium of the Progesterone-primed Mouse. Robert Bigsby, Christopher LaPensee, Nira Ben Jonathan, Andrea Caprell-Grant.

**6:00 PM.** 39. HTRA3 Expression in Non-pregnant Rhesus Monkey Ovary and Endometrium, and at the Maternal-

Fetal Interface During Early Pregnancy. Marissa Bowden, Ying Li, Jock Findlay, Lois Salamonsen, Guiying Nie.

**6:15 PM.** 40. Over-expression of VEGF-D Does Not Induce Lymphangiogenesis in the Mouse Endometrium. Jane Girling, Jacqui Donoghue, Marc Achen, Steven Stacker, Peter Rogers.

**POSTER SESSION A**  
**Wednesday, May 28, 2008**

**7:00 a.m. – 9:00 a.m.**

**Poster Tent**

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**Cloning**

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**7:00 AM.** 41. Growth and Hematologic Characteristics of Cloned Dogs Derived from Adult Somatic Cell Nuclear Transfer. Jung Eun Park, Min Kyu Kim, Jung Teak Kang, So Gun Hong, Hyun Ju Oh, Goo Jang, Dae Yong Kim, Sung Keun Kang, Byeong Chun Lee.

**7:00 AM.** 42. Derivation of Embryonic Stem Cells by Nuclear Transfer Using Cryopreserved Eggs. Ching-Chien Chang, Li-Ying Sung, Tomokazu Amano, Misa Amano, Chih-Jen Lin, Zsolt Nagy, Jie Xu, Xiuchun Tian, Xiangzhong Yang.

**7:00 AM.** 43. In Vitro Development and Quality of Porcine Blastocysts Derived by Aggregation of Somatic Cell-Nuclear Transferred Embryos. Sang-Goo Lee, Chang-Kyu Lee, Chi-Hun Park, Sang-Won Yun, Hyung-Min Kim, Hye-Sun Kim, Hakhyun Ka.

**7:00 AM.** 44. Development of Bovine Embryos Cloned from Donor Cells Treated by Scriptaid. Se-Woong Kim, Min-Jung Lee, Gi-Sun Im, Byoung-Chul Yang, Hwan-Hoo Seong, Hee-Tae Cheong, Dong-Hoon Kim.

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**Comparative Reproduction**

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**7:00 AM.** 45. Characterization of Subsets of Progesterone Profiles Identified Using Shape-Based Cluster Analysis. Susanne Meier, Ray Boston.

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**Education in Reproduction**

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**7:00 AM.** 46. Improving the Educational Opportunities of Reproductive Biologists and Reproductive Endocrinologists in Training. William Catherino.

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**Embryonic Development**

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**7:00 AM.** 47. Maternal Immune Challenge During Early Embryo Development Affects Blastocyst Cell Lineage Ratio and Postnatal Phenotype. Charlotte Williams, Adam Watkins, Judith Eckert, Tom Fleming.

**7:00 AM.** 48. Maternal Protein Restriction During Mouse Preimplantation Development Induces Vascular Dysfunction and Altered Renin-angiotensin-system Homeostasis in the Offspring. Tom Fleming, Christopher Torrens, Jane Cleal,

Lauren Green, Clive Osmond, Judith Eckert, William Gray, Mark Hanson, Adam Watkins.

**7:00 AM.** 49. Indirect Activation of a Chloride Channel by a Trophic Ligand Is Required for Development of the Preimplantation Mouse Embryo. Margot Day, Yan Li, Chris O'Neill.

**7:00 AM.** 50. Disruption of *Tcfap2c* in Primordial Germ Cells using *Prdm1-Cre* Prevents Germ Cell Development. Jillian Guttormsen, Gerrit Bouma, Frances Bhushan, Trevor Williams, Quinton Winger.

**7:00 AM.** 51. Regulation of Steroid Sulfatase During Differentiation of Mouse MC3T3-E1 Pre-osteoblastic Cells. Kyle Selcer, Heidi DiFrancesca.

**7:00 AM.** 52. Transcript Profiling of Bovine In Vivo Early Embryonic Development. Maud Vallee, Isabelle Dufort, Stephanie Desrosiers, Aurelie Labbe, Catherine Gravel, Isabelle Gilbert, Claude Robert, Marc-Andre Sirard.

**7:00 AM.** 53. Molecular Properties of Mitochondria in Non-Human Primate Embryos. Carol Brenner, Namdori Mtango, Tiffini Gibson, Regina Staten, Barry Bavister, Keith Latham, Alexandra Harvey.

**7:00 AM.** 54. Comparison of Embryonic Gene Expression Levels in Dairy Heifers and Mature Cows. Pretheeban Thavaneetharajah, Miriam Gordon, Ravinder Singh, Ruwanie Perera, Rajadurai Rajamahendran.

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**Environmental Influences on Reproduction**

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**7:00 AM.** 55. BH4 Peptide Derived from BCL-xL and BAX-Inhibitor Peptide Suppresses Heat Shock-Induced Apoptotic Changes in Bovine Oocyte Mitochondria. Paolete Soto, Lawrence Smith.

**7:00 AM.** 56. Seasonal Changes and the Efficiency of Hormonal Treatments for Pregnancy Rate and Late Embryonic Loss in Dairy Cattle Gyorgy Gabor, Balogh Orsolya Gabriella, Csilla Sandor, Zsolt Abonyi-Toth, Petra Reka Gabor, Tamas Endrodi.

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**Epigenetics**

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**7:00 AM.** 57. DNA Methylation Analyses in Lungs of Cloned Pigs. Joonghoon Park, Steven Davis, Tatsanee Suteevun,

Richard Bruno, Randall Prather, Xiangzhong Yang, X. Cindy Tian.

**7:00 AM.** 58. The Bovine *Zac1* Differentially Methylated Region. Nancy D'Cruz, Katrina Wilson, Michael Holland.

**7:00 AM.** 59. The Absence of the Oocyte-derived Dnmt1 $\alpha$  Protein Leads to Anatomical and Molecular Abnormalities in Placentae. Josee Martel, Amanda Fortier, Flavia Lopes, Cecilia Cirio, Richard Chaillet, Jacquetta Trasler.

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### Female Gametes

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**7:00 AM.** 60. Relative Gene Expression in Bovine Immature and In Vivo- and In Vitro-Matured Oocytes. Paula Ripamonte, Anthony Castilho, Mariana Machado, Isabela Costa, Diego Guerra, Christopher Price, Jose Buratini Jr.

**7:00 AM.** 61. Effect of Electrical Pulse and 6-DMAP on Parthenogenesis of Golden Hamster Oocytes Lingyan Wang, Bo Tang, Ming Tan, Xueming Zhang, Zhanpeng Yue, Dexue Li, Ziyi Li.

**7:00 AM.** 62. Activation of Cumulus Cell Smad2/3 and MAPK Pathways Are Not Obligatory for Bovine and Porcine Cumulus Cell Expansion. Lesley Ritter, Robert Gilchrist.

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### Female Reproductive Tract

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**7:00 AM.** 63. Green Tea Extract (EGCG) Inhibits Proliferation of Human Leiomyoma Cells. Dong Zhang, Mohamed Al-Hendy, Ayman Al-Hendy.

**7:00 AM.** 64. TNF-Binding Protein Complex Inhibits TNF- $\alpha$ -Mediated Effects in Human Endometriotic Cell Line. David Kagan, Selvaraj Nataraja, Eric Grund, Anna Starzinski-Powitz, Stephen Palmer.

**7:00 AM.** 65. WITHDRAWN.

**7:00 AM.** 66. Estrogen Up-regulation of Hepatocyte Growth Factor (HGF) Activator in the Mouse Uterus Is Associated with HGF Activation. Xuan Zhang.

**7:00 AM.** 67. Differential Immunoglobulin (IgG) mRNA Expression in Bovine Endometrium of Superior Compared to Inferior Recipients. Anita Ledgard, Martin Berg, Susanne Meier, Anthony Peterson.

**7:00 AM.** 68. Focal Adhesion Kinase Receptor Expression in Human Leiomyomas: Impact on P38 MAPK, P44/42 ERK, Mechanical Homeostasis and Tumor Behavior. Gregory Christman, Huaijing Tang, John Stribley, Steven Domino, Jenifer McCarthy.

**7:00 AM.** 69. Mechanism of Cell Death Initiation in the Rat Uterine Epithelia During the Proestrus-Estrus Transition. Carmen Mendoza-Rodriguez, Miguel Martinez, Omar Vargas, Mirielle Espinosa, Marco Cerbon.

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### Fertilization

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**7:00 AM.** 70. New Roles for MAPKs: ERK1/2 and p38 in Human Sperm Functions. Tal Almog, Nir Etkovitz, Haim Breitbart, Zvi Naor.

**7:00 AM.** 71. Identification of 19S Proteasomal Regulatory Complex Subunits Involved in Sperm-Zona Pellucida Interactions During Porcine Fertilization. Peter Sutovsky, Young-Joo Yi, Gaurishankar Mananadhar, Miriam Sutovsky, Shawn Zimmerman, Vera Jonakova, Fred van Leeuwen.

**7:00 AM.** 72. Identification of an Oolemmal Receptor for the Sperm Acrosomal Ligand, SLLP1. Arabinda Mandal, Monika Sachdev, Laura Digilio, Charles Flickinger, John Herr.

**7:00 AM.** 73. TSSK6, a Member of the Testis-Specific Serine Kinase (TSSK) Family, Is Present in Mature Sperm and Required for Sperm-Egg Fusion in the Mouse. Julian Sosnik, Nikolay Spiridonov, Sook-Young Yoon, Rafael Fissore, Gibbes Johnson, Pablo Visconti.

**7:00 AM.** 74. Purification of Native Human Zona Pellucida Glycoproteins from Eggs: Binding Characteristics to Human Spermatozoa, Hyper-activation, Acrosomal Exocytosis, and Sperm-Oocyte Interaction. Philip Chiu, Ben Wong, C.L. Lee, Man-Kin Chung, Kevin Lam, Ronald Pang, Kai-Fai Lee, S.B. Sumitro, S.K. Gupta, William Yeung.

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### Gene Regulation and Function

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**7:00 AM.** 75. Involvement of Nuclear Factor of Activated T-cells on Regulation of FasL Expression in Corticosterone-treated Leydig Cell. Hui-Bao Gao, Wei-Ran Chai, Qian Wang.

**7:00 AM.** 76. Expression Pattern and Knockdown of Zebrafish *foxo5* (*zfoxo5*) Gene in Development. Li-Sung Hsu, Dennis Jine-Yuan Hsieh, Jen-Ning Tsai, Wen-Chuan Chen, Hui-Ming Lee.

**7:00 AM.** 77. The Reverse Cholesterol Transport System as a Potential Mediator of Luteolysis in the Primate Corpus Luteum. Randy Bogan, Melinda Murphy, Jon Hennebold.

**7:00 AM.** 78. Sildenafil-Sensitive 3',5'-Cyclic Guanosine Monophosphate (cGMP)-Degrading Phosphodiesterases Up-regulation in Luteinizing Porcine Cumulus Cells. Maxime Sasseville, Nancy Cote, Marie-Claude Gagnon, Francois Richard.

**7:00 AM.** 79. Binding Dynamics Between the RASSF1A Tumor Suppressor and Grb2 in the Cell Death Response. Shari Laprise, Karen Levi, Jessica Sullivan, Sadie Aznavoorian-Cheshire, Shairaz Baksh, Joanne Pratt.

**7:00 AM.** 80. *Orc6l* mRNA: a Maternal mRNA Required for DNA Replication in Zygotes. Shin Murai, Richard Schultz.

**7:00 AM.** 81. Proteomic Analysis in the Cloned Porcine Extraembryonic Tissue. Yeoung-Gyu Ko, Seongsoo Hwang, Byoung-Chul Yang, Gi-Sun Im, Byung-Hyun Cha, Jeom-Soon Kim, Hwan-Hoo Seong.

**7:00 AM.** 82. The Amplification Bias That Hinders the Interpretation of Ontogenic Profiling During Early Development. Claude Robert, Isabelle Gilbert, Isabelle Dufort, Marc-Andre Sirard.

**7:00 AM.** 83. Ectopic Expression of Brahma in Porcine Embryos Induces Developmental Arrest and Alters Expression of SNF2L. Luca Magnani, Ryan Cabot.

**7:00 AM.** 84. Spatiotemporal Expression of Selenoprotein P Gene in Postimplantational Mouse Embryos. Mi-Ra Kim, Se-Ra Lee, Jung-Min Yon, In-Jeoung Baek, Byeongwoo Ahn, Beom Jun Lee, Young Won Yun, Sang-Yoon Nam.

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### Growth Factors

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**7:00 AM.** 85. In Vitro Treatment with 17,20 -Dihydroxy-4-pregnen-3-one Regulates mRNA Levels of Transforming Growth Factor Beta Superfamily Members in Rainbow Trout (*Oncorhynchus mykiss*) Ovarian Tissue. Scott Lankford, Greg Weber.

**7:00 AM.** 86. The Expression of VEGF and Its Receptors (Flt-1 and KDR/ Flk-1) in Ovine Oocytes Matured In Vitro. Hailing Luo, Youzhang Zhao, Xin Cao.

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### Hormone Action

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**7:00 AM.** 87. Regulatory Mechanism of Rat Preantral Follicular Development: Involvement of FSH, Thyroid Hormone and Growth Differentiation Factor-9. Noriko Kobayashi, Makoto Orisaka, Noriaki Sakuragi, Fumikazu Kotsuji, Arthur Leader, Benjamin Tsang.

**7:00 AM.** 88. G-protein Coupled Receptor-stimulated Calcium Entry in Human Myometrial Cells Is Attenuated by Knockdown of TRPC4. Aida Ulloa, Miao Zhong, Yoon-Sun Kim, Jeremy Cantlon, Colin Clay, Chun-Ying Ku, Barbara Sanborn.

**7:00 AM.** 89. Estrogen Receptor Endogenous Nitric Oxide Dependent Dynamic S-Nitrosylation in Estradiol-17 $\beta$ -Treated Endothelial Cells Hong-hai Zhang, Wu Xiang Liao, Lin Feng, Ronald Magness, Dong-bao Chen.

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### Implantation and Pregnancy

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**7:00 AM.** 90. Global Gene Expression Analysis in Human Uterine Stromal Cells for the Identification of Novel Targets for Implantation. Deborah Denis, Selva Nataraja, Cam Anh Tran, David Kagan, Nathan Treff, Stephen Palmer.

**7:00 AM.** 91. Maternal HBEGF Deficiency Restricts Placentation in Mice. D. Armant, Huirong Xie, Haibin Wang, Zitao Liu, Po Chiang, Anelia Petkova, Sanjoy Das.

**7:00 AM.** 92. Improving Fertility of Frozen-Thawed Embryos Transferred with Trophoblastic Vesicles by Direct-Co-transfer Method in Cattle. Yutaka Hashiyada, Masanori

Taniguchi, Yoichi Fujii, Hitomi Takahashi, Masaya Geshi, Masashi Takahashi.

**7:00 AM.** 93. Maternal Deficiency of *cdkn1a* and Pgr-B Leads to Poor Pregnancy Outcome with Decidualization Defects in Mice. Sanjoy Das, Ping Li, Meiling Li.

**7:00 AM.** 94. Enhanced PGE2 Release from Cultured Endometrial Epithelial Cells of Mice by Trypsin. Ye Chun Ruan, Wen Liang Zhou, Hsiao Chang Chan.

**7:00 AM.** 95. Bovine Peripheral Blood Mononuclear Cells Enhance Expression of Cytokine and Chemokine Transcripts in Bovine Endometrial Epithelial Cells. Atsushi Ideta, Yoshito Aoyagi.

**7:00 AM.** 96. IFN- $\delta$ , a Type I Interferon, Is Expressed by Both the Conceptus and Endometrium During Early Equine Pregnancy. Chandrakant Tayade, Sonya Cnossen, Jocelyn Wessels, Nicola Linton, Bette Quinn, Rudolf Waelchli, Barbara Croy, M Hayes, Keith Betteridge.

**7:00 AM.** 97. Selective Continuation of Postimplantation Development in Simultaneous Transfer at Different Stage Mouse Embryos. Fukashi Inoue, Atsuhiko Tatemizo, Mitsumi Ikeda, Katsuhiko Ohkoshi, Tadashi Furusawa, Tomoyuki Tokunaga.

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### Male Gametes

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**7:00 AM.** 98. Reactive Oxygen Species Present During Cryopreservation Accelerates Capacitation of Mouse Sperm. Jeffrey Gray, Terry Magnuson.

**7:00 AM.** 99. Comprehensive Characterization of Testicular ADAMs. Cecil Han, Boyeon Lee, Chunghee Cho.

**7:00 AM.** 100. WITHDRAWN.

**7:00 AM.** 101. Preservation of Cauda Epididymis in Powder of Salt or Sugar at Room Temperature. Tetsuo Ono, Eiji Mizutani, Chong Li, Teruhiko Wakayama.

**7:00 AM.** 102. Adhesion Between the Plasma and Outer Mitochondrial Membranes in Relation with the Migration of the Cytoplasmic Droplet in Guinea-pig Spermatozoa. Fumie Suzuki-Toyota, Chizuru Ito, Mamiko Maekawa, Yoshiro Toyama, Kiyotaka Toshimori.

**7:00 AM.** 103. Human Sperm Thermotaxis is Mediated by Phospholipase C and Inositol Trisphosphate Receptor. Anat Bahat, Michael Eisenbach.

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### Male Reproductive Tract

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**7:00 AM.** 104. Amyloidogenic Properties of the CRES Subgroup: A Functional Role in the Epididymis? Seethal Johnson, Mary Hastert, Sandra Whelley, Gail Cornwall.

**7:00 AM.** 105. Expression of Core Clock and Output Genes in the Male Reproductive Ducts of Mice. Patrick Chappell, Piotr Bebas, Cheri Goodall, Kristin Latham, Magda Majewska, Jadwiga Giebultowicz.

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### Meiosis

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**7:00 AM.** 106. Evolutionary Origin and Phylogenetic Analysis of the Novel Oocyte-Specific Eukaryotic Translation Initiation Factor 4E in Tetrapoda. C Marin de Esvikova, Alexei Esvikov.

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### Neuroendocrinology

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**7:00 AM.** 107. Estradiol Conjugated to Bovine Serum Albumin (E2BSA) Decreases Secretion of LH Without Modifying Secretion of GnRH in Ovariectomized Ewes. Alejandro Arreguin-Arevalo, Elizabeth Wagenmaker, Amy Oakley, Fred Karsch, Terry Nett.

**7:00 AM.** 108. Reproductive Neuroendocrine Function and Behavior of Rams That Underwent Prolonged In Utero Exposure to an Aromatase Inhibitor During the Critical Period for Sexual Differentiation. Charles Roselli, Henry Stadelman, Fredrick Stormshak.

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### Nutrition and Reproduction

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**7:00 AM.** 109. Effect of Linoleic Acid on Luteinized Granulosa Cell Via Production of PGF $2\alpha$  of Bovine Endometrial Cells In Vitro. Carolina Mesa, Carlos Giraldo, Martha Olivera, Zulma Tatiana Ruiz-Cortes.

**7:00 AM.** 110. Consequences of Maternal Stress and Nutrition During Gestation on the Metabolic Phenotype of Rat Offspring. Kellie Tamashiro, Chantelle Terrillion, Jayson Hyun, James Koenig, Timothy Moran.

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### Ovary

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**7:00 AM.** 111. Inhibition of Apoptosis Induced by Allopregnanolone in the Rat Corpus Luteum. Myriam Laconi, Juan Cavicchia, Ricardo Cabrera.

**7:00 AM.** 112. Charles Weems, Yoshie Weems, Torrance Nett, Tracy Davis, Tracie Uchima, Aaron Raney, Esther Lennon, Drew Johnson, Allison Ong, Georgia Bowers, Tara Harbert, Lehua Pahia, Kylee Goto, Ron Randel.

**7:00 AM.** 113. Characterization of the Leptin Receptor, Angiopoietin-1, and Fibroblast Growth Factor-2 in the Caprine Corpus Luteum Throughout the Luteal Phase of the Estrous Cycle. Jessica Wiles, Robin Katchko, Elizabeth

Aguirre, Melissa Mahan, Chad O'Gorman, Theresa Fielder, Erin Tilly, Randy Stanko, Michelle Garcia.

**7:00 AM.** 114. IL6: A Potent Regulator of the Mouse Cumulus Cells-Oocyte Complex Expansion Process. Zhilin Liu, JoAnne Richards.

**7:00 AM.** 115. Evidence that Numbers of mRNA Transcripts for Estrogen Receptor Alpha and Beta are Greater in Cumulus Cells and Oocytes from Cattle with a Diminished Ovarian Reserve. Joe Folger, Fermin Jimenez-Krassel, Anil Bettegowda, George Smith, F. Mossa, Pat Lonergan, Alex Evans, James Ireland.

**7:00 AM.** 116. Involvement of Blood and Lymphatic Angiogenesis in Folliculogenesis and Ovulation. Darryl Russell, Hannah Brown, Emily Alvino, Rebecca Robker.

**7:00 AM.** 117. Roles of BMP15 and GDF9 on the In Vitro Maturation, Fertilization and Following Development of Bovine Oocytes. Misa Hosoe, Koichi Ushizawa, Fukashi Inoue, Atsuhiko Tatemizo, Toru Takahashi.

**7:00 AM.** 118. Reproductive Effects of Lactational Coumestrol Exposure on Adult Female Offspring Rats. Hyun Ju Moon, Ji Hyun Seok, Soon Sun Kim, Jong-Min Kim, Gyu Seek Rhee, Rhee Da Lee, Jun Young Yang, Soo Yeong Chae, Seung-Hee Kim, Soo Youn Chung.

**7:00 AM.** 119. Ovarian Administration of Angiopoietin-1 Ab Increases Follicular Apoptosis Mediated in part by an Imbalance in the Ratio of Androgens/Estrogens and a Decrease in the Granulosa and Theca Cell Proliferation. Fernanda Parborell, Dalhia Abramovich, Alejandra Rodriguez Celin, Marta Tesone.

**7:00 AM.** 120. A Shock in the Road to Fertility: Antibodies to HSP90  $\beta$ an Immunodominant Target Involved in Ovarian Autoimmunity. Vrinda Khole, Eusebio Pires.

**7:00 AM.** 121. The Expression of Genes Involved in Ovulation Is Regulated by Angiotensin II in Granulosa Cells In Vitro. Valerio Portela, Paulo Goncalves, Joao de Oliveira, Christopher Price.

**7:00 AM.** 122. Spatial and Temporal Regulation of BMPR1A, BMPR1B, BMPR2 and TGFBR1 mRNA Expression in Developing Porcine Ovarian Follicles. Francois Paradis, Susan Novak, Gordon Murdoch, Michael Dyck, George Foxcroft, Walter Dixon.

**7:00 AM.** 123. Comparisons of mRNA Expression for Aromatase, FSH Receptor, and IGF-I in the Granulosa of Small Ovarian Follicles Between Cattle Selected and Unselected for Twin Ovulations. Sherrill Echternkamp, Robert Cushman, Leon Spicer.

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### Pituitary

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**7:00 AM.** 124. LBT2 Cells Produce Immunoreactive Leptin in Culture. Nathan Okia.

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**Reproductive Aging**

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**7:00 AM.** 125. Metabolic Control of Steroidogenesis and Implications for Aging in the Brown Norway Rat Leydig Cell. Andrew Midzak, Barry Zirklin.

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**Reproductive Behavior**

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**7:00 AM.** 126. Effects of Alcohol on the Development of Copulation and Sexual Motivation in Male Rats. Miguel Angel Guevara, Angelica Maria Checa-Contreras, Marisela Hernandez-Gonzalez.

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**Reproductive Technologies**

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**7:00 AM.** 127. Extender Choice Affects Chromatin Status after Thawing in Red Deer Spermatozoa. Luis Anel, Felipe Martinez-Pastor, Mercedes Alvarez, Ana Soler, Enrique Anel, Paulino de Paz, Julian Garde.

**7:00 AM.** 128. Cumulus Cell Gene Expression Profile—A Potential Indicator of Oocyte Quality in Women Undergoing Assisted Reproductive Technology (ART). Surabi Veeraragavan, Laurie McKenzie, Chad Shaw, Ruihong Chen, Martin Matzuk.

**7:00 AM.** 129. Mouse Zona Pellucida Mechanically Hardens in the Amount of Cortical Granule Exudates Dependent Manner. Yoshonobu Murayama, Jinji Mizuno, Hirokazu Kamakura, Hiroko Nakamura, Kazuyuki Akaishi, Hiroaki Inui, Sadao Omata.

**7:00 AM.** 130. Effects of Sperm Pre-Treatment on Chromosomal Integrity Following Intracytoplasmic Sperm Injection in Mice. Hiroyuki Watanabe, Mohammad Bhuiyan, Yutaka Fukui.

**7:00 AM.** 131. Mass Spectrometry Analysis of Pancreas Derived from Adult Cloned Pig. Jung Il Chae, Young Keun Cho, Seong-Keun Cho, Jin-Hoi Kim, Yong-Mahn Han, Deog-Bon Koo, Kyung-Kwang Lee.

**7:00 AM.** 132. Production of Live Offspring from Hamster Oocytes Injected with Freeze-Dried Spermatazoa Stored for One Year. Tomomi Muneto, Chikako Kani, Manami Takenaka, Toshitaka Horiuchi.

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**Reproductive Toxicology**

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**7:00 AM.** 133. In Vitro Maturation of Sika Deer (*Cervus nippon* [Temminck]) Oocytes. Yupeng Yin, Guangqi Song, Jixiang Wei, Lei Li, Lin Guo, Jiang Wen, Lingyan Wang, Ziyi Li.

**7:00 AM.** 134. The Aryl Hydrocarbon Receptor Agonist 2,3,7,8-Tetrachloro-Dibenzo-p-Dioxin (TCDD) Inhibits Early

Embryonic Development in a Rat IVF Exposure Model. Kelli Valdez, Sara Brown, David Albertini, Brian Petroff.

**7:00 AM.** 135. Neonatal Exposure to Genistein Adversely Affects Mouse Oocyte Developmental Competence. Wendy Jefferson, Elizabeth Padilla-Banks, Eugenia Goulding, Carmen Williams, Retha Newbold.

**7:00 AM.** 136. Effects of Methiocarb on Spermatogenesis and Sperm Quality in Adult Male Mice. Mira Park, Jiyoun Han, Miae Won, Jae-hong Kim, Jeong-Jae Ko, Jeehyeon Bae.

**7:00 AM.** 137. Effect of Prenatal Administration of Polybrominated Diphenyl Ethers (PBDEs) on the Thyroid Hormone Levels and Neuronal Development in Juvenile and Adult Rats Hyung Sik Kim, Ena Lee, Tae Hyung Kim, Jaewon Lee, Young Jun Lee.

**7:00 AM.** 138. WITHDRAWN.

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**Sex Determination/Differentiation**

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**7:00 AM.** 139. Evaluation of Porcine Embryo Sex Determination Efficiency by Chromogenic In Situ Hybridization (CISH). DaeYoung Kim, HyoHyun Kim, EunSoo Lee, Munsuk Bae, YouJin Hwang.

**7:00 AM.** 140. Regulation of CYP19 Expression by Sox Proteins in the Frog, *Rana rugosa*. Yuki Oshima, Kiyoshi Naruse, Masahisa Nakamura.

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**Stem Cells**

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**7:00 AM.** 141. Unique Differentiation Character of Embryonic Stem Cells Derived from Oocytes of 76-Week-Old Aged Mice. Hidenori Akutsu, Aki Hamada, Masakazu Machida, Akihiro Umezawa.

**7:00 AM.** 142. Induced Differentiation of Buffalo (*Bubalus bubalis*) Embryonic Stem Cells to Neuron Cells In Vitro. D. Kumar, T. Anand, K. Singh, M. Singh, M. Chauhan, P. Palta, R. Manik.

**7:00 AM.** 143. Identifying Markers of Embryo Quality: *Brg1* Regulates Transcriptional Activation of *Stat3* Target Genes in ES Cells and Preimplantation Embryos. Benjamin Kidder, Daniel de Matos, Jason Knott, Stephen Palmer.

**7:00 AM.** 144. Reprogramming of Mouse Embryonic Fibroblasts by Cell-Free Extracts from Nanog-Overexpressing Embryonic Stem Cells. Tomoyuki Tsukiyama, Kei Miyamoto, Naojiro Minami, Masayasu Yamada, Hiroshi Imai.

**7:00 AM.** 145. WITHDRAWN.

**7:00 AM.** 146. Characterization of a Novel Primate Embryonic Stem Cell Line in African Green Monkey (*Cercopithecus aethiops*). Nobuhiro Shimosawa, Shinichiro Nakamura, Masanori Hatori, Tadashi Sankai.



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**Testis**

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**7:00 AM.** 147. Evolutionary Conservation of the Sperm Protein SPRASA. Deborah Prendergast, Kathryn Woad, Larry Chamley, Andrew Shelling.

**7:00 AM.** 148. Androgen Downregulates the Expression of Translationally Controlled Tumor Protein (TCTP) in Mouse Sertoli Cells. Shinji Komori, Hiroyuki Kasumi, Yuri Nakamura, Takatoshi Kinuta, Hiroyuki Tanaka, Koji Koyama.

**7:00 AM.** 149. The Effect of Sesamol on Steroidogenesis and Apoptosis in MA-10 Mouse Leydig Tumor Cells. Chun-Yi Jen, Yung Ming Lin, Bu-Miin Huang, Ming-Yie Liu.

**7:00 AM.** 150. Effect of Hypoxia on Progesterone Production by the Testicular MA 10 Cells. Lata Rani, Bidut Mohanty, Anand Kumar.

**7:00 AM.** 151. The Involvement of Peroxisome Proliferator-Activated Receptor Gamma (PPAR $\gamma$ ) In Gonadal Steroidogenesis and Steroidogenic Acute Regulatory Protein (STAR) Expression. Mariusz Kowalewski, Matthew Dyson, Pulak Manna, Douglas Stocco.

**7:00 AM.** 152. Laser Capture Micro Dissection and mRNA Analysis of Post-natal Precursors of Sheep Spermatogonia. Andrew Bertolini, Ann Hahnel.

**7:00 AM.** 153. The Functions of UCH L1 on the Apoptosis of Spermatocytes in Cryptorchid Testes of Mice Were Related with Its Coordinated Up-Regulation with Jab1 and p27kip1. Zhaogui Sun, Zheng Gu, Yan Shi, Qiuju Chen, Jian Wang, Jiake Tso.

**POSTER SESSION B**  
**Wednesday, May 28, 2008**

**11:00 a.m. – 1:00 p.m.**  
**Poster Tent**

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**Cloning**

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**11:00 AM.** 169. Changes of Spatial Chromatin Organization During Nuclear Transfer in Cattle. Daniela Koehler, Alessandro Brero, Eckhard Wolf, Thomas Cremer, Valeri Zakhartchenko.

**11:00 AM.** 170. Expression of Green Fluorescent Protein in Canine-Cloned Embryos Following Interspecies Somatic Cell Nuclear Transfer. So Gun Hong, Goo Jang, Min Kyu Kim, Hyun Ju Oh, Jung Eun Park, Jung Taek Kang, Dae Yong Kim, Byeong Chun Lee.

**11:00 AM.** 171. Dynamics of Histone Methylation Reprogramming Following Nuclear Transfer with Rabbit Mesenchymal Stem Cells and Adult Fibroblasts. Alessandro Brero, Ru Hao, Thomas Cremer, Eckhard Wolf, Valeri Zakhartchenko.

**11:00 AM.** 172. Microinjection of Mitochondria Derived from Serum-Starved Somatic Cells Affects Parthenogenetic Development of Murine and Bovine Oocytes. Kumiko Takeda, Mariko Tasai, Satoshi Akagi, Kazutsugu Matsukawa, Seiya Takahashi, Masaki Iwamoto, Akira Onishi, Takahiro Tagami, Keijiro Nirasawa, Hirofumi Hanada, Carl Pinkert.

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**Comparative Reproduction**

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**11:00 AM.** 173. The Effects of Estradiol and Catecholestrogens on the Expression and Activity of Enzymes Regulating Glycogen Metabolism in the Uterus of the Mink. Jack Rose, Jason Hunt, Jadd Shelton, Steven Wyler, Dan Mechem.

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**Contraception**

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**11:00 AM.** 174. Development of Dimethandrolone 17 $\beta$ -Undecanoate (DMAU) as an Oral Male Hormonal Contraceptive: Induction of Infertility and Recovery of Fertility in Adult Male Rabbits. Sheri Hild, Jean Engbring, Barbara Attardi, David Gropp, Sailaja Koduri, Jerry Reel.

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**Education in Reproduction**

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**11:00 AM.** 175. An Interactive Method for Teaching Non-Human Primate Behavioral Data Quantification to Undergraduate Behavioral Endocrinology Students by Postdoctoral Fellows in the Fellowships in Research and Science

Teaching (FIRST) Program. Jackie Hoffman, Andrew Benson, Joanne Chu, Mark Wilson, Doug Eaton.

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**Embryonic Development**

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**11:00 AM.** 176. Effect of FCS and BSA on Hatching Rate, Apoptosis, and Stress Activated Protein Kinase Activity in Bovine Blastocysts. Hisataka Iwata, Yosuke Sakaguchi, Yoshihiro Kon, Koji Kimura, Takehito Kuwayama, Yasuniri Monji.

**11:00 AM.** 177. In Vitro Production of Blastocysts Through OPU in HFxSahiwal Crosses of *Bos indicus* and *Bos taurus*. Shri Singh, Hetal Shukla, Ramakrishna Kasiraj.

**11:00 AM.** 178. Sonic Hedgehog Supplementation Promotes Porcine Oocyte Maturation and Early Embryo Development. Nguyen Ngoc Tan, Tzu-An Lin, Shi-Ing Yen, Jung-Kai Tseng, Rui-Fen Zhuang, Pei-Cih Kang, David Lin, Han-Hsin Chang, Jyh-Cherng Ju.

**11:00 AM.** 179. Calcium Release and Development of Heat-shocked Porcine Oocytes after Nucleus-ooplasmic Reconstruction. Jung-Kai Tseng, Jyh-Cherng Ju, Xiangzhong Yang.

**11:00 AM.** 180. Mechanisms of Mouse Blastocyst Patterning: The Roles of Mechanical Constraint and Cell Polarity Regulator. Vernadeth Alarcon, Dana Tamashiro, Yusuke Marikawa.

**11:00 AM.** 181. Early Post-fertilization Events in the Rat Model: New Insights on Sperm Decondensation Classification and Chromatin Remodeling Patterning. Lisanne Grenier, Barbara Hales, Bernard Robaire.

**11:00 AM.** 182. Spatial and Temporal Formation of Vimentin Filament in Bovine Post-hatching Blastocyst In Vitro. Shuntaro Ikeda, Miki Sugimoto, Shin-ichi Kume.

**11:00 AM.** 183. Filia, a Maternal Effect Gene that Regulates Cleavage Embryogenesis in Mice. Ping Zheng, Jurrien Dean.

**11:00 AM.** 184. Mutant Form of an Uncharacterized KPNA2 like Gene (AW146299) Caused the First Cell Cycle Delay and 2-Cell Embryo Arrest in Mouse. Jianjun Hu, Ran Song, Shaorong Gao.

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### Environmental Influences on Reproduction

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**11:00 AM.** 185. Seasonal Variation in Gene Expression of Bovine Oocytes and the Resultant Embryos. Zvi Roth, Mirit Gandelman.

**11:00 AM.** 186. Uranium Stimulates Estrogen-Responsive Gene Expression in Stably Transfected T47D Human Breast Adenocarcinoma Cells. Michael Hendrix, Kevin Sullivan, Jeff Henrikson, Samantha Kemper, Stefanie Raymond-Whish, Loretta Mayer, Cheryl Dyer.

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### Epigenetics

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**11:00 AM.** 187. Creation of Monozygotic Twin Viable Yellow Murine Blastocysts. Jiude Mao, Mika Katayama, Angela Davis, Benford Mafuvadze, R. Roberts, Cheryl Rosenfeld.

**11:00 AM.** 188. Expression Patterns of H3/K27 Methylation Mediating Genes in Porcine Embryos. Kieun Park, Luca Magnani, Ryan Cabot.

**11:00 AM.** 189. Aberrant DNA Methylation in Cloned Ovine Embryos. Xiaorong An, Lei Liu, Jian Hou, Tinghua Lei, Jiahua Bai.

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### Female Gametes

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**11:00 AM.** 190. Predisposition to Precocious Chromatid Segregation and Non-disjunction May Relate to Abundance of mRNAs Involved in Metabolism in Maturing Oocytes. Ursula Eichenlaub-Ritter, Ilse Betzendahl, Jaques Cohen, Nury Steuerwald.

**11:00 AM.** 191. PRKA Regulation of Energy Utilization in Porcine (*Sus scrofa*) Cumulus-Oocyte Complexes. Mario Mayes, Francois Richard.

**11:00 AM.** 192. Estrogen Signaling Regulates Neonatal Oocyte Development by Multiple Mechanisms. Melissa Pepling, Kelsey Breen, Ying Chen.

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### Female Reproductive Tract

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**11:00 AM.** 193. Signal-regulated Calcium Entry Plays a Role in Endoplasmic Reticulum Store Refilling in Human Myometrial Cells. Daesuk Chung, Chun-Ying Ku, Barbara Sanborn.

**11:00 AM.** 194. Follistatin mRNA Expression Is Regulated by Seminal Fluid TGF $\beta$  in Human Ect1 Cervical Epithelial Cells. David Sharkey, Sarah Robertson.

**11:00 AM.** 195. Prostaglandin F $_{2\alpha}$  Stimulates 11 $\beta$ -Hydroxysteroid Dehydrogenase Type 1 Activity and Protein Expression in Bovine Endometrial Stromal Cells. Hwa Yong Lee, Tomas Acosta, Kiyoshi Okuda.

**11:00 AM.** 196. Study of the Interaction of Cumulus-Associated Alpha-2-Macroglobulin with Glycodelin-C from

Human Cumulus Matrix. Man Kin Chung, Philip Chiu, Kevin Lam, Cheuk Lun Lee, Ronald Pang, Kai-Fai Lee, William Yeung.

**11:00 AM.** 197. EP2 Receptor-Mediated cAMP Release Is Augmented Following Activation of the Calcium-Calmodulin Pathway by PGF $_{2\alpha}$ -FP Receptor Interaction. Aron Abera, Kurt Sales, Roberto Catalano, Arieh Katz, Henry Jabbour.

**11:00 AM.** 198. Regulation of Cytokine-Induced Plasminogen Activator in Porcine Uterus Epithelial Cells Via Protein Kinase Inhibitors. Choon-Keun Park, Eun-Hye Kwon, Mi-Young Shin, Boo-Keun Yang, Hee-Tae Cheong, Dong-Seok Lee.

**11:00 AM.** 199. PGF $_{2\alpha}$  - FP Receptor Regulation of Interleukin-11 Expression in Endometrial Adenocarcinoma Cells Via the Calcium-Calmodulin Pathway. Kurt Sales, Vivien Grant, David Maldonado-Perez, Alistair Williams, Richard Anderson, Henry Jabbour.

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### Fertilization

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**11:00 AM.** 200. Regulation of Ca $^{2+}$  Oscillation in Mouse Oocytes by the Oocyte-activating Potential and Intracellular Localization of Sperm-specific Phospholipase C $\zeta$ . Akihiro Yoneda.

**11:00 AM.** 201. Ca $^{2+}$  Dynamics and Chemotactic Behavior of the Ascidian Sperm. Manabu Yoshida, Kogiku Shiba, Kotetsu Maruyama, Shoji Baba.

**11:00 AM.** 202. Enzymatic Activity of Proprotein Convertase 4 is Important for Mammalian Fertilization. Sitthichai Iamsaard, Rapeepun Vanichviriyakit, Arpornrad Saewu, Boonsirm Withyachumnarnkul, Ajoy Basak, Nongnuj Tanphaichitr.

**11:00 AM.** 203. Can Bovine In Vitro Matured Oocytes Process Differentially X- or Y-bearing Spermatozoa? Pablo Bermejo-Alvarez, Dimitrios Rizos, Detlef Rath, Pat Lonegan, Alfonso Gutierrez-Adan.

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### Gene Regulation and Function

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**11:00 AM.** 204. Expression of an *OCT4* (*POU5F1*) Pseudogene in the Bovine Embryo Derived CT-1 Cell Line. Andrew Schiffmacher, Carol Keefer.

**11:00 AM.** 205. Comparative Analysis of Development-related Gene Expression in Parthenogenetic and IVF Sheep Embryos. Sergio Ledda, Daniela Bebbere, Luisa Bogliolo, Stefano Fois, Federica Ariu, Giovanni Leoni.

**11:00 AM.** 206. Characterization of the Fragile X-related Proteins FMRP, FXR1P and FXR2P in the Oocyte and Prehatching Embryos. Catherine Gravel, Jean-Philippe Grenon, Claude Robert.

**11:00 AM.** 207. Tissue-specific Expression and Estrogen Receptor-mediated Regulation of Phospholipid Hydroperoxide Glutathione Peroxidase (phgpx) Gene in Mouse Embry-

os. In-Jeoung Baek, Jung-Min Yon, Se-Ra Lee, Mi-Ra Kim, Byeongwoo Ahn, Beom Jun Lee, Sang-Yoon Nam, Young Won Yun.

**11:00 AM.** 208. Regulation of the Transcriptional Activity of the CAG and GGN Polymorphisms in the Androgen Receptor by the Cofactor GRIP-1. Yvonne Giwerzman, Hannah Nenonen.

**11:00 AM.** 209. Spatial and Temporal Expression of *Rhox5* Homeobox Gene in the Epididymis Is Controlled by DNA Methylation, Androgen Receptor, and GATA Transcription Factors. Anjana Bhardwaj, Sreenath Shanker, Hye-Won Song, Kichiya Suzuki, Marie-Claire Orgebin-Crist, Miles Wilkinson.

**11:00 AM.** 210. In Vivo Definition of Genes Coordinately Regulated by STAT5a and ERalpha. Anne Miermont, Priscilla Furth.

**11:00 AM.** 211. Microarray Analysis of the Overlap Between Genes Known to Be Induced by Hypoxia and/or Hypoxia-inducible Factor 1 $\alpha$  (HIF-1 $\alpha$ ) and Genes Rapidly Induced by Estrogen in Rat Uterine Epithelial Cells. Kristin Molitoris, Armina Kazi, Robert Koos.

**11:00 AM.** 212. The Gonadal-selective TFIID Subunit, TAF4b, in Hormonal Regulation of Female Fertility in the Mouse. Lindsay Lovasco, Kathleen Zafra, Colin O'Brien, Richard Freiman.

**11:00 AM.** 213. Regulation of the Hepatic Transcriptome by Estradiol and Progesterone in Cows. Carla Piccinato, Guilherme Rosa, Milo Wiltbank.

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### Growth Factors

**11:00 AM.** 214. Vascular Endothelial Growth Factor (VEGF) Promotes Proliferation of Trophoblast Cells of In-vitro Parthenogenetic Porcine Embryos. Dibyendu Biswas, Ju Hyun Lee, Eui Bae Jeung, Hwan Yul Yong, Sang Hwan Hyun.

**11:00 AM.** 215. The Role of the Estrogen Receptor Coactivator, Amplified in Breast Cancer 1 (AIB1), in Her2/neu-Initiated Mouse Mammary Carcinogenesis and Tamoxifen Resistance. Maddalena Tilli, Mark Fereshteh, Kathleen Torre, Anna Riegel, Priscilla Furth.

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### Hormone Action

**11:00 AM.** 216. Leydig Cells Express Follicle-Stimulating Hormone Receptor and Respond to Follicle-Stimulating Hormone with Androgen Release in Catfish. Rudiger Schulz, Angel Garcia-Lopez, John Trant, Jan Bogerd.

**11:00 AM.** 217. Changes in Plasma Concentrations of Inhibin, Estradiol-17 $\beta$ , Progesterone, LH and FSH Associated with Follicular Waves During the Estrous Cycle in Sows. Michiko Noguchi, Koji Yoshioka, Chie Suzuki, Sachiko Arai, Seigo Itoh, Hiroyuki Kaneko.

**11:00 AM.** 218. Expression of Oxytocin Receptor Protein in Gastrointestinal Tract of Lactating Rats. Wei-Ju Huang, Chan-Hsun Hsu, Paulus S. Wang, Full-Young Chang, Ming-Luen Doong.

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### Implantation and Pregnancy

**11:00 AM.** 219. Progesterone and Interferon Tau Regulation of LIFR and IL6ST in the Peri-implantation Ovine Uterus. Gwonhwa Song, M Satterfield, Jinyoung Kim, Fuller Bazer, Thomas Spencer.

**11:00 AM.** 220. GnRH Agonist-Induced Up-Regulation of Estrogen Receptors in Bovine Endometrium. Ravinder Singh, Thavaneetharajah Pretheeban, Ruwanie Perera, Rajadurai Rajamahendran.

**11:00 AM.** 221. Transforming Growth Factor  $\beta$  Regulates Proliferation and Invasion of Rat Trophoblastic Cells. Eric Asselin, Lyne Lafontaine, Celine Van Themsche.

**11:00 AM.** 222. Estrogen Increases LPA3 Expression and LPA Up-Regulates PTGS2 Expression in the Porcine Uterine Endometrium During Pregnancy. Heewon Seo, Mingoo Kim, Chang-Kyu Lee, Hakhyun Ka.

**11:00 AM.** 223. Expression and Regulation of TRPV6 in the Uterine Endometrium During the Estrous Cycle and Pregnancy in Pigs. Yohan Choi, Heewon Seo, Mingoo Kim, Chang-Kyu Lee, Hakhyun Ka.

**11:00 AM.** 224. Secreted Phosphoprotein One (SPP1 or Osteopontin) Binds  $\alpha$ v $\beta$ 3 and  $\alpha$ 5 $\beta$ 1 Integrins on Ovine Trophectoderm to Mediate Cell Attachment and Stimulate the FRAP1/mTOR Pathway. Greg Johnson, Jinyoung Kim, David Erikson, Gwonhwa Song, Thomas Spencer, Kayla Bayless, Guoyao Wu, Robert Burghardt, Fuller Bazer.

**11:00 AM.** 225. Enhanced Focal Adhesion Assembly Reflects Increased Mechanosensation and Mechanotransduction Along the Maternal-Conceptus Interface During Pregnancy in Sheep. Robert Burghardt, Thomas Spencer, Kayla Bayless, James Burghardt, Greg Johnson.

**11:00 AM.** 226. Matrix Metalloproteinases Are Present and Expressed Differentially During the Initial Ovarian Response to Photostimulation in Siberian Hamsters (*Phodopus sungorus*). Lisa A. Vrooman, Carling F. McMichael, Kelly A. Young.

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### Male Gametes

**11:00 AM.** 227. Identification of  $\alpha_6$ ,  $\beta_1$ , and  $\beta_3$  on Bovine Sperm. Roseli Goncalves, Ricardo Bertolla, Renato Mortara, Valquiria Barnabe.

**11:00 AM.** 228. Rat GETM4, a Novel Germ Cell-Expressing Four-Transmembrane Protein Involved in Early Cleavage of Fertilized Ova. Hui-Juan Shi, Xiao-feng Jia, Mi Zhou, Michelle Santos, Ai Zhen Wu, Ching-Ling Chen.

**11:00 AM.** 229. WITHDRAWN.

**11:00 AM. 230.** A Novel Testis-Specific Serine-Proline Rich Protein Is Present in Mammalian Sperm and Becomes Phosphorylated During Capacitation. Ana Salicioni, Mark Platt, Pablo Visconti.

**11:00 AM. 231.** A Novel Mouse Enolase 1-like Gene is Expressed Specifically in Spermatogenic Cells and Encodes a Protein Present in the Principal Piece Region of the Sperm Flagellum. Noriko Nakamura, Qunsheng Dai, Mitch Eddy.

**11:00 AM. 232.** The Association of Seminal Inflammatory Markers with *Chlamydia trachomatis* Infection in Male Infertility. Abasali Kokab, Adrian Eley, Mehdi Akhondi, Mohamad Hosein Modaresi, Roy Jennings, Mohamad reza Sadeghi, Mohsen Aarabi, Allan Pacey.

**11:00 AM. 233.** Water Channels in Human Sperm Volume Regulation. Trevor Cooper, Chiara Callies, Ching-Hei Yeung.

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### Male Reproductive Tract

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**11:00 AM. 234.** Regulation of Claudin-1 by The Transcription Factor Snail in the Rat Epididymis. Mary Gregory, Aurore Nicol, Daniel Cyr.

**11:00 AM. 235.** Expression of a HDL Receptor Scavenger Receptor Class B, Type I in Prostate Cancer Cells. Jong Kim, Keunbaik Lee, Jiwon Park.

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### Meiosis

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**11:00 AM. 236.** Identification and Characterization of Novel Genes Related to the Initiation of Meiosis in the Embryonic and Postnatal Murine Gonad. Cathryn Hogarth, Chris Small, Lizhong Yang, Debra Mitchell, Paul Hurley, Michael Griswold.

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### Neuroendocrinology

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**11:00 AM. 237.** Expression of Appetite Regulatory Genes, Receptors, and Hormones in Obese Dams and Their Fetuses. Rebecca Cockrum, Kristi Cammack, Kathy Austin, Stephen Ford, Bret Hess, Gary Moss, Brenda Alexander.

**11:00 AM. 238.** The Absence in the Neonatal Androgen Is Essential for the Presence of Anteroventral Periventricular Metastin Neurons and GnRH/LH Surge System in the Adult. Tamami Homma, Yoshihisa Uenoyama, Maki Maeda, Shunji Yamada, Kinuyo Iwata, Kei-ichiro Maeda, Hiroko Tsukamura.

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### Nutrition and Reproduction

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**11:00 AM. 239.** Effects of Caffeine Intake on the Development of Deciduoma in Pseudopregnant and on Embryo Implantation in Pregnant Rats. Shao-Hsuan Kao,

Tsung-Ho Ying, Jyh-Cherng Shyu, Chin-Chiu Tsai, Jen-Hsiang Tsai, Jer-Yuh Liu.

**11:00 AM. 240.** Differential Gene Expression in Oviducts Collected During Proestrus from Ewes Fasted During the Luteal Phase of the Estrous Cycle. Kathleen Austin, Kristi Cammack, Edward Van Kirk, Gary Moss, Brenda Alexander.

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### Ovary

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**11:00 AM. 241.** Differential Expression of N- and E-cadherin in the Hamster Ovary During Perinatal Development: Potential Regulation by FSH. Cheng Wang, Shyamal Roy.

**11:00 AM. 242.** The Hedgehog System in Ovarian Follicles of Cattle Selected for Twin Ovulations and Births: Evidence of a Link Between the IGF and Hedgehog Systems. Pauline Aad, Leon Spicer, Sherrill Echterkamp.

**11:00 AM. 243.** Evaluation Of Stage of the Corpus Luteum (Cl) and Signaling Pathway Involvement in Regulation of Chemokine mRNA by Prostaglandin F2 alpha (PGF) in Bovine Cl and Luteinized Granulosa Cells. Wenxiang Luo, Lisa Wiltbank, Hemanta Shrestha, Milo Wiltbank.

**11:00 AM. 244.** Hyper-Prolific Ewes Carrying Copies of Three Major Genes: A Model for Studying Genes Controlling Ovulation Rate. George Davis, Susan Galloway, Anne O'Connell, Phillip Farquhar, Kenneth McNatty, Jennifer Juengel.

**11:00 AM. 245.** Asymmetric Effects on Ovulation by of Blockade of Estrogen Receptor beta of POA-AHA in the Morning of Proestrous or Estrus Phase of the Estrous Cycle of the Rat. Luciano Mendoza-Garces, Deisy Rodriguez, Patricia Cruz-Martinez, Esteban Olvera, Roberto Dominguez, Maria-Esther Cruz.

**11:00 AM. 246.** The Role of Thrombospondin-1 (TSP-1) in Epithelial Ovarian Cancer. Nicole Solinger, Jim Petrik.

**11:00 AM. 247.** Effect of Diet in Pregnancy on the Expression of Genes Involved in TGF- $\beta$  Superfamily Bioavailability in the Bovine Ovarian Cortex of Female Offspring. Raymond Rodgers, Mark Prodoehl, Helen Irving-Rodgers, Tracy Sullivan, Gina Micke, Wendy Bonner, Mark Gibson, Vivienne Perry.

**11:00 AM. 248.** Activin A Regulates Key Receptor/Ligand Systems Influencing Oogenesis and Folliculogenesis in the Human Fetal Ovary. Andrew Childs, Richard Anderson.

**11:00 AM. 249.** Redundant Roles of SMAD2 and SMAD3 in Ovarian Granulosa Cells In Vivo. Qinglei Li, Stephanie Pangas, Carolina Jorgez, Jonathan Graff, Michael Weinstein, Martin Matzuk.

**11:00 AM. 250.** Congenital Lipoid Adrenal Hyperplasia with Bilateral Ovarian Endometriomas: A Case Report. Teruo Sugawara, Masataka Kudo, Kenji Fujieda, Noriaki Sakuragi.

**11:00 AM.** 251. Residual Ovarian Tissue of Follicle-depleted Mice Expresses Genes for Androgen Synthesis and Metabolism of Xenobiotic Compounds. Zelicann Rivera, James Hoying, Patricia Hoyer.

**11:00 AM.** 252. Prohibitin (Phb1) Signaling Enhances Cell Survival Factors by Promoting Anti-apoptotic Gene Transcription and Translation in Rat Granulosa Cells. Indrajit Chowdhury, Alicia Branch, Anthony Zeleznik, Kelwyn Thomas, Winston Thompson.

**11:00 AM.** 253. Heterotopic Transplantation of both Cryopreserved and Fresh Whole Ovine Ovaries. Vicki Onions, Bruce Campbell, Robert Webb.

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### Pituitary

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**11:00 AM.** 254. An Involvement of Estrogen Receptors in the Transcriptional and Translational Induction of Growth Hormone Evoked by Xenoestrogens in Rat Pituitary Gland. Vu Hoang Dang, Keith Choi, Eui-Bae Jeung.

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### Reproductive Aging

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**11:00 AM.** 255. Antiprogestosterone Treatment Rescues Fertility, by Overcoming Parturition Failure, in Ageing Transgenic FSH Female Mice. Kirsten McTavish, David Handelsman, Charles Allan.

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### Reproductive Immunology

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**11:00 AM.** 256. Interruption of Inflammatory Pathways with JNK Inhibitors Induces Regression of Human Endometrial Lesions and Restores Progesterone Receptor Sensitivity in Endometrium and Lesions. Selvaraj Nataraja, David Kagan, Anna Starzinski-Powitz, Enrico Gillio Tos, Rocco Cirillo, Chiara Ferrandi, Jean-Pierre Gotteland, Kevin Osteen, Kaylon Bruner-tran, Stephen Palmer.

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### Reproductive Technologies

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**11:00 AM.** 257. Sperm Aster Formation and Blastocyst Development of Bovine Oocytes Injection with Spermatogenic Cells. Chikako Kani, Manami Takenaka, Minako Kamihata, Miki Ikegami, Masanori Ochi, Toshitaka Horiuchi.

**11:00 AM.** 258. Use of Sperm Chromatin Structure Assay (SCSA) for Evaluating Freeze-Dried Mouse Sperm DNA Fragmentation. Yosuke Kawase, Naoko Wada, Kou-ichi Jishage.

**11:00 AM.** 259. Effect of Different LDL Concentrations in the Freezing Extender on Semen Quality of Frozen-Thawed Ram Spermatozoa. Mercedes Alvarez, David Castro, Juan Muro, Felipe Martinez-Pastor, Maria Mata-Campuzano, Carmen Garcia, Luis Anel, Paulino de Paz.

**11:00 AM.** 260. WITHDRAWN.

**11:00 AM.** 261. An Improved Method for Producing Transgenic Mice by Introcytoplasmic Sperm Injection (ICSI) Carrying Large Foreign DNA Fragments (BAC). Miyuri Kawasumi, Kazuto Morozumi, Ben Fogelgren, Scott Lozano, Stefan Moisyadi.

**11:00 AM.** 262. Super Open Pulled Straw Vitrification of Porcine Blastocysts: Effect of Centrifugation and Cytoskeletal Stabilization. Cristina Cuello, Emilio Martinez, Jonatan Sanchez-Osorio, Carmen Alminana, Maria Gil, Ignacio Caballero, Inmaculada Parrilla, Jordi Roca, Juan Vazquez, Heriberto Rodriguez-Martinez.

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### Reproductive Toxicology

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**11:00 AM.** 263. Transgeneration Effects of Fenarimol on Reproductive Health in Female Mice. Jiyun Han, Mira Park, Miae Won, Jae-hong Kim, Jeong-Jae Ko, Jeehyeon Bae.

**11:00 AM.** 264. Effects of Acrolein and Nicotine on the Secretion of Testosterone In Vivo and In Vitro. Kai-Lee Wang, Ching-Han Yu, Wei-Ju Huang, Cai-Yun Jian, Chih-Yung Lin, Paulus Wang.

**11:00 AM.** 265. Di-butyl Phthalate Targets Multiple Signaling Mechanisms to Down-Regulate Fetal Testosterone Biosynthesis. Adam Kuhl, Kevin Gaido.

**11:00 AM.** 266. Atrazine Inhibits Reproductive Processes in Rats. Zlatko Kniewald, Branimir Simic, Jasna Kniewald.

**11:00 AM.** 267. Perinatal Exposure to Low Dose DE-71 Affects Thyroid and Gonadal Endpoints. Holly LaVoie, Yvonne Hui, George McCoy, Charles Blake.

**11:00 AM.** 268. Decreased Ovarian Glutathione and Glutamate Cysteine Ligase Subunit Protein Levels in Nrf2 Knockout Mice. Yvonne Hoang, Brooke Nakamura, Jefferson Chan, Ulrike Luderer.

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### Sex Determination/Differentiation

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**11:00 AM.** 269. Global Expression Profiling in Zebrafish Reveals Genes with Potential Roles in Sexual Differentiation. Rajini Sreenivasan, Xingang Wang, Richard Bartfai, Hsiao Yuen Kwan, Alan Christoffels, Laszlo Orban.

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### Stem Cells

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**11:00 AM.** 270. Isolation and Differentiation of Buffalo (*Bubalus bubalis*) Embryonic Stem Cell-Like Cells Through Parthenogenetically Produced Embryos. K. Singh, D. Kumar, T. Anand, M. Chauhan.

**11:00 AM.** 271. Towards Autologous Embryonic Stem Cell-Based Therapies Using an Equine Model. Joelle Desmarais, Simon-Pierre Demers, Carmen Leveillee, Patrick Vincent, Sheila Laverty, Lawrence Smith.

**11:00 AM.** 272. Aggregation of Blastomeres Using Phytohemagglutinin Improves the Development to Blastocyst and Derivation of Embryonic Stem Cells in Zona

Pellucida-Free Mouse Half Embryos. Dong Ryul Lee, Jeoung Eun Lee, Jung Ho Kim, Hyung Min Chung, Tae Ki Yoon.

**11:00 AM. 273.** The Effects of Small Molecule Inhibitors of *Wnt* /  $\beta$ -Catenin Signaling Pathway on Murine Embryonic Stem Cells. Timothy McKinnon, Hong Ma, Michael Kahn.

**11:00 AM. 274.** Identification of Candidate Genes Involved in Avian Germline Stem Cell Migration. James Petite, Julie Angerman-Stewart, Becca Wysocky, Huaijun Zhou, Paul Mozdziak.

**11:00 AM. 275.** Derivation of Embryonic Stem Cells from Mouse Tetraploid Embryos and Their Character. Takuro Horii, Mika Kimura, Sumiyo Morita, Yasumitsu Nagao, Izuho Hatada.

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### Testis

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**11:00 AM. 276.** The Role of the NMD RNA Surveillance Pathway in Sertoli Cells Elucidated Using a Tissue-Specific RNA Interference Approach. Lulu Huang, Miles Wilkinson.

**11:00 AM. 277.** Regulation of Activin A and Inhibin B by Bacterial Lipopolysaccharide in Sertoli Cells from Prepuber-

tal Rats: No Role for Secreted Interleukin-1 $\alpha$ . Mark Hedger, Yoshinori Okuma, Kazutaka Saito, Julie Muir, Wendy Winnall.

**11:00 AM. 278.** Effects of Active Immunization Against Inhibin Using Two Adjuvants on Hormonal and Daily Sperm Production (DSP) in Ram Lambs. Jon Wheaton, Jared Voге.

**11:00 AM. 279.** Study of Signal Transduction Pathways Activated by Cordycepin on Steroidogenesis in Mouse Leydig Cells. Hsiang-Yin Pao, Bu-Miin Huang, Ming-Yie Liu, Yung Ming Lin.

**11:00 AM. 280.** Midazolam Regulates StAR-Dependent Steroidogenesis and Cell Death in Mouse Leydig Cells. Ya-Ting Chang, Ming-Yie Liu, Yung Ming Lin, Bu-Miin Huang.

**11:00 AM. 281.** Chronic Effects of Amphetamine and Methamphetamine on the Testosterone Production in Rats. Cai-Yun Jian, Chih-Yung Lin, Yen-Jui Chang, Wei-Ju Huang, Ching-Han Yu, Paulus Wang.

**11:00 AM. 282.** Syntaxin and  $\beta$ -actin Interact with Acrosome-Expressing Protein VAD1.2/AEP2 in Spermatogenesis. Kai-Fai Lee, Yan Zuo, Bettie Tam, Alan Tang, William Yeung.

**Platform Presentations, Sessions 7–12**  
**Wednesday, May 28, 2008**

**3:30 p.m. – 5:00 p.m.**  
**Concurrent Sessions**

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**Platform Session 7: Stem Cells**

Chairs: Jon Oatley, Ph.D. and Olga Ocon-Grove  
Wednesday, May 28, 2008

3:30 p.m. - 5:00 p.m.  
Location: Keauhou II

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- 3:30 PM. 286.** Human Endometrial Stem Cells Transplantation in a Parkinson's Disease Mouse Model. Erin Wolff, Xiao-Bing Gao, Zane Andrews, Katherine Yao, Hongling Du, Hugh Taylor.
- 3:45 PM. 287.** Interspecies Nuclear Transfer of Human Adult Dermal Fibroblast Cells. Akiko Yabuuchi, Paul Lerou, Kerriane Cunniff, Lingyi Chen, Hongguang Huo, George Daley.
- 4:00 PM. 288.** Improvement of Mouse Embryonic Stem Cell Derivation Efficiency with Novel Medium, Glucose Concentration, and Epigenetic Modifications. Chul Kim, Tomokazu Amano, Joonghoon Park, Mark Carter, X. Tian, Xiangzhong Yang.
- 4:15 PM. 289.** Assessment of the Developmental Potential of Rat Embryonic Stem-Like (ES-Like) Cells by Diploid and Tetraploid Embryo Aggregation Confirms Their In Vivo Multipotency. Simon-Pierre Demers, Joelle Desmarais, Lawrence Smith.
- 4:30 PM. 290.** Irradiation Enhanced Efficiency of Testicular Germ Cell Transplantation in Sheep. Muren Herrid, Michael Jackson, Natalka Suchowerska, Sally Stockwell, Keryn Hutton, Rhonda Davey, Jeanette Olejnik, Shelly Hope, Jonathan Hill.
- 4:45 PM. 291.** Inhibition of Histone Deacetylase Activity Amplifies Retinoic Acid-mediated Induction of *Stra8* Expression and Oogenesis in Ovaries of Adult Female Mice. Ning Wang, Jonathan Tilly.

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**Platform Session 8: Preimplantation Embryo Biology**

Chairs: Lynne Selwood, Ph.D. and Karen Schindler, Ph.D.  
Wednesday, May 28, 2008

3:30 p.m. - 5:00 p.m.  
Location: Session Tent

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- 3:30 PM. 292.** Maternally Encoded FLOPED Complex Required for Early Cleavage Stage of Mouse Embryogenesis. Lei Li, Boris Baibakov, Jurrien Dean.

**3:45 PM. 293.** Embryonic Mortality Is Associated with Monoallelic Expression of *STAT5A*. Hasan Khatib, Christian Maltecca, Ricky Monson, Valerie Schutzkus, Jack Rutledge.

**4:00 PM. 294.** Histone Deacetylase 1 Regulates Gene Expression During Mouse Preimplantation Embryogenesis. Pengpeng Ma, Paula Stein, Richard Schultz.

**4:15 PM. 295.** The Regulation of *TRP53* Expression and the Viability of the Mouse Preimplantation Embryo. C. O'Neill, X. Jin, Hugh Morgan.

**4:30 PM. 296.** Stage-specific Expression of *jmjd2* Histone Demethylases in Early Mouse Embryos. Jianle Wang, Yu Zhang, Zhaohui Kou, Da-Yuan Chen, Shaorong Gao.

**4:45 PM. 297.** Preimplantation Development of Mouse (*Mus musculus*) x Bank Vole (*Clethrionomys glareolus*) Interspecies Hybrid Embryos. Sandra Lencka-Ostrowska, Jacek Modlinski.

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**Platform Session 9: Male Reproductive Tract**

Chairs: Mark Hedger, Ph.D. and Wei Zhou, Ph.D.  
Wednesday, May 28, 2008

3:30 p.m. - 5:00 p.m.  
Location: Bayview Meeting Rooms

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- 3:30 PM. 298.** Carnitine Transporter 2 (CT2): a Transporter Proposed to be Involved in Epididymal Osmoprotection and Sperm Development. Leanne Cotton, Debra Fisher, Barry Hinton.
- 3:45 PM. 299.** The Role of *LGR8* in Mediating Androgen-Induced Inguinoscrotal Testis Descent in Luteinizing Hormone Receptor Knockout Animals. Zhenmin Lei, Xian Li, Christian Schwabe, Ch Rao, Fangping Yuan.
- 4:00 PM. 300.** Expression and Functional Role of the Bradykinin Type 2 Receptor in Epididymal Principal Cells. Clemence Belleannee, Nicolas Da Silva, Winnie Shum, Mireille Marsolais, Raynald Laprade, Dennis Brown, Sylvie Breton.
- 4:15 PM. 301.** Testosterone and Cyclooxygenases Modulate Ion Transport in Vas Deferens Epithelia. Fernando Pierucci-Alves, Bruce Schultz.
- 4:30 PM. 302.** Donor/Host Involvement in Testis Xenografts. Jens Ehmcke, Kathrin Gassei, Birgit Westernstroer, Stefan Schlatt.



**4:45 PM.** 303. Suppression of Insulin-Like 3 by Androgen Depletion in Hormone-Treated Irradiated Rat Testis. Wei Zhou, Olga Bolden-Tiller, Gunapala Shetty, Connie Weng, Shan Shao, Stefan Hartung, Marvin Meistrich.

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**Platform Session 10: Implantation and Pregnancy II:  
Post-Implantation Period of Pregnancy**

Chairs: Thomas Spencer, Ph.D. and Kathrin Dunlap, Ph.D.  
Wednesday, May 28, 2008

3:30 p.m. - 5:00 p.m.  
Location: Keauhou I

**3:30 PM.** 304. The Roles of Peroxisome Proliferator Activated Receptor Delta (*Ppard*) and Retinoid X Receptor Alpha (*Rxra*) in the Deciduogenically Stimulated Rat Endometrium. Sen Han Phang, Carolina Gillio-Meina, Thomas Kennedy.

**3:45 PM.** 305. Molecular Cloning and Characterization of Heparanase mRNA in Porcine Placenta Throughout Gestation. Jeremy Miles, Jeffrey Vallet, Bradley Freking.

**4:00 PM.** 306. Uterine Global Gene Expression During Resumption of Embryo Development Following Delayed Implantation in the Mink. Pavine Lefevre, Daniele Beaudry, Marie-France Palin, Bruce Murphy.

**4:15 PM.** 307. Involvement of the Sphingosine-1-Phosphate Cell Signaling Pathway in Regulating Ovine Endometrial Angiogenesis During Pregnancy. Kathrin Dunlap, Hyeong-Il Kwak, Shih-Chi Su, E. Mendoza, Robert Burghardt, Fuller Bazer, Ronald Magness, Greg Johnson, Kayla Bayless.

**4:30 PM.** 308. Placental Expression of Slit/Robo Signaling: Implication in Angiogenesis and Preeclampsia. Wu Xiang Liao, Hong-hai Zhang, Lin Feng, Jing Zheng, Dongbao Chen.

**4:45 PM.** 309. Identification of a Key Role for Runt-related Gene 2 in Human Cytotrophoblast Invasion. York Ng, Hua Zhu, Colin MacCalman.

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**Platform Session 11: Ovulation**

Chairs: Bruce Murphy, Ph.D. and Valerio Portela, Ph.D.  
Wednesday, May 28, 2008

3:30 p.m. - 5:00 p.m.  
Location: Keauhou III-IV

**3:30 PM.** 310. Selective Expression of Constitutively Active KrasG12D in Granulosa Cells of the Mouse Ovary Causes Defects in Follicle Development and Ovulation. Heng-Yu Fan, Masayuki Shimada, Zhilin Liu, Nicola Cahill, Noritaka Noma, JoAnne Richards.

**3:45 PM.** 311. Targeted Suppression of *Has2* mRNA in Mouse Cumulus Cell-oocyte Complexes (COCs) by Adenovirus-mediated Short-hairpin RNA (shRNA) Expression. Koji Sugiura, John Eppig.

**4:00 PM.** 312. Post hCG Follicle Differentiation in the Mouse Is Associated with an Increase in Hypoxia Inducible Factor Activity. Kimberley Tam, Darryl Russell, Karen Kind, Jeremy Thompson.

**4:15 PM.** 313. A Potential Role of MMP2 and MMP9 in Regulation of Hepsin and Protein Disulfide Isomerase from Granulosa Cells. Thomas Curry Jr., Katherine Rosewell.

**4:30 PM.** 314. ERM, an ETS Transcription Factor, Is Crucial for Folliculogenesis and Ovulation in Mice. Hyun-jung Lim, Jinwon Eo, Kyuyong Han, Kenneth Murphy, Haengseok Song.

**4:45 PM.** 315.  $\beta$ -catenin/Tcf signaling in oocytes identifies non-ovulatory follicles. Riaz Farookhi, Aida Rizk, Macalister Usongo.

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**Platform Session 12: Hormone Action and Growth Factors**

Chairs: Ben Tsang, Ph.D. and Joy McIntosh, Ph.D.  
Wednesday, May 28, 2008

3:30 p.m. - 5:00 p.m.  
Location: Keauhou Boardroom

**3:30 PM.** 316. Assisted Reproduction Technologies Impair Placental Steroid Metabolism. Abby Collier, Shogo Miyagi, Yasuhiro Yamauchi, Monika Ward.

**3:45 PM.** 317. Cables 1 Mediates Progesterone-Induced Inhibition of Endometrial Epithelial Cell Proliferation. Whitfield Growdon, Ramey Littell, James Pru, Maureen Lynch, Lankai Guo, Bo Rueda.

**4:00 PM.** 318. Mutations of FSH Receptor Intracellular Loop 2 Which Abrogate Interaction with 14-3-3 $\tau$  Reveal a Novel Signaling Defect When Placed in Context of Full Length Receptor. Smita Mahale, Cheryl Nechamen, Olga Davydenko, James Dias.

**4:15 PM.** 319. Development of an Interactive Virtual 3-D Model of the Human Testis Using the Second Life Platform. Douglas Danforth.

**4:30 PM.** 320. The Proregion of mBMP15 Regulates the Cooperative Interactions of BMP15 and GDF9. Joy McIntosh, Stan Lun, Steve Lawrence, Kenneth McNatty, Jennifer Juengel.

**4:45 PM.** 321. Activin Regulates KIT mRNA and Protein in the Postnatal Mouse Testis. Kate Loveland, Sridurga Mithraprabhu, Badia Barakat, Martin Matzuk, Chester Brown.

**POSTER SESSION C**  
**Thursday, May 29, 2008**

**7:00 a.m. – 9:00 a.m.**

**Poster Tent**

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**Cloning**

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**7:00 AM.** 324. Effect of Treatment with Scriptaid on Development of Bovine Nuclear Transferred Embryos. Satoshi Akagi, Kazutsugu Matsukawa, Seiya Takahashi.

**7:00 AM.** 325. In Vitro Development and mRNA Expression in Bovine Nuclear Transferred Embryos Derived from Early G1 or G0 Phase Cells. Kazutsugu Matsukawa, Satoshi Akagi, Kazuhiro Hukunari, Fukashi Inoue, Tadashi Furusawa, Shinya Watanabe, Seiya Takahashi.

**7:00 AM.** 326. Epigenetic Changes and Development of Somatic Cell Nuclear Transfer Swine Embryos after Inhibition of Histone Deacetylases. Mario Martinez-Diaz, Limei Che, Marcelo Albornoz, Marcelo Seneda, Xin Zhao, Vilceu Bordignon.

**7:00 AM.** 327. Development of Embryos Reconstructed with Somatic Cell Nuclei Derived from Hyper- and Hypo-Prolific Sows. Marcelo Albornoz, Mario Martinez-Diaz, Nayla El Beyrouthi, Vilceu Bordignon.

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**Comparative Reproduction**

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**7:00 AM.** 328. Effects of Gonadotropins and Growth Factors on Granulosa Cell Proliferation and Progesterone Production in the Brushtail Possum. Doug Eckery, Brian Thomson, Brigitta Mester.

**7:00 AM.** 329. WITHDRAWN.

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**Education in Reproduction**

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**7:00 AM.** 330. Plastination: A New Tool to Teach and Learn Anatomy of Reproductive Organs. Rafael Latorre, Francisco Gil, Octavio Lopez-Albors, Maria Ayala, Gregorio Ramirez, Jose Vazquez.

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**Embryonic Development**

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**7:00 AM.** 331. Regulation of Mesendoderm Formation and Axial Elongation by Wnt Signaling in Mouse Embryonal Carcinoma Cells. Yusuke Marikawa, Dana Tamashiro, Toko Fujita, Vernadeth Alarcon.

**7:00 AM.** 332. Involvement of ATM in H2AX Phosphorylation during Early Preimplantation Development in Mice. Masashi Yukawa, Masao Nagata, Fugaku Aoki.

**7:00 AM.** 333. Mouse Zygotic Pronuclei Autonomously Regulate DNA Synthesis. W. Steven Ward, Yasuhiro Yamauchi.

**7:00 AM.** 334. Mitochondrial Dysfunction of the Early Mouse Embryo Increases Expression of SNF2 Family Genes. Sarah Wakefield, Michelle Lane, Megan Mitchell.

**7:00 AM.** 335. Analysis of *Oog1*, an Oocyte-Specific Gene, Using Transgenic RNAi Approach. Hisashi Imaichi, Satoshi Tsukamoto, Yuki Ohta, Seiji Kito, Koji Kimura, Hiroshi Imai, Naojiro Minami.

**7:00 AM.** 336. Identification of Primordial Germ Cells in Developing Canine Embryos Using Anti-human OCT4 Antibody. Daniele Martins, Carlos Ambrosio, Naiara Saraiva, Cristiane Wenceslau, Adriana Morini, Irina Kerkis, Joaquim Garcia, Angelica Miglino.

**7:00 AM.** 337. Effect of Oxygen Tension on Embryo Development and Gene Transcription of Bovine Blastocysts Produced In Vitro by Co-culture with Oviduct Epithelial Cells. Maria Clemente, Julio de la Fuente, Pat Lonergan, Alfonso Gutierrez-Adan, Dimitrios Rizos.

**7:00 AM.** 338. The Contribution of Germinal Vesicle Materials to the Determination of Developmental Competence in Mouse Oocytes. Azusa Inoue, Rui Nakajima, Masao Nagata, Fugaku Aoki.

**7:00 AM.** 339. Do Sirtuin Proteins Function in the Developing Mammalian Embryo? Megan Mitchell, Alice Georgiou, Kara Cashman, Alicia Stump, Michelle Lane.

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**Environmental Influences on Reproduction**

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**7:00 AM.** 340. Full-Term Development Using the High Alkali Treating Spermatozoa Before ICSI Chong Li, Eiji Mizutani, Tetsuo Ono, Teruhiko Wakayama.

**7:00 AM.** 341. Nurses? Perceptions of Occupational Reproductive Risks Associated with Severe Acute Respiratory Syndrome (SARS) and the Implications for Future Outbreaks. Karen Phillips, Tracey O'Sullivan, Carol Amarunga.

**7:00 AM.** 342. Effects of Nanoparticle Enriched Diesel Exhaust on Pregnancy in F344 Rats. ChunMei Li, Shinji Taneda, Gen Watanabe, Yuki Ito, Tamie Nakajima, Kazuyoshi Taya, Akira Suzuki.

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### Epigenetics

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**7:00 AM.** 343. Methylation Status of Differentially Methylated Regions at Igf2/H19 Locus in Porcine Gametes. Chi-Hun Park, Hye-Sun Kim, Hakhyun Ka, Chang-Kyu Lee.

**7:00 AM.** 344. The Roles of E2F6 and DNA Methylation in the Regulation of Gene Expression During Germ Cell Development. Emily Smith, James Resnick.

**7:00 AM.** 345. The Promoter Activity of Placental HERV Type-Fb and Its Epigenetic Regulation. Jun Sugimoto, Makiko Sugimoto, Danny Schust.

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### Female Gametes

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**7:00 AM.** 346. Fatty Acid Oxidation and Meiotic Resumption in Mouse Oocytes. Stephen Downs.

**7:00 AM.** 347. Proteom Patterns of Porcine Oocytes During In Vitro Maturation Using Image Analysis of Two-Dimensional Gel Electrophoresis. Dong-Min Jang, Tae-Sin Kim, Boo-Keun Yang, Hee-Tae Cheong, Dong-Seok Lee, Choon-Keun Park.

**7:00 AM.** 348. The Kinetics of Nuclear Status and Kinase Activities During In Vitro Maturation of Canine Oocytes. Naomi Kashiwazaki, Chika Suzukamo, Mariko Hoshina, Daisuke Sano, Shuhei Sugio, Makoto Nakada, Noriaki Nakajima, Junya Ito.

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### Female Reproductive Tract

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**7:00 AM.** 349. LPS Introduced at Mating Regulates KC Production in the Murine Uterus During Early Pregnancy. Danielle Glynn, Sarah Robertson.

**7:00 AM.** 350. Activation and Over-expression of Matrix Metalloproteinase-2 in the Decidualization May through PKC Pathway. Jer-Yuh Liu, Shao-Hsuan Kao, Tsung-Ho Ying, Chih-Yang Huang, Yih-Shou Hsieh.

**7:00 AM.** 351. Global Analysis of Genes Regulated by HOXA10 in Decidualization Reveals a Role in Cell Proliferation. Julie Kim, Jennifer Hardt, Zhenxiao Lu.

**7:00 AM.** 352. In Vivo Molecular Modulation of P-AKT, XIAP, and COX-2 Pathways, and Cellular Proliferation by Resveratrol in Uteri of Immature Rats. Sophie Parent, Celine Van Themsche, Valerie Leblanc, Eric Asselin.

**7:00 AM.** 353. Evidences for Different Molecular Weight Oviductins in the Bovine Oviductal Fluid: A Proteomic

Approach. Manuel Aviles, Maria Dolores Saavedra, Irene Mondejar, Sebastian Canovas, Raquel Romar, Pilar Coy.

**7:00 AM.** 354. Membrane Progesterone Receptors - Expression and Regulation in the Human and Mouse Fallopian Tube. Magdalena Nutu, Ruijin Shao, Birgitta Weijdegard, Peter Thomas, Ann Thurin Kjellberg, Hakan Billig, D.G. Joakim Larsson.

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### Fertilization

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**7:00 AM.** 355. The Cleavage Status of ZP2 Determines Initial Sperm-Egg Recognition in Mice. Gagandeep Gahlay, Jurrien Dean.

**7:00 AM.** 356. Sire Effect and Sperm Membrane Changes on Bovine Embryonic Cleavage and Subsequent In Vitro Development. Pedro Santos, Antonio Chaveiro, Fernando Moreira da Silva.

**7:00 AM.** 357. The Analysis of Fertilizing Ability of *Spesp1* Gene Targeted Mouse Sperm. Yoshitaka Fujihara, Masao Murakami, Naokazu Inoue, Kazuhiro Kaseda, Masahito Ikawa, Masaru Okabe.

**7:00 AM.** 358. Effect of N-acetyl-D-glucosamine on Bovine Sperm-oocyte Interactions. Yousuke Sakaguchi, Hisataka Iwata, Takehito Kuwayama, Yasunori Monji.

**7:00 AM.** 359. Evaluation of In Vitro Bovine Sperm Binding and Fertilization After Incubation with Ouabain. Amy Way, Carrie Reese.

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### Gene Regulation and Function

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**7:00 AM.** 360. Differential Regulation of Lysyl Oxidase Gene Family Isoforms by Steroid Hormones in Human Stromal Endometrial Cells. Perla Baez, Abigail Ruiz, Marcicarmen Colon, Nivette Perez, Pedro Santiago, Sukru Tuzmen, Idhaliz Flores.

**7:00 AM.** 361. Association Between Preovulatory Concentrations of Estradiol and Expression of Uterine Milk Protein Precursor, Inhibin Beta A, and Proenkephalin. Brandi Perry, Amanda Schiefelbein, George Perry.

**7:00 AM.** 362. Association Between Preovulatory Concentrations of Estradiol and Expression of Uterine Receptors for Oxytocin, Progesterone, and Estradiol. Amanda Schiefelbein, Brandi Perry, George Perry.

**7:00 AM.** 363. Expression of Adiponectin and Its Receptors, AdipoR1, AdipoR2 and T-cadherin, in Chicken Ovarian Tumors. Olga Ocon-Grove, Susan Krzysik-Walker, James Giles, Patricia Johnson, Gilbert Hendricks III, Ramesh Ramachandran.

**7:00 AM.** 364. Role of the Protein C Inhibitor (PCI) Gene in IVF Fertilization Failure. Mona Bungum, Aleksander Giwercman, Leif Bungum, Peter Humaidan, Hamideh Rastkhani, Yvonne Giwercman.

**7:00 AM.** 365. Expression and Localization of Pten in Mouse Gametes. Guo-Zhang Zhu, Terry Boyce, Hiroto Akabane.

**7:00 AM.** 366. Long Term Hypoxia (LTH) Modulates Expression of Key Transcription Factors Governing Adipogenesis and Function of Adipose Tissue in the Late Gestation Ovine Fetus. Dean Myers, Krista Hanson, Malgorzata Mlynarczyk, Kanchan Kaushal, Charles Ducusy.

**7:00 AM.** 367. Transcriptional Regulation of miRNA-212/132 Expression in Murine Periovarian Granulosa Cells. Stephanie Fiedler, Lane Christenson.

**7:00 AM.** 368. Mice Deficient for a Small Cluster of piRNAs Implicate piRNAs in Transposon Control. Mingang Xu, Yun You, Patricia Hunsicker, Tamaki Hori, Chris Small, Michael Griswold, Norman Hecht.

**7:00 AM.** 369. Different Epigenetic Status of Bovine Interferone-tau Gene in Trophoblast and Non-trophoblast Cells. Toshihiro Sakurai, Yoshikage Muroi, Masashi Takahashi, Toru Takahashi, Kazuyoshi Hashizume, Alan Ealy, James Godkin, Kentaro Nagaoka, Kazuhiko Imakawa.

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**Growth Factors**

**7:00 AM.** 370. Expression of Fibroblast Growth Factors 17 and 18 (Fgf-17 And Fgf-18) in Bovine Antral Follicles. Jose Buratini Jr., Mariana Machado, Anthony Castilho, Isabela Costa, Diego Guerra, Pedro Pinczowski, Renee Laufer-Amorin, Paula Ripamonte, Christopher Price.

**7:00 AM.** 371. A Novel Mutation in the Growth and Differentiation Factor 9 (GDF9) Gene Is Associated, in Homozygosis, with Increased Ovulation Rate in Santa Ines Sheep. Eduardo Melo, Bianca Silva, Edylaine Castro, Thiago Silva, Samuel Paiva, Roberto Sartori, Mauricio Franco, Carlos Jose Souza, Jairo Neves.

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**Hormone Action**

**7:00 AM.** 372. Involvement of Pyruvate in the Exercise-Induced Testosterone Secretion in Rats. Yu-Min Cho, Ya-Wen Hsu, Yen-Jui Chang, Paulus Wang.

**7:00 AM.** 373. 11Keto-Testosterone as Androgen Contraceptive with Anti-Metabolic Benefits by Modulating 11 $\beta$ -Hydroxysteroid Dehydrogenase 1. Han Lin, Guo-Xin Hu, Dianne Hardy, Regine Sitruk-Ware, Ren-Shan Ge.

**7:00 AM.** 374. Functional Androgen Signaling in an Explant Model of Normal Human Breast Tissue. Theresa Hickey, Aleksandra Ocknik, Tina Bianco-Miotto, Steve Birrell, Lisa Butler, Wayne Tilley.

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**Implantation and Pregnancy**

**7:00 AM.** 375. Glycodelin-A Suppresses the Invasion of the Human Extravillous Cytotrophoblast. Kevin Lam, Philip Chiu, Man Kin Chung, Cheuk Lun Lee, Ronald Pang, Terence Lao, William Yeung, Pak Chung Ho.

**7:00 AM.** 376. Proteomic Analysis of Endometrial Lavage Samples Provides New Insights into Proteins Important for Implantation. Natalie Hannan, Chelsea Stoikos, Andrew Stephens, Jenny Chen, Luk Rombauts, Lois Salamonsen.

**7:00 AM.** 377. Expression of VEGF Receptors (Flt-1 and Flk-1) and IGF-1R on Placenta of Sheep. Xiaohong Zhang, Hailing Luo, Hong Zhu.

**7:00 AM.** 378. Involvement of 26S Proteasome in the Invasion of Human Cytotrophoblast Cells During Early Pregnancy. Cheng Zhu, Jiejun Fu, Ping Lin, Haiyan Lin, Xiaoguang Yu, Hongmei Wang.

**7:00 AM.** 379. Identification of Bovine Pregnancy-Specific Milk Proteins Using Proteomics. Rongxun Han, Hong-Rye Kim, Kenji Naruse, Su Min Choi, Baek-Chul Kim, Myyung-Youn Kim, Chang-Sik Park, Dong-Il Jin.

**7:00 AM.** 380. Interleukin 11 and Activin A Synergise to Enhance Medroxyprogesterone But Not cAMP-Induced Decidualization of Human Endometrial Stromal Cells. Evdokia Dimitriadis, Jin Zhang, Craig Harrison, Lois Salmonsens.

**7:00 AM.** 381. Differential Expression of Integrins and Latency-Associated Peptide (LAP) Implicate Functional Roles in Conceptus-Maternal Communication During Porcine Periimplantation. Dana Massuto, Eric Kneese, R. Hooper, Nancy Ing, Greg Johnson, Robert Burghardt, Laurie Jaeger.

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**Male Gametes**

**7:00 AM.** 382. Progesterone Treatment on Capacitated Boar Spermatozoa Increases Phosphorylation of PI3K, PDK, Akt, and JNK Molecules. Lee Yi, Hyun Kang, Sunphil Jang.

**7:00 AM.** 383. Aquaporins in Murine Spermatazoa—Implication of AQP8 in Volume Regulation. Ching-Hei Yeung, Chiara Callies, Aleksandra Rojek, Soren Nielsen, Trevor Cooper.

**7:00 AM.** 384. The Role of the Actin Cytoskeleton in Equine Spermatozoal Response to Osmotic Stress. Alysia Thomas, Liane Correa, Barry Ball, Stuart Meyers.

**7:00 AM.** 385. Effects of Liposomes of Low Density Lipoprotein on Refrigerated Rooster Sperm. Denise Bongalardo, Guilherme van der Laan, Ciciane Marten, Eder Oliveira, Elisangela Madeira, Joao Carlos Deschamps.

**7:00 AM.** 386. Effects of Trehalose on the Osmotic Stress Limits of Boar Sperm. Josep Rutllant, Omar Alvarado, Edward Fonda.

**7:00 AM.** 387. Mass Spectrometry Analysis of Rainbow Trout (*Oncorhynchus mykiss*) Outer Arm Dynein (OAD) Components. Expression and Localization of their mRNA During the Spermatogenesis Stages. Jean-Luc Gatti, Maya Belghazi, Valerie Labas, Marie-Jose Ricordel, Jean-Jacques Lareyre, Florence Legac.

**7:00 AM.** 388. Effect of Gonadotropin Releasing Hormone Agonist-Buserelin on In Vitro Induction of Acrosome Reac-

tion in Bovine Spermatozoa. Ruwanie Perera, Thavaneetharajah Pretheeban, Ravinder Singh, Rajadurai Rajamahendran.

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### Male Reproductive Tract

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**7:00 AM. 389.** WITHDRAWN.

**7:00 AM. 390.** Expression and Localization of Beta-Microseminoprotein in Boar Reproductive Tract. Pavla Manaskova, Vendula Kyselova-Novakova, Nina Davidova, Vera Jonakova.

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### Meiosis

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**7:00 AM. 391.** Orientation of Ts65Dn Chromosome in Meiosis I Predicts Reduction of Metaphase II Spermatocytes in a Mouse Model of Down Syndrome. Fengyun Sun, Mary Ann Handel.

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### Neuroendocrinology

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**7:00 AM. 392.** Prolonged Neonatal Exposure to Estrogen Inhibits Pulsatile LH Release and Estrous Cyclicity in Female Rats Probably Via Disruption of the Arcuate Metastin/Kisspeptin Neurons. Yoko Inamoto, Tamami Homma, Yoshihisa Uenoyama, Maki Maeda, Shunji Yamada, Naoko Inoue, Satoshi Ohkura, Kei-Ichiro Maeda, Hiroko Tsukamura.

**7:00 AM. 393.** Influence of Plasmatic Leptin and IGF-I on Puberty and Precocious Fertility of Nellore Heifers (*Bos taurus indicus*). Guilherme Nogueira, Maria Paula Beltran.

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### Nutrition and Reproduction

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**7:00 AM. 394.** Effects of Differential Supplementation of Calcium Salts of Fatty Acids (CSFAs) in Lactating Dairy Cows on Plasma Acute Phase Proteins and Leukocyte Responses: Phagocytic and Oxidative Burst, CD62L/CD18 Expression and Cytokine Production. Flavio Silvestre, Thiago Carvalho, Cynda Crawford, Jose Santos, Charles Staples, William Thatcher.

**7:00 AM. 395.** Developmental Programming: Effects of Postnatal Obesity on Insulin Resistance in Prenatally Testosterone-Treated Sheep. Carol Herkimer, Almudena Veiga-Lopez, Jim Lee, Vasantha Padmanabhan.

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### Ovary

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**7:00 AM. 396.** Normal Follicle Development and Oocyte Maturation in *Bmal1* Null Females Indicates Other Defects Responsible for Reproductive Failure. Christine Ratajczak, Louis Muglia.

**7:00 AM. 397.** Reduction in Circulating Estradiol by Ablation of Follicles Delays Luteolysis in Heifers. Reno Araujo, O. Ginther, Jair Ferreira, Mohd Beg, Milo Wiltbank.

**7:00 AM. 398.** Effect of Prostaglandin F<sub>2α</sub> (PGF<sub>2α</sub>) Administration on the Luteotropic and Angiogenic Factors During Functional Luteolysis in the Bovine Corpus Luteum. Bajram Berisha, Heike Kliem, Akio Miyamoto, Heinrich Meyer, Dieter Schams.

**7:00 AM. 399.** The Expression of Prostaglandin F<sub>2α</sub> Receptor and its Isoforms During the Estrous Cycle and Luteolysis in the Bovine Corpus Luteum. Yukito Akabane, Koumei Shirasuna, Motoki Sasaki, Motozumi Matsui, Bajram Berisha, Dieter Schams, Takashi Shimizu, Akio Miyamoto.

**7:00 AM. 400.** Expression Profiles of Cytokine and Progesterone Receptor Messenger Ribonucleic Acids (mRNA) in Bovine Corpus Luteum During Pregnancy. Kalidou Ndiaye, Daniel Poole, Thomas Hansen, Joy Pate.

**7:00 AM. 401.** Possible Role of Fibroblast Growth Factor (FGF) Family Members in Porcine Antral Follicles During Final Follicle Maturation. Dieter Schams, Vera Steinberg, Werner Amselgruber, Bajram Berisha.

**7:00 AM. 402.** Expression of Luteinizing Hormone Receptor (LHR) and mTOR Protein in Sheep Corpora Lutea during the Estrous Cycle and Prostaglandin F<sub>2α</sub> (PGF)-Induced Luteal Regression. Anna Grazul-Bilska, Jerzy Bilski, Jessica Nyberg, Kurt Rudolph, Ewa Borowczyk, Lawrence Reynolds, Dale Redmer.

**7:00 AM. 403.** Presence of Arylsulfatase A and Sulfogalactosylglycerolipid in Mouse Ovaries: Localization to the Corpus Luteum. Nongnuj Tanphaichitr, Araya Anupriwan, Matthias Schenk, Kessiri Kongmanas, Rapeepun Vanichviriyakit, Daniela Santos, Alexander Wu, Arman Yaghoubian, Trish Berger, Kym Faull, Porncharn Saitongdee, Prapee Sretarugsa.

**7:00 AM. 404.** Expression of the MAESTRO (MRO) Gene in Adult Human Ovarian Granulosa Cells. Shlomit Kenigsberg, Ron Tovich, Clifford Librach.

**7:00 AM. 405.** Sequential Exposure of Porcine Cumulus Cells to FSH And LH Is Critical for Appropriate Expression of Steroidogenic and Ovulation-Related Genes That Impact Oocyte Maturation In Vivo and In Vitro. Masayuki Shimada, Ikkou Kawashima, Tetsuji Okazaki, Yasuhisa Yamashita.

**7:00 AM. 406.** PGE<sub>2</sub> and Progesterone Enhance EGFR Activation in Porcine Cumulus Cells Via the Induction of TACE/ADAM17 Expression but Not EGF Like Factors Expression During Oocyte Maturation In Vivo and In Vitro. Yasuhisa Yamashita, Tetsuji Okazaki, Ikkou Kawashima, Masayuki Shimada.

**7:00 AM. 407.** Real-time PCR Analysis of Phosphodiesterase (PDE) 4D Splice-variant mRNA Expression and Selective PDE Inhibitor Action in Highly Purified Human Granulosa/

luteal Cell Cultures. David Schomberg, Ioanna Konidari, Jon Proctor, Justin Eller, Grace Couchman, David Walmer.

**7:00 AM.** 408. Estrogen Receptor alpha Overexpression Alters Expression of Other Receptors in the Mouse Ovary. Tessie Paulose, Jackye Peretz, Jodi Flaws.

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### Reproductive Aging

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**7:00 AM.** 409. Effect of Glutathione Depletion on Susceptibility of MA-10 Leydig Cell Steroidogenesis to Oxidative Stress. Haolin Chen, Liang Zhou, Andrew Midzak, Matthew Beattie, June Liu, Barry Zirkin.

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### Reproductive Immunology

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**7:00 AM.** 410. Cytotrophoblast Responsiveness to the Endometrium-Derived Chemokines GRO $\alpha$ , MCP-1, MCP-2, and BRAK. Ramsey McIntire, Mirhan Kapidzic, Susan Fisher, Linda Giudice.

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### Reproductive Technologies

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**7:00 AM.** 411. Controlled Ovarian Stimulation of Rhesus Monkeys Using Macaque Recombinant Gonadotropins. Michelle Sparman, Cathy Ramsey, Carrie Thomas, Albert Parlow, Don Wolf, Shoukhrat Mitalipov, Richard Stouffer.

**7:00 AM.** 412. Biotechnology Favored in China. W.G. Cao, M. Cui, X. Yuan.

**7:00 AM.** 413. Vitrification of Canine Embryos at Various Developmental Stages. Yasuyuki Abe, Yoshinori Suwa, Hiroshi Suzuki.

**7:00 AM.** 414. Advances on Fish Embryo Cryopreservation Using Antifreeze Proteins. Sonia Martinez-Paramo, Serafin Perez-Cerezales, Vera Barbosa, Vanesa Robles, Paz Herraiz.

**7:00 AM.** 415. Treatment with MG132, a Proteasome Inhibitor, Through Somatic Cell Nuclear Transfer Improves Survival and Pronuclear Number of Reconstructed Rat Embryos. Junya Ito, Noriaki Nakajima, Chika Suzukamo, Daisuke Sano, Shuhei Sugio, Makoto Nakada, Naomi Kashiwazaki.

**7:00 AM.** 416. Improvement of Culture Conditions for the Development of Oocytes Injected with Freeze-Dried Rat Sperm. Takehito Kaneko, Shinya Kimura, Naomi Nakagata.

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### Reproductive Toxicology

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**7:00 AM.** 417. Effect of Gossypol on Cell Proliferation and Apoptosis in Cultured Porcine Luteal Cells. An-Mei Long, Jing Wu, Li-Yun Yuan, Na Ge, Hui Yuan.

**7:00 AM.** 418. Methoxychlor Reduces Aryl Hydrocarbon Receptor Levels in the Mouse Ovary. Mallikarjuna Basavarajappa, Rupesh Gupta, Rebekah Weck, Jodi Flaws.

**7:00 AM.** 419. Methoxychlor Alters the Steroidogenesis Pathway in the Mouse Ovary. Raymond Krawzak, Rupesh Gupta, Mallikarjuna Basavarajappa, Jodi Flaws.

**7:00 AM.** 420. Phthalate Esters Inhibit Growth and Reduce Estradiol Levels in Mouse Ovarian Antral Follicles. Rupesh Gupta, Traci Leslie, Ray Krawzak, Jodi Flaws, Humphrey Yao.

**7:00 AM.** 421. Proteomic Analysis of Diaminochlorotriazine (DACT) Adducts in Wister Rat Pituitary Glands and L $\beta$ T2 Rat Pituitary Cells. William Hanneman, Greg Dooley, Robert Handa, Marie Legare.

**7:00 AM.** 422. Expression and Function of Nicotinic Acetylcholine Receptors (nAChR) in Rat and Human Uterine Artery. Doerthe Brueggmann, Timothy McKinnon, Andreas Hackethal, Hans-Rudolf Tinneberg.

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### Sex Determination/Differentiation

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**7:00 AM.** 423. Steroidogenic Gene Expression During Sex Determination in the Frog, *Rana rugosa*. Masahisa Nakamura, Koichi Maruo, Mari Suda, Yuki Oshima, Nana Sakurai.

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### Stem Cells

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**7:00 AM.** 424. Nevirapine Regulation of Gene Expression in Mouse Parthenote Stem Cells Derived Without a Feeder Layer. Jeffrey Shaman, Hui-Zhong Yin, Lisa Fitzgerald, Maureen Kearnan, Ann Kiessling.

**7:00 AM.** 425. Derivation of Porcine Embryonic Stem Cells from the Aggregation of In Vitro-Fertilized Embryos. Chang-Kyu Lee, Hye-Young Son, Sang-Goo Lee, Sang-Won Yun, Hyung-Min Kim, Jin-Gyu Park.

**7:00 AM.** 426. Gender Difference in FSHR-Positive Cells Derived from Adult Bone Marrow Stem Cells Indirectly Co-cultured with Sertoli Cells. Ting Zou, Meiling Mi, Bei Yang, Mingdi Xiong, Haiyan Qin, Jinglei Wang, Dalei Zhang, Xiaying Lu, Sifan Xu.

**7:00 AM.** 427. Enrichment of Spermatogonial Stem Cells from Immature Rhesus Macaque Testes. S. Meyers, Angela Pommer, Ina Dobrinski.

**7:00 AM.** 428. WITHDRAWN.

**7:00 AM.** 429. Terminal Spermatogenesis from Two Different Male Mouse Embryonic Stem Cell Lines. Irina Kerkis, Simone Fonseca, Rui Srafim, Tais Lavagnolli, Soraya Abdelmassih, Virginia Pereira, Roger Abdelmassih, Alexandre Kerkis.

**Testis**

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**7:00 AM.** 430. Effect of Triiodothyronine Treatment on Testicular Anti-Mullerian Hormone Content in Adult Mice Over-Expressing Anti-Mullerian Hormone. Chamindrani Mendis-Handagama, Yong Siow, Kellie Fecteau, Nilanthi Jayasundera.

**7:00 AM.** 431. Effects of Decreased *SKI* on Invasive Properties of Testicular Cancer Cells. Amy Nash, Laura Richardson.

**7:00 AM.** 432. SUMO2 Modification of Retinoic Acid Receptor Alpha (RARA) Influences RARA-Mediated Transcriptional Activity and Subcellular Localization. Li Zhu, Nadine Santos, Kwan Hee Kim.

**7:00 AM.** 433. Constitutive Expression of Hypoxia-Inducible Factor-1 Regulatory Proteins in the Normoxic and Ischemic Testis. Michael Palladino, Fiori Alite, Sadaf Kazmi.

**7:00 AM.** 434. The Immunoreactivity of Ts4, an Anti-TEX101 Monoclonal Antibody, Derived from Anti-mouse Sperm Autoantibody. Hiroshi Yoshitake, Atsuko Kamo, Mitsuaki Yanagida, Yohei Shirai, Kenji Takamori, Hideoki Ogawa, Akiko Hasegawa, Yoshihiko Araki.

**7:00 AM.** 435. FSH Regulation of Retinoic Acid Receptor alpha in Sertoli Cells. Nadine Santos, Timothy Doyle, Kwan Hee Kim.

**7:00 AM.** 436. The Relationship Between Bioactive Androgens and Spermatogenesis in the Rat. Lindi Luo, Edward Cho, Chieh-Yin Lin, Jonathan Jarow, Barry Zirkin.

**POSTER SESSION D**  
**Thursday, May 29, 2008**

**11:00 a.m. – 1:00 p.m.**

**Poster Tent**

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**Cloning**

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**11:00 AM. 452.** Dynamic Changes of Nuclear Halo Structure of In Vivo-Fertilized and Cloned Preimplantation Mouse Embryos. Chih-Jen Lin, Li-Ying Sung, Xiangzong Yang, Stephan Krawetz, X. Cindy Tian.

**11:00 AM. 453.** Effects of Meat-Based Diets Containing Either Normal or Cloned Cattle Meat Powder on Developmental Parameters in Rabbits. ByoungChul Yang, SeongSoo Hwang, DongHoon Kim, YeoungGyu Ko, GiSun Im, Seong-Hun Bae, BohSuk Yang, MyungJick Kim, HwanHoo Seong.

**11:00 AM. 454.** Production of Minipig's Cells Harboring HLA-G1, hDAF, and CD59 Genes. Gui Han, Kwang Park, Ki Choi, Seung Hong, Ji Yoo, Soo Kimm, Young Park, Jae Seol.

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**Comparative Reproduction**

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**11:00 AM. 455.** Changes in Localization of Steroidogenic Enzymes and Steroid Hormone Receptors in the Musk Shrew (*Suncus murinus*). Naoko Inoue, Akira Uchida, Toshihiro Mizorogi, Chiori Sugiyama, Sen-ichi Oda, Kei-ichiro Maeda, Katsuhiko Fukuta.

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**Contraception**

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**11:00 AM. 456.** Inhibition of Human Sperm Fertilizing Capacity by Adjudin [AF2364, 1-(2,4-Dichlorobenzyl)-<sup>1</sup>H-Indazole-3-Carbohydrazide]. Qi-xian Shi, Jian-Yuan Jing, Ling-Ying Jiang, C. Yan Cheng, Ren-Shan Ge, Li-Wen Sun, Song-Ying Zhang, Ya Ni.

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**Education in Reproduction**

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**11:00 AM. 457.** A Day Devoted to the Celebration of Scholarship Highlights Student Research. Amy Way.

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**Embryonic Development**

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**11:00 AM. 458.** Temporally Coordinated Cell Cycle- and Clock-Dependent Mechanisms Control the Maternal-Embryonic Transition During Early Embryogenesis. Hugh Clarke, Luc Poirier, Vilceu Bordignon, Wenling Zhang.

**11:00 AM. 459.** Regulation of Bovine Oocyte Competence: Evidence Supporting a Positive Influence of Maternal (Oocyte-derived) Follistatin on Blastocyst Development and Cell Allocation. Kyung-Bon Lee, James Ireland, George Smith.

**11:00 AM. 460.** Effect of Antioxidants Treated During In Vitro Maturation of Porcine Oocytes on the Early Embryonic Development. Changyong Choe, Sang-Rae Cho, Hyun-Jong Kim, Sun-Ho Choi, Sung-Hyum Yeon, Man-Hye Han, Dong-Soo Son, Dawon Kang.

**11:00 AM. 461.** Immunolocalization of DNA Damage and Repair Factors in Parthenogenetically Activated Porcine Embryos of High and Low Developmental Capacity. Ana Rita Coutinho, Mayra Assumpcao, Vilceu Bordignon.

**11:00 AM. 462.** Application of Heat Stress During Oocyte Maturation Increases Susceptibility of Preattachment Bovine Embryos to Heat Stress. J. Edwards, Amber Bogart, Louisa West-Rispoli, Fernando Scenna, Gretchen Schrock, Thomas Wilson, Frank Schrick.

**11:00 AM. 463.** Mammalian RNA Binding Proteins ECAT1 and HOEP19 Reveal Oocyte Prepatterning Locus. Monika Sachdev, Arabinda Mandal, Olga Chertihin, Laura Digilio, Theodore Thomas, Henry Frierson, Charles Flickinger, John Herr.

**11:00 AM. 464.** The Role of O-linked Glycosylation in Early Mouse Development. Marie Pantaleon, Hwee Tan, Peter Kaye.

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**Environmental Influences on Reproduction**

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**11:00 AM. 465.** MAPK Regulation of Aquaporin (AQP) Expression and Embryonic Apoptosis Following Exposure to Hyperosmotic Conditions. Christine Bell, Nathalie Lariviere, Patricia Watson, Adrew Watson.

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**Embryonic Development**

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**11:00 AM. 466.** When Does Adherens and Tight Junction Biogenesis Occur During the Hamster Zygotic Development? Bibhash Paria, Tianbing Ding, Jeff Reese, Hehai Wang.



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### Environmental Influences on Reproduction

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- 11:00 AM. 467.** Concentrations of Perfluoroalkyl Compounds in the Serum and Milk of Lactating North Carolina Women. Erin Hines, Kayoko Kato, Zsuzsanna Kuklenyik, Ondine VonEhrenstein, Antonia Calafat, Suzanne Fenton.
- 11:00 AM. 468.** Differential Effects of Flutamide and Di-(2-ethylhexyl)phthalate on the Male Reproductive Organs in a Rat Model. Thuy TB Vo, Gous Miah, Geun-Shik Lee, Vu Hoang Dang, Keith K. C. Choi, Eui-Bae Jeung.
- 11:00 AM. 469.** The Possible Effect of Metritis on Formation of Irregular Corpus Luteum (CL) Forms in Postpartum Dairy Cows Orsolya Gabriella Balogh, Sandor Csilla, Abo-nyi-Toth Zsolt, Gabor Petra, Endrodi Tamas, Gyorgy Gabor.

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### Epigenetics

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- 11:00 AM. 470.** Analysis of Chromatin Structure in Oocytes by Chromatin Immunoprecipitation Assays Using Microinjected DNA Fragments. Hiroki Sonehara, Masao Nagata, Fugaku Aoki.
- 11:00 AM. 471.** The ISWI Protein Snf2L Regulates Multiple Genes Involved in the Steroid Biosynthesis Pathway. David Pepin, Barbara Vanderhyden.
- 11:00 AM. 472.** Genome-wide Mapping of DNA Fragmentation in Elongating Spermatids. Guylain Boissonneault, Frederic Leduc, Genevieve Bikond Nkoma.

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### Female Gametes

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- 11:00 AM. 473.** Ovarian and Follicular Metrics are Useful for Predicting Oocyte Quality in the Cheetah (*Acinonyx jubatus*). Adrienne Crosier, David Wildt, Tom Baker, Autumn Davidson, JoGayle Howard, Laurie Marker, Pierre Comizzoli.
- 11:00 AM. 474.** Regulation of Mitogen-Activated Protein Kinase (MAPK) Signalling Pathway during Meiotic Maturation of Mouse Oocyte-Derived Primordial Germ Cells (PGCs) In Vitro. Wei Shen.

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### Female Reproductive Tract

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- 11:00 AM. 475.** Identification of Genes Regulated by PGF $_{2\alpha}$ -FP Receptor Activation in Endometrial Cancer. Rob Catalano, Martin Wilson, Aron Abera, Alison Wallace, Kurt Sales, Henry Jabbour.
- 11:00 AM. 476.** Retinoic Acid Alters the Genomic Pattern of Immortalized Human Uterine Leiomyoma Cells to a Molecular Phenotype Similar to Normal Myometrial Cells. William Catherino, Minnie Malik, Joy Britten-Webb.

**11:00 AM. 477.** Chromosomal Variants and Gene Expression Dysregulation in Endometriosis. Shannon Hawkins, Rakesh Mangal, Robert Franklin, Michael Heard, Matthew Anderson, Martin Matzuk.

**11:00 AM. 478.** Uterine and Placental Transient Receptor Potential Cation Channel, Subfamily V, Member 6 (TRPV6) Gene Is Regulated Via Progesterone Receptor- or Estrogen Receptor-Mediated Pathways During Pregnancy in Rodents. Bo-Mi Lee, Geun-Shik Lee, Man-Hee Kim, Eui-Man Jung, Hyun Yang, Keith K. C. Choi, Eui-Bae Jeung.

**11:00 AM. 479.** Local and Systemic Regulation of Relaxin Receptors in the Reproductive Tract of Pregnant Rats. Lenka Vodstrcil, Oksana Shynlova, Stephen Lye, Mary Wlodek, Laura Parry.

**11:00 AM. 480.** Expression of Phospholipase A2 Group IVA in the Ovine Endometrium James Godkin, Gregory Ochs, Mary Roberts, Patricia Tithof.

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### Fertilization

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- 11:00 AM. 481.** Sperm Lacking Cystatin-Related Epididymal Spermatogenic Protein (CRES) Exhibit Impaired Capacitation. Kim Chau, Gurvinder Kaur, Gail Cornwall.
- 11:00 AM. 482.** Identification of a Binding Domain in Non-human Primate (*Macaca fascicularis*) ADAM2 for Hetero Complex. Jae-Woong Lee, Ekyune Kim, Sang-Rae Lee, Sang-Hyun Kim, Zae-Young Ryoo, Kyu-Tae Chang.
- 11:00 AM. 483.** Species-Specific Differences in the Activity of Bovine and Mouse PLC zeta. Melissa Cooney, Michael Holland, Nancy D'Cruz, Rafael Fissore.

**11:00 AM. 484.** Treatment of Frozen/thawed Rat Spermatozoa with IBMX Accelerates Capacitation and Improves Fertilization In Vitro. Yasunari Seita, Shuhei Sugio, Jyunya Ito, Naomi Kashiwazaki.

**11:00 AM. 485.** ER-60 and HSP-70 Proteins Are Candidates to Be Contained in Cortical Granules of In Vitro-Matured Porcine Oocytes. Raquel Romar, Saavedra Maria Dolores, Pilar Coy, Manuel Aviles.

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### Gene Regulation and Function

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**11:00 AM. 486.** JNK Inhibitor AS-01 Causes Regression of Endometriosis and Suppression of Inflammatory Cytokines and Tissue Remodeling Enzymes. Melis Altan, Kaylon Bruner-Tran, Kevin Osteen, Stephen Palmer.

**11:00 AM. 487.** SF-1 Expression Is Mostly Directed by Distal Regulatory Elements. Ravichandiran Kumarasamy, Leslie Heckert.

**11:00 AM. 488.** Prostaglandin F $_{2\alpha}$  via Yin Yang-1 Suppresses Steroidogenic Acute Regulatory Protein Intracellular Cholesterol Transport while Maintaining Scavenger Receptor Class B Type I Cell Surface Expression in Luteal

Cells. Mark McLean, Oleg Kuzmenok, Xiaohui Zhang, Ricardo Bravo, Charles Szekeres.

**11:00 AM.** 489. Vitellogenesis and Vitellogenin Processing in the Decapod Crustaceans. Shirley Tiu, Siu-Ming Chan.

**11:00 AM.** 490. *c-erbB<sub>2</sub>* and *c-myb* Induce Oocyte Maturation Via Activation of Maturation Promoting Factor (MPF). Yuehui Zheng, Liping Zheng, Fang Li, Jian Huang, Lei Wu.

**11:00 AM.** 491. WITHDRAWN.

**11:00 AM.** 492. Identification of the Estrogen Receptor Alpha Gene as a Potential Target of the Transcription Factor FoxL2. Brianne Givens, Jean Escudero, Nancy Ing, Kenneth Escudero.

**11:00 AM.** 493. Altered Expression of TASK-3 and Aquaporin 4 Channels in Bovine Ovary with Follicular Cyst. Dawon Kang, Eun-Sook Kim, Jeong-Soon Lee, Eunju Choi, Changyong Choe, Jae-Yong Park, Seong-Geun Hong, Jaehee Han.

**11:00 AM.** 494. Regulation of the Murine Endozepine Gene by the Forkhead Transcription Factor FoxL2. Joel Lopez, Jean Escudero, Colin Clay, Kenneth Escudero.

**11:00 AM.** 495. The Expression and Function of MicroRNA-21 in the Periovarian Follicle. Martha Carletti, Lane Christenson.

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### Growth Factors

**11:00 AM.** 496. Identification of Second Messenger Pathways Involved in the Cooperative Effects of Ovine GDF9 & BMP15 Stimulated Thymidine Uptake by Rat Granulosa Cells. Jennifer Juengel, Derek Heath, Stan Lun, Kenneth McNatty.

**11:00 AM.** 497. Protein Phosphatase Modulation of FGF2- and VEGF-Induced MAPK3/1 and AKT1 Activation in Ovine Fetoplacental Artery Endothelial (OFPAE) Cells. Yang Song, Kai Wang, Dongbao Chen, Jing Zheng.

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### Hormone Action

**11:00 AM.** 498. Nuclear Progesterone Receptor-Mediated Regulation of Apoptosis in Rat Periovarian Granulosa Cells. P. Anders Friberg, Joakim Larsson, Hakan Billig.

**11:00 AM.** 499. Disrupted Estrogen Signaling Pathways and Loss of p53 in the Development of Mammary Gland Preneoplasia. Edgar Diaz-Cruz, Priscilla Furth.

**11:00 AM.** 500. Studies of Human FSH Receptor Mutant K376A Which Does Not Bind APPL1 when Expressed in Human Granulosa Cell Line KGN. Richard Thomas, Cheryl Nechamen, Alfredo Ulloa-Aguirre, Joseph Mazurkiewicz, Kerri Kluetzman, James Dias.

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### Implantation and Pregnancy

**11:00 AM.** 501. The Interferon Stimulated Gene, MX1, Interacts with Tubulin  $\beta$  in Ovine Glandular Epithelial Cells and Regulates Cell Proliferation. Karen Racicot, Koji Toyokawa, Troy Ott.

**11:00 AM.** 502. Isg15 Is a Molecular Sentinel That Functions to Assist Mothers in Coping with Environmental Stressors Imposed on Pregnancy. Ryan Ashley, Luiz Henkes, Russ Anthony, Katherine McBroom, James Pru, Thomas Hansen.

**11:00 AM.** 503. Cyclic Adenosine Monophosphate-Degrading Phosphodiesterases 4B5 and 7B and the Prostaglandin EP2 Receptor in Rat Endometrium Differentially Sensitized for the Decidual Cell Reaction. James Mather, Thomas Kennedy.

**11:00 AM.** 504. Complex Regulatory Effects of Gonadal Steroids on the Expression Levels of the Distinct Aggreginases Present in Human Endometrial Stromal Cells In Vitro. Jiadi Wen, Hua Zhu, Colin MacCalman.

**11:00 AM.** 505. Identification of Progesterone-Regulated Genes Governing Pre-implantation Conceptus Growth and Development. Michael Satterfield, Gwonhwa Song, Kelli Kochan, Penny Riggs, Huaijun Zhou, Chris Elsik, David Adelson, Fuller Bazer, Thomas Spencer.

**11:00 AM.** 506. Uterine Artery Endothelial Bradykinin Receptor Levels and Their Activation of NO Production in Arteries from Ewes During the Ovarian Cycle and Pregnancy. Ronald Magness, FuXian Yi, Gladys Lopez, Kimberly Vonnahme.

**11:00 AM.** 507. Cationic Amino Acid Transporters in the Peri-implantation Ovine Uterus and Conceptus. Haijun Gao, Guoyao Wu, Thomas Spencer, Gregory Johnson, Fuller Bazer.

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### Male Gametes

**11:00 AM.** 508. Effects of Centrifugation and Removal of Seminal Plasma on Post-thaw Motility of Bull Spermatozoa. Jose Antonio Tanajura Neto, Renata Calegari, Andre Crespilho, Camila Silva, Alicio Martins Jr.

**11:00 AM.** 509. Sperm-DNA Fragmentation Measured by Sperm Chromatin Structure Assay as an Independent Predictor of Male Fertility In Vivo. Aleksander Giwercman, Lars Lindstedt, Mattias Larsson, Lars Rylander.

**11:00 AM.** 510. R2D2 Proteins Display Differential Localization and AKAP Interaction in Sperm Flagella and Cilia. Sarah Fiedler, Amy Hanlon Newell, Jenny Ruan, Daniel Carr.

**11:00 AM.** 511. Analysis of Reproductive Ability in the Transgenic Boar Jae-Seok Woo, Eun-Jin Kim, Hwi-Cheul Lee, Joo-Hee Han, In-Sul Hwang, Myoung-Seob Chio, Min-Ji Kim, Sin-Ae Oh, Myung-Geol Pang, Hoon-Teak Lee, Won-Kyong Chang, Jin-Ki Park.

**11:00 AM. 512.** Over Expression of the Na,K-ATPase  $\alpha 4$  Isoform in Spermatozoa Results in Increased Motility of the Cells. Gustavo Blanco, Gladis Sanchez, Anh-Nguyet Nguyen, Tamara Jimenez.

**11:00 AM. 513.** Characterization of Phospholipase C zeta (PLC $\zeta$ ) in Stallion Sperm. Sylvia Bedford-Guaus, Stephanie Twomey, Lori McPartlin, Mark Roberson.

**11:00 AM. 514.** Diversity of Motility in Fish Spermatozoa Depends on Distinct Energy Metabolism. Tatsuo Harumi, Tadashi Andoh, Takahiro Matsubara, Norihiko Shimizu, Toshiyuki Hayakawa, Yokichi Hayashi, Ryuzo Yanagimachi.

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### Male Reproductive Tract

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**11:00 AM. 515.** The Adult Boar Testicular and Epididymal Transcriptome. Benoit Guyonnet, Jean-Louis Dacheux, Florence Jaffrezic, Anne Lacoste, Guillemette Marot, Marie-Jose Mercat, Sandrine Schwob, Jean-Luc Gatti.

**11:00 AM. 516.** Antiandrogenic Signaling of Bufalin and Cinobufagin on Human Prostate Cancer Cells. Ching-Han Yu, Paulus Wang.

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### Meiosis

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**11:00 AM. 517.** Effect Of Angiotensin II On Bovine Oocyte Nuclear Maturation Mediated by PGE $_2$  and PGF $_{2\alpha}$ . Marcos Barreta, Joao Oliveira, Alfredo Antoniazzi, Rogerio Ferreira, Luciano Sandri, Paulo Goncalves.

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### Neuroendocrinology

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**11:00 AM. 518.** Sexual Differentiation of the LH Surge Response to Estradiol in Sheep Treated Prenatally with Testosterone Plus an Antiandrogen. Kathleen Timmer, Leslie Jackson, Douglas Foster.

**11:00 AM. 519.** The Role of Netrins and Hedgehog in the Early Development of the Zebrafish GnRH1 System. Eytan Abraham, Ori Palevitch, Yoav Gothilf, Yonathan Zohar.

**11:00 AM. 520.** Estradiol in the Arcuate Nucleus Inhibits LH Pulse Frequency and Steroid Receptor Coactivator-1 Colocalization with Estrogen Receptor- $\alpha$ . Heather Billings, Stephanie Geer, Ida Holaskova, Robert Goodman.

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### Nutrition and Reproduction

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**11:00 AM. 521.** Effect of Feed Level on Hypothalamic and Ovarian Leptin Receptor Expression, Uterine Involution, Oocyte Quality, and Ovarian Activity in Dual Purpose Cattle During the Postpartum Period under Tropical Conditions. Ana Ruiz, Carlos Dominguez, Nelson Martinez, Rafael Perez, Libia Pinto, Karin Drescher, Jesus Rojas, Adriana Fernandez.

**11:00 AM. 522.** Arginine, Leucine, Glutamine, and Glucose Stimulate on PI3K-AKT1 and FRAP1-RPS6K Signaling Cascades in Ovine Conceptuses. Jinyoung Kim, Thomas Spencer, Gwonhwa Song, Robert Burghardt, Guoyao Wu, Gregory Johnson, Fuller Bazer.

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### Ovary

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**11:00 AM. 523.** Wnt/ $\beta$ -catenin Signaling OSE Cells in the Murine Ovary. Macalister Usongo, Riaz Farookhi.

**11:00 AM. 524.** The Ability of the Aryl Hydrocarbon Receptor to Regulate Steroidogenesis May Depend on Sexual Maturity in Mice. Maria Isabel Hernandez Ochoa, Kimberly Ringgold, Traci Leslie, Rupesh Gupta, Jodi Flaws.

**11:00 AM. 525.** Pathogenic Reactions of the Ovarian Surface Epithelium to Ovulation, Dimethylbenzanthracene, and Estrogen Are Negated by Vitamin E. William Murdoch, Edward Van Kirk, Youqing Shen.

**11:00 AM. 526.** Angiotensin-(1-7) in the Rabbit Ovary: a Novel Local Regulator of Ovulation. Adelina dos Reis, Gregorio Viana, Virginia Pereira, Robson Santos.

**11:00 AM. 527.** Experimental Polycystic Ovary Syndrome (PCOS) Induced by Estradiol Valerate (EV) Is Not Explained Only by the Increase in the Norepinephrine Ovarian Activity. Roberto Dominguez, Rosa Linares, Gabriela Rosas, Sara Cruz-Morales, Leticia Morales.

**11:00 AM. 528.** Maternal Dietary Restriction Affects Follicle Stimulating Hormone (FSH) Receptor (R) Protein Expression in Fetal Ovaries of Sheep. Jerzy Bilski, Melissa Erickson, Rebekah Caton, Kimberly Vonnahme, Joel Caton, Pawel Borowicz, Lawrence Reynolds, Dale Redmer, Anna Grazul-Bilska.

**11:00 AM. 529.** Exogenous 17 $\beta$ -estradiol Results in an Earlier Onset of Ovarian Cancer and a Decreased Survival Time in a Transgenic Mouse Model of Ovarian Cancer. Laura Laviolette, Kenneth Garson, Elizabeth Macdonald, Mary Senterman, Kerri Courville, Barbara Vanderhyden.

**11:00 AM. 530.** Genome-Wide Gene Expression Profiling of Bovine Follicles: Identification of Genes Involved in the Growth of Dominant Follicles by Microarray Analysis. Ken-Go Hayashi, Koichi Ushizawa, Misa Hosoe, Toru Takahashi.

**11:00 AM. 531.** Decreased mRNA Expression of Dominance Marker Genes in Preovulatory Compared to Newly Selected Dominant Follicles in Cattle. Paul Baker, Lynne Fleming, Francesca Mossa, Patrick Lonergan, Alexander Evans, Monika Mihm.

**11:00 AM. 532.** Influence of LH Surge on RNA Expression in the Granulosa Cells During Final Maturation of the Bovine Follicle. Isabelle Gilbert, Claude Robert, Steph Dieleman, Patrick Blondin, Marc-Andre Sirard.

**11:00 AM. 533.** Role of Hypoxia in the Regulation of Perioovulatory Endothelin-2 (EDN2) Expression in the Mouse Ovary. Phillip Bridges, Giyoung Na, Yongbum Koo, CheMyong Ko.

**11:00 AM.** 534. Biochemical Profiles of Follicular Fluid in Buffalo (*Bubalus bubalis*). S. Mondal, Rajdeep Das, Archana Minj, V. Varshney.

**11:00 AM.** 535. Prostaglandins Stimulate Progesterone Production in Vitro by Theca and Granulosa Cells from Ovulatory Follicles of Cattle. Joanne Fortune, Catherine Yang, Erin Willis.

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### Pituitary

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**11:00 AM.** 536. Secretory Sorting Signals Encoded in the Carboxyl Termini of the CG $\beta$  and LH $\beta$  Subunits. Albina Jablonka-Shariff, Irving Boime.

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### Reproductive Aging

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**11:00 AM.** 537. Differential Expression of Renal Calcium Processing Genes Between Male and Female: Involvement of Potential Mechanism for Osteoporosis Geun-Shik Lee, Sang-Hwan Ko, Hyun Yang, Keith K. C. Choi, Eui-Bae Jeung.

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### Reproductive Technologies

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**11:00 AM.** 538. Large-Scale Field Practice of Juvenile In Vitro Embryo Transfer in Sheep. Ke-Mian Gou, Hong Guan, Jia-Hua Bai, Xiu-Hong Cui, Zhi-Fang Wu, Feng-Xiang Yan, Xiao-Rong An.

**11:00 AM.** 539. Characterization of Multiplexed Quantitative PCR Amplification of the Human Y-Chromosome Using SYBR Green I Dye and Repetitive Thermal Degradation. Kenneth Campbell, Alexander Trachtenberg.

**11:00 AM.** 540. Screening Ability of Female Reproductive Tract for Fragmented DNA Spermatozoa Depends on the Source of Damage. Juan de Dios Hourcade, Miriam Perez-Crespo, Belen Pintado, Alfonso Gutierrez-Adan.

**11:00 AM.** 541. DNA Damage Measured by Sperm Chromatin Structure Assay (SCSA) and Birth Characteristics in Children Conceived by IVF or ICSI. Leif Bungum, Mona Bungum, Peter Humaidan, Lars Rylander, Lena Wedlund, Aleksander Giwercman.

**11:00 AM.** 542. Impact of Spermagic Medium on Pregnancy in Humans after Intrauterine Insemination. Lei Zheng, Yibing Han, Huai Feng.

**11:00 AM.** 543. Biophysics of Zebrafish (*Danio rerio*) Sperm. Mary Hagedorn, Josette Ricker, Stuart Meyers, Terrence Tiersch, Frederick Kleinhans.

### Reproductive Toxicology

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**11:00 AM.** 544. Estrogen Receptor (ER) Antagonist ICI 182,780, As Well As Androgen Receptor (AR) Agonist Dihydrotestosterone (DHT) or Testosterone (T), Mitigates Estrogen-induced Developmental Disorders of the Penis. Hari Goyal, Tim Braden, Carol Williams, John Williams.

**11:00 AM.** 545. Effects of Lindane on Male Reproductive Parameters in Rats. Jasna Kniewald, Branimir Simic, Ivana Kmetec, Zlatko Kniewald.

**11:00 AM.** 546. Prenatal and Lactational Exposures of Diethylhexylphthalate Differentially Suppress 11 $\beta$ -Hydroxysteroid Dehydrogenase I and II in Male Long Evan Rat Testis. Ren-Shan Ge, Guo-xin Hu, Han Lin, Bing-Bing Chen, Xing-Wang Li, Guo-Rong Chen, Chantal Sottas, Matthew Hardy.

**11:00 AM.** 547. In Utero Exposure to Di-Isoheptyl Phthalate (DIHP) Reduces Testicular Testosterone (T) Production in Fetal Sprague Dawley (SD) Rats. Christy Lambright, Kembra Howdeshell, Johnathan Furr, L. Gray Jr, Vickie Wilson.

**11:00 AM.** 548. In Utero Exposure to Diethylhexyl Phthalate Differentially Affects Fetal Testosterone and insl3 Levels in the Testes of Male Sprague Dawley and Wistar Rats: A Dose Response Study. Vickie Wilson, Kembra Howdeshell, Christy Lambright, Johnathan Furr, L. Gray Jr.

**11:00 AM.** 549. Inhibitory Effects of Oral Administration of Nonylphenol on Testosterone Production in Rat Leydig Cells. Jen-Jung Wu, I-Fang Mao, Mei-Lien Chen, Paulus Wang.

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### Sex Determination/Differentiation

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**11:00 AM.** 550. SRY Regulation of Tcf21, a Basic Helix-Loop-Helix Transcription Factor, During Male Sex Determination Ramji Bhandari, Tracy Clement, Ingrid Sadler-Riggelman, Michael Skinner.

**11:00 AM.** 551. Arrested Proliferation of Progenitor and Immature Not Stem Leydig Cells Accounts for the Reduced Leydig Cell Number in IGF-I Knockout Mice. Guo-Xin Hu, Guo-Rong Chen, Han Lin, Bing-Bing Chen, Qing-Quan Lian, Chantal Sottas, Xiao-Kun Li, Ren-Shan Ge.

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### Stem Cells

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**11:00 AM.** 552. In Vitro Transfection of Mouse Spermatological Stem Cells on a Transgenic STO Feeder Layer Expressing Mouse GDNF. Xueming Zhang, Zhanpeng Yue, Dexue Li, Ziyi Li, Chuntian Han, Degong Song, Bo Tang.

**11:00 AM.** 553. Cryopreservation of Testicular Tissues from Adult Cattle and Culture of Bovine Spermatogonial Stem Cells. Jianying Wu, Xueming Zhang, Tiejun Hu, Zhanpeng

Yue, Ziyi Li, Bo Tang, Bin Guo, Deguang Song, Chuntian Han.

**11:00 AM.** 554. Nodal Stimulates the Proliferation and Survival of Mouse Spermatogonial Stem Cells through the Activation of Smad2/3 and Oct-4 Transcription Via an Autocrine Pathway. Zuping He, Jiji Jiang, Maria Kokkinaki, Martin Dym.

**11:00 AM.** 555. Hypoxia-Inducible Factor-1 $\alpha$  Mediates Oxygen-Dependent Inhibition of Trophoblast Cell Differentiation. Kashmiri Kulkarni-Datar, Amy Gultice, Thomas Brown.

**11:00 AM.** 556. Gene Expression Analysis in Spermatogonial Stem Cells from 6-Day-, 21-Day-, and 60-Day-Old Mice. Maria Kokkinaki, Tin-Lap Lee, Nady Golestaneh, Zuping He, Jiji Jiang, Wai Yee Chan, Martin Dym.

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### Testis

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**11:00 AM.** 557. Human Meiotic Boll Protein Regulates CDC25A Expression Via Binding to the 3'-Untranslated Region. Chia Chung, Yu Cheng, Yung Ming Lin.

**11:00 AM.** 558. MicroRNAs and Male Germ Cell Differentiation. Yao-Fu Chang, Manjeet Rao.

**11:00 AM.** 559. Effects of a Constitutively Active Luteinizing Hormone Receptor on Leydig Cell Development. Mary Coonce, Prema Narayan.

**11:00 AM.** 560. Involvement of Endogenously Produced Nitric Oxide in the Mechanism of Histamine-Induced Inhibition of Leydig Cell Steroidogenesis Via HRH1 Receptor Subtypes. Carolina Mondillo, Cecilia Reche, Zoraida Patrignani, Omar Pignataro.

**11:00 AM.** 561. Cloning, Functional Characterization, and Expression of the Androgen Receptor in zebrafish (*Danio rerio*) Testis. Jan Bogerd, Paul de Waal, Deshou Wang, Wouter Nijenhuis, Rudiger Schulz.

**11:00 AM.** 562. Expression Pattern Profiling of Testis Specific Tentative Consensus Sequences in Chicken. Deivendran Rengaraj, Duk Kim, Ying Zheng, Sang Lee, Heebal Kim, Jae Han.

**11:00 AM.** 563. Roles for STYX in MAPK Signaling and Nuclear Transport during Male Germ Cell Maturation. Matthew Wishart, David Karnak, Balin Carter.

**11:00 AM.** 564. GDNF Stimulates Sertoli Cell Proliferation through Pathways from NCAM. Chunsheng Han, Qingzhong Wang, Yongguang Yang, Huilian Liu, Yuqiang Shi, Shangying Liao.

**Platform Presentations, Sessions 13–24**  
**Thursday, May 29, 2008**

**2:00 p.m. – 5:30 p.m.**  
**Concurrent Sessions**

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**Platform Session 13: Sperm Function, Activation,  
and Capacitation**

Chairs: William Wright, Ph.D. and Sarah E. Fiedler  
Thursday, May 29, 2008

2:00 p.m. - 3:30 p.m.  
Location: Keauhou III-IV

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**2:00 PM. 566.** Cl<sup>-</sup> is required for HCO<sub>3</sub><sup>-</sup> entry necessary for sperm capacitation: involvement of a Cl<sup>-</sup>/HCO<sub>3</sub><sup>-</sup> exchanger (SLC26A3) and CFTR. Wen-Ying Chen, Wen-Ming Xu, Zhang-Hui Chen, Ya Ni, Yu-Ying Yuan, Si-Chang Zhou, Kun Li, LL Tsang, Yiu Wa Chung, Qi-Xian Shi, Hsiao Chang Chan.

**2:15 PM. 567.** Lactate Dehydrogenase-C<sub>4</sub> (LDH-C<sub>4</sub>) Is Essential for Sperm Function. Fanny Odet, Chongwen Duan, William Willis, Eugenia Goulding, Aisha Kung, Mitch Eddy, Erwin Goldberg.

**2:30 PM. 568.** PKA Mediates PKC $\alpha$  Down Regulation and PI3K $\alpha$  Activation During Bovine Sperm Capacitation. Nir Etkovitz, Tali Rotman, Sara Rubinstein, Haim Breitbart.

**2:45 PM. 569.** The Composition and Significance of Lipid Rafts in Mouse Spermatozoa. Brett Nixon, Amanda Bielano-wicz, Eileen McLaughlin, Nongnuj Tanphaichitr, Michael Ensslin, R. Aitken.

**3:00 PM. 570.** Paternal DNA Damage Resulting from Various Sperm Treatments can be Detected both Before and after Fertilization and is Similar prior and after DNA Synthesis. Jonathan Riel, Yasuhiro Yamauchi, Anna Ajduk, Monika Ward.

**3:15 PM. 571.** Activation of Sperm Motility of Euryhaline Teleost, Medaka, *Oryzias latipes*. Makoto Okuno, Koji Kawaguchi, Misa Sato, Yuu Mukai.

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**Platform Session 14: Testis Determination & Differentiation**

Chairs: Humphrey Yao, Ph.D.  
and Liesl Nel-Themaat, Ph.D.  
Thursday, May 29, 2008

2:00 p.m. - 3:30 p.m.  
Location: Session Tent

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**2:00 PM. 572.** Cellular Mechanisms in Sex Cord Formation. Liesl Nel-Themaat, Chuan-Wei Jang, Jian Min Deng, Henry Adams, Richard Behringer.

**2:15 PM. 573.** Betaglycan Is Required for Normal Leydig Cell Development in Mouse. Mai Sarraj, Hui Kheng Chua, Alex Umbers, Ruth Escalona, Kate Loveland, Jock Findlay, Kaye Stenvers.

**2:30 PM. 574.** The Interaction of *nr0b1* and *nr5a4* in the Sex Differentiation and Development of the Gonad in Protandrous Black Porgy Fish, *Acanthopagrus schlegelii*. Guan-Chung Wu, Ching-Fong Chang.

**2:45 PM. 575.** Sex-Specific Regulation of Ectopic Appearance of Adrenal Cells by Beta-Catenin in Mouse Fetal Gonads. Chia-Feng Liu, Lillian Soong, Nathan Bing-ham, Keith Parker, Humphrey H-C Yao.

**3:00 PM. 576.** Regulation of Neurotrophin 3 Expression by SRY During Male Sex Determination. Tracy Clement, Ramji Bhandari, Michael Skinner.

**3:15 PM. 577.** Investigating the Role of Beta-Catenin in Sex Determination. Danielle Maatouk, Leo DiNapoli, Makoto Taketo, Blanche Capel.

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**Platform Session 15: Fertilization: To Be or Not**

Chairs: Erwin Goldberg, Ph.D. and Kim My Chau  
Thursday, May 29, 2008

2:00 p.m. - 3:30 p.m.  
Location: Bayview Meeting Rooms

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**2:00 PM. 578.** Haploid-Specific Chaperone Calpelin (Calr3) Is Required for Sperm Fertility. Masahito Ikawa, Ryo Yamaguchi, Naokazu Inoue, Masaru Okabe.

**2:15 PM. 579.** Valosin Containing Protein VCP/p97 Binds to the Sperm Attractant SAAF and May Control Its Release from the Ascidian Egg. Eri Kondoh, Aru Konno, Kazuo Inaba, Tohru Oishi, Michio Murata, Manabu Yoshida.

**2:30 PM. 580.** Hyperactivation of Stallion Sperm is Required for Successful In Vitro Fertilization of Equine Oocytes. Lori McPartlin, Susan Suarez, Catherine Czaya, Katrin Hinrichs, Sylvia Bedford.

**2:45 PM. 581.** IL-11 Antagonist Inhibits Decidual Transformation Resulting in Pregnancy Failure in Mice. Ellen Menkhorst, Lois Salamonsen, Manuel Baca, Felicity Dunlop, Andrew Nash, Louis Fabri, Pierre Scotney, Evdokia Dimitriadis.

**3:00 PM. 582.** PolyADP-Ribosylation Is Required for Pronuclear Fusion and Nuclear Reprogramming in the

Oocytes. Tomoharu Osada, Hideki Ogino, Takashi Sugimura, Ryuzo Yanagimachi, Toshiaki Noce, Mitsuko Masutani.

**3:15 PM.** 583. Exploiting the Potential of Iminosugars as Novel Reversible Non-Hormonal Male Contraceptive. Vijayalaxmi Gupta, Sudhakar Jakkraj, Gunda Georg, Joseph Tash.

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**Platform Session 16: Meiosis and Cell Cycle Control**

Chairs: Terry Hassold, Ph.D. and Lynda K. McGinnis  
Thursday, May 29, 2008

2:00 p.m. - 3:30 p.m.

Location: Keauhou Boardroom

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**2:00 PM.** 584. CDC14A and CDC14B Regulate Meiotic Progression in Mouse Oocytes. Karen Schindler, Richard Schultz.

**2:15 PM.** 585. Src-Family Protein Tyrosine Kinases Are Required for Meiotic Maturation in the Mouse. Lynda McGinnis, William Kinsey, David Albertini.

**2:30 PM.** 586. Aurora C Promotes Condensation and Separation of Homologues in Meiosis I of Mouse Oocytes. David Glover, Jie Na, Bedra Sharif, Karin Lykke-Andersen, Magdalena Zernicka-Goetz.

**2:45 PM.** 587. Cytogenetic Studies of Meiotic Recombination in Human Females. Terry Hassold, Theresa Nalwai-Cecchini, Sheila Cherry, Terah Hansen, Edith Cheng.

**3:00 PM.** 588. LGN is Polarized at the Cortex and Regulates Meiotic Spindle Organization and Cortical Anchoring in Mouse Oocytes. Xinzhen Guo, Shaorong Gao.

**3:15 PM.** 589. ARF1 Determines Asymmetric Cell Division in Oocyte Meiosis. Shufang Wang, Jianjun Hu, Xinzhen Guo, Shaorong Gao.

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**Platform Session 17: Epigenetics**

Chairs: Yukiko Yamazaki, Ph.D. and Nahid Turan, Ph.D.  
Thursday, May 29, 2008

2:00 p.m. - 3:30 p.m.

Location: Keauhou I

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**2:00 PM.** 590. Inter- and Intra-individual Variation in Allele-specific DNA Methylation. Nahid Turan, Raffi Chalian, Sunita Katari, Halleh Asadpour, Christos Coutifaris, Carmen Sapienza.

**2:15 PM.** 591. Culture of Mouse Zygotes Induces Epigenetic Changes in the Expression of the *agouti viable yellow* Allele in the Resulting Progeny. Hugh Morgan, Xing Jin, Aiqing Li, Emma Whitelaw, Chris O'Neill.

**2:30 PM.** 592. The Multilayered Epigenetic Environment of the Mammalian X-Chromosome. Michael O'Neill, Benjamin Carone, Seth Kasowitz, Michael Murphy, Rachel O'Neill.

**2:45 PM.** 593. Dynamic Nuclear Organization of the Genome During Fetal Male Germ Cell Development. Hirota-ka Yoshioka, Yukiko Yamazaki.

**3:00 PM.** 594. Identification of Brown Norway Rat Genomic Loci Altered in Germ Cell Methylation Patterns Due to Combination Chemotherapy for Testicular Cancer. Donovan Chan, Geraldine Delbes, Dominic Smiraglia, Bernard Robaire, Jacquetta Trasler.

**3:15 PM.** 595. Programmed DNA Damage Response in Human Elongating Spermatids. Frederic Leduc, Vincent Maquennehan, Genevieve Bikond Nkoma, Guylain Boissonneault.

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**Platform Session 18: Gene Expression in Female Reproductive Tract**

Chairs: Winston Thompson, Ph.D. and Julie A.W. Stilley  
Thursday, May 29, 2008

2:00 p.m. - 3:30 p.m.

Location: Keauhou II

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**2:00 PM.** 596. Radical Divergence of CEACAM Family Genes in Mammals. Chia Lin Chang, Jenia Semyonov, Sheau Yu Hsu.

**2:15 PM.** 597. Effects of a Dominant Loss-of-Function Connexin Mutation on the Female Reproductive System of the Mouse. Dan Tong, Deanne Colley, Xuerong Lu, Isabelle Plante, Hongxing Wang, Dale Laird, Donglin Bai, Gerald Kidder.

**2:30 PM.** 598. A New Role for Activin in Endometrial Restoration Following Menses. Tu'uhevaha Kaitu'u-Lino, David Phillips, Naomi Morison, Lois Salamonsen.

**2:45 PM.** 599. Progesterone Suppresses Endothelin-3 (EDN3) in the Macaque Endometrium. Christopher Keator, Kunie Mah, Rebecca Carroll, Ov Slayden.

**3:00 PM.** 600. Estrogen Induction of Uterine MMP-9 Expression Involves Post-transcriptional Regulation and Is Associated with Suppression of microRNA (miR)-705. Warren Nothnick, Xuan Zhang, Lane Christenson.

**3:15 PM.** 601. TIMP-1 Contributes to Anomalies in the Ovary and Preimplantation Embryo Development in a Rat Model of Endometriosis. Julie Stilley, Renita Marshall, Peter Sutovsky, Kathy Sharpe-Timms.

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**Platform Session 19: Spermatogenesis: Identifying Proteins Required for Sperm Production and Fertility**

Chairs: Deborah O'Brien, Ph.D.  
and Cathryn Hogarth, Ph.D.  
Thursday, May 29, 2008

4:00 p.m. - 5:30 p.m.

Location: Bayview Meeting Rooms

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**4:00 PM.** 602. Study of the Anion Transporter TAT1 (SLC26A8) in the Etiology of Human Asthenozoospermia.

Aminata Toure, Pierre Lhuillier, Denise Escalier, Pierre Jouannet, Emmanuel Dulioust, Gerard Gacon.

**4:15 PM.** 603. A Missense Mutation is Present in the *Capza3* Gene of ENU-generated *repro32* Male Infertility Mutants. Chris Geyer, Amy Inselman, Jeff Sunman, Sheila Bornstein, Mary Handel, Mitch Eddy.

**4:30 PM.** 604. The Glioma Pathogenesis-related Protein 1 Like 1 (GLIPR1L1) Is a Novel Testis-specific CAP Protein, Is Post-translational Modified by SUMO and Is Presented to the Acrosomal Cap Following In Vitro Capacitation. Gerard Gibbs, Donna Merriner, Sewa Rijal, Deborah Bianco, Gabriel Sanchez-Partida, Moira O'Bryan.

**4:45 PM.** 605. Transgenic Rescue of Male Infertility Caused by Haploinsufficiency of *Klh110* in Mice. Huili Zheng, Wei Yan.

**5:00 PM.** 606. Mouse Models of Male Infertility: Three New Spermiogenesis Failures. Claire Borg, Victoria Adams, David de Kretser, Moira O'Bryan.

**5:15 PM.** 607. Phosphorylation of Sperm Axoneme Central Apparatus Protein SPAG16L by a Testis-specific Kinase, TSSK-2. Zhibing Zhang, Xuening Shen, Brian Jones, Bin-fang Xu, John Herr, Jerome Strauss III.

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#### Platform Session 20: Reproductive Immunology

Chairs: Sarah Robertson, Ph.D. and Daniel Poole  
Thursday, May 29, 2008

4:00 p.m. - 5:30 p.m.  
Location: Keauhou III-IV

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**4:00 PM.** 608. Sex Hormones Enhance TLR3 Response to Its Specific Ligand in Human Fallopian Tube Epithelial Cells. Reza Aflatoonian, John Ward, Kai-Fai Lee, William Yeung, S. W. Tsao, Sarah Elliott, Alireza Fazeli.

**4:15 PM.** 609. Prostaglandin F<sub>2α</sub> Induces Pro-Inflammatory T Lymphocyte Phenotypes in the Bovine Corpus Luteum. Daniel Poole, Kalidou Ndiaye, J. Pate.

**4:30 PM.** 610. GMCSF Is an Essential Regulator of Uterine Dendritic Cells in Early Pregnancy. Sarah Robertson, Lachlan Moldenhauer, John Hayball.

**4:45 PM.** 611. Impaired Immunosuppressive Activities of Glycodelin-A in Pregnant Women with Gestational Diabetes Mellitus. Cheuk-Lun Lee, Philip Chiu, Man-Kin Chung, Kevin Lam, Ivan Chu, Kai-Fai Lee, Terence Lao, William Yeung.

**5:00 PM.** 612. Phenotypic Differences Between Natural Killer Cells in Human Deciduas and Uterine Blood. Yuan-Lin Dong, Janice Endsley, Alison Hogg, Hong Wen, Chandra Yallampalli, Manubai Nagamani, Gary Hankins.

**5:15 PM.** 613. Dendritic Cell Based Intervention Effectively Prevents the Development of Experimental Autoimmune Orchitis in Rats. Andreas Meinhardt, Eva Schneider, Monika Fijak.

#### Platform Session 21: Reproductive Development as Influenced by Environment and Diet

Chairs: Marvin L. Meistrich, Ph.D.  
and Jakub Kwintkiewicz, Ph.D.  
Thursday, May 29, 2008

4:00 p.m. - 5:30 p.m.  
Location: Session Tent

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**4:00 PM.** 614. Maternal Exposure of Phthalates in Low-Birth-Weight Newborns: A Case-Control Study in Shanghai, China. Yunhui Zhang, Ling Lin, Yang Cao, Bingheng Chen, Renshan Ge.

**4:15 PM.** 615. Endocrine Disruptor Bisphenol A Induces Expression of Peroxisome Proliferator-Activated Receptor  $\gamma$  which Contributes to Down-Regulation of FSH-Stimulated Aromatase Expression and Estradiol Production in Human Granulosa KGN Cells. Jakub Kwintkiewicz, Linda Giudice.

**4:30 PM.** 616. Fetal and Neonatal Exposure to Endocrine Disruptor Methoxychlor Impairs Adult Ovarian Function. Mehmet Uzumcu, Aparna Zama, AnnMarie Armenti, Lisa Passantino.

**4:45 PM.** 617. Developmental Programming: Postnatal Estradiol Amplifies Reproductive Defects Induced by Fetal Exposure to Excess Testosterone and Dihydrotestosterone in Sheep. Almudena Veiga-Lopez, Aimee Wurst, Teresa Steckler, Wen Ye, Vasantha Padmanabhan.

**5:00 PM.** 618. Testosterone Teases but Estrogen Eases Blood Pressure in the Offspring of Rats Fed with Low Protein Diet During Pregnancy. Kunjureddiar Sathishkumar, Rebakah Elkins, Chandrasekhar Yallampalli.

**5:15 PM.** 619. Reduced Endothelial Vascular Function in Adult Female Offspring of Rats Fed with Low Protein Diet During Pregnancy. Chandrasekhar Yallampalli, Rebakah Elkins, Uma Yallampalli, Kunjureddiar Sathishkumar.

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#### Platform Session 22: Gene Expression in Reproductive Tissues

Chairs: Mary Hunzicker-Dunn, Ph.D. and  
Jennifer A. Hernandez Gifford, Ph.D.  
Thursday, May 29, 2008

4:00 p.m. - 5:30 p.m.  
Location: Keauhou II

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**4:00 PM.** 620. MicroRNAs in Human Ovarian Cancer. Ankur Nagaraja, Chad Creighton, Jeffrey Reid, Preethi Gunaratne, Lang Ma, Matthew Anderson, Martin Matzuk.

**4:15 PM.** 621. The Differential Regulation of STAR-Mediated Steroidogenesis by Type I and Type II PKA. Matthew Dyson, Mariusz Kowalewski, Pulak Manna, Douglas Stocco.

**4:30 PM.** 622. Lysophosphatidic Acid Receptor-Specific Functions in Uterine Receptivity and Spermatogenesis. Xiaoqin Ye, Jerold Chun.



**4:45 PM. 623.** Pituitary Adenylate Cyclase Activating Protein (PACAP) Regulates Expression, Intracellular Localization and Function of Early Growth Response Protein 1 (Egr1) in Gonadotropes. Michael Wolfe, Gaurav Chaturvedi, Emily McDonald.

**5:00 PM. 624.** Loss of the Protein p8 Leads to Delayed LH $\beta$  Expression, Delayed Female Sexual Maturation, and Testicular Development of a Sertoli-Cell-Only Syndrome-Like Phenotype. Christina Million Passe, Crystal White, Michael King, Christine Quirk.

**5:15 PM. 625.** Similar to Estrogen, Relaxin-Induced Vascular Endothelial Growth Factor (VEGF) Gene Expression in the Rat Uterus Involves Activation of the PI3K/AKT Pathway, Estrogen Receptor  $\alpha$  (ER $\alpha$ ), and Hypoxia-Inducible Factor 1 $\alpha$  (HIF-1 $\alpha$ ). Armina Kazi, Kristin Molitoris, Robert Koos.

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**Platform Session 23: Conservation and Reproductive Toxicology**

Chairs: Leon E. Gray, Jr., Ph.D. and Traci Leslie  
Thursday, May 29, 2008

4:00 p.m. - 5:30 p.m.  
Location: Keauhou Boardroom

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**4:00 PM. 626.** Acute Disruption of the Growth and Reproductive Endocrine Systems of Juvenile Salmon by Waterborne Exposure to Ethynylestradiol Does Not Impact Later Adult Growth and Fertility. Penny Swanson, Jon Dickey, Graham Young, Kathleen Cooper, Adam Luckenbach, Larissa Felli, Irvin Schulz.

**4:15 PM. 627.** Methoxychlor Decreases Sex Steroid Production by Mouse Antral Follicles. Traci Leslie, Rupesh Gupta, Jodi Flaws.

**4:30 PM. 628.** Effects of Aryl Hydrocarbon Receptor Activation on Circadian Clock Gene Expression in the Ovary. Shelley Tischkau, Bethany Karman, Stacey Krager, Canxin Xu.

**4:45 PM. 629.** Capacity of the Giant Panda to Give Birth after a Single Intrauterine Insemination Using Precise Ovulation Detection. JoGayle Howard, David Kersey, Cooper Aitken-Palmer, Steve Monfort, David Wildt.

**5:00 PM. 630.** A Novel Strategy for Preservation of Genetic Resources in Birds. Yoshiaki Nakamura, Fumitake Usui, Yasuhiro Yamamoto, Yusuke Atsumi, Tamao Ono, Kumiko Takeda, Keijiro Nirasawa, Hiroshi Kagami, Takahiro Tagami.

**5:15 PM. 631.** Effect of 4-Vinylcyclohexene Diepoxide on Xenobiotic Metabolizing Enzyme Expression in the Rat Ovary. Aileen Keating, Nivedita Sen, I. Glenn Sipes, Patricia Hoyer.

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**Platform Session 24: Folliculogenesis/Corpus Luteum**

Chairs: Tom Curry, Ph.D. and Pavine Lefevre  
Thursday, May 29, 2008

4:00 p.m. - 5:30 p.m.  
Location: Keauhou I

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**4:00 PM. 632.** Accelerated Loss of Germ Cells in LIM-homeobox Gene, *Lhx8*, Likely Occurs Due to Misexpression of *Kit*, *Kitl*, and a Multitude of Germ Cell-Specific Genes. Youngsok Choi, Daniel Ballow, Yun Xin, Aleksandar Rajkovic.

**4:15 PM. 633.** An Alginate Matrix Supports the Three-dimensional Architecture of the Nonhuman Primate Follicle and Permits Coordinated Development of Preantral Follicles to Small Antral Follicles in Vitro. Mary Zelinski, Min Xu, Erin West, Maralee Lawson, Lonnie Shea, Teresa Woodruff, Richard Stouffer.

**4:30 PM. 634.** Inhibition of Activation of Newly Formed Bovine Primordial Follicles by Estradiol Is Reversible and Associated with Inhibition of Progression of Meiotic Prophase I. Ming Yang, Joanne Fortune.

**4:45 PM. 635.** Existence of the Lymphatic System in the Primate Corpus Luteum. Fuhua Xu, Richard Stouffer.

**5:00 PM. 636.** Uterine Vein Infusion of Interferon-tau Acts Systemically to Induce ISG15 in the Ovine Corpus Luteum. Rebecca Bott, Ryan Ashley, Luiz Henkes, Jason Brummer, Gordon Niswender, Thomas Spencer, Fuller Bazer, Russell Anthony, Thomas Hansen.

**5:15 PM. 637.** Local Effects of the Sphingosine 1-phosphate on PGF $2\alpha$ -induced Luteolysis in the Pregnant Rat. Marina Peluffo, Silvia Hernandez, Griselda Irusta, Richard Stouffer, Marta Tesone.

## POSTER SESSION E

Friday, May 30, 2008

7:00 a.m. – 9:00 a.m.

### Poster Tent

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#### Cloning

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**7:00 AM. 638.** The Nutritional Requirements for In Vitro Development of Interspecies Nuclear Transfer Embryos Depend Mainly on the Species of Recipient Cytoplasts. Jinghe Tan, Yan-Guang Wu, Guo-Cheng Lan, Ping Zhou, Gong Wang.

**7:00 AM. 639.** Improvement of Efficiency in Canine Somatic Cell Nuclear Transfer Using Roscovitine-Treated Donor Cells. Hyun Ju Oh, So Gun Hong, Min Kyu Kim, Jung Eun Park, Jung Teak Kang, Goo Jang, Sung Kang, Dae Yong Kim, Byeong Chun Lee.

**7:00 AM. 640.** The Effect of Treatment of Donor Cells with Roscovitine on In Vitro and In Vivo Development of Porcine Cloned Embryos. Hee Jung Park, Ok Jae Koo, Dae kee Kwon, Jung Tak Kang, Sung Kang, Byeong Chun Lee.

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#### Comparative Reproduction

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**7:00 AM. 641.** Effects of Dietary Arachidonic Acid on the Reproductive Physiology of Female Atlantic Cod (*Gadus morhua* L.). Birgitta Norberg, Kristin Hamre, Eva Andersson, Lene Kleppe, Anders Thorsen, Grethe Rosenlund.

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#### Contraception

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**7:00 AM. 642.** The Candidate Male Contraceptive Agent, Gamendazole, Affects Actin Organization and Vinculin Based Focal Contact Distribution in Sertoli Cells In Vitro. Jeffrey Cotitta, Sedide Ozturk, Terri Kinzy, Sudhakar Jakkuraj, Ramappa Chakrasali, Stephane Gross, Gunda Georg, Joseph Tash.

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#### Education in Reproduction

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**7:00 AM. 643.** Genomic Imprinting: A Central Thread in the Reproductive Sciences. Shari Laprise.

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#### Embryonic Development

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**7:00 AM. 644.** The Effects of 2,4-Dinitrophenol and D-Glucose Concentration on the Quality, Development, Sex Ratio, and IFN-tau Production of Bovine Blastocysts. M. Green, L. Spate, K. Kimura, J. Thompson, R. Roberts.

**7:00 AM. 645.** Preimplantation Development of Embryos in Labrador Retrievers. Hiroshi Suzuki, Yasuyuki Abe, Yoshinori Suwa.

**7:00 AM. 646.** Positive Effects of Bovine Somatotropin (bST) on the Microenvironment of Uterus at Day 7 of Estrus Cycle during Hyperstimulation Treatment. Seongsoo Hwang, Gyong-Sub Chung, Kwan-Sik Min, Yeonug-Gyu Ko, Byong-Chul Yang, Myeong-Jik Kim, Hwan-Hoo Seong, Jong-Taek Yoon.

**7:00 AM. 647.** Effects of 5-AZA-2'-Deoxycytidine on Development of Porcine Parthenogenetic and Cloned Embryos. Kenji Naruse, Hong Rye Kim, Baek Chul Kim, Rong Xun Han, Su Min Choi, Myung Youn Kim, Chang Sik Park, Dong Il Jin.

**7:00 AM. 648.** Exposure to High Levels of Estrogen During Pregnancy Induces Developmental Abnormalities Including In Utero Death in the Mouse. Grant Gephardt, Melissa Pepling.

**7:00 AM. 649.** Protective Effects of Natural Products (Gingerol and Emodin) on Ethanol-induced Teratogenicity in Mouse Embryos. Jung-Min Yon, Myeong Seon Kim, Hye-Joung Kang, In-Jeoung Baek, Se-Ra Lee, Mi-Ra Kim, Byeongwoo Ahn, Young Won Yun, Sang-Yoon Nam, Beom Jun Lee.

**7:00 AM. 650.** Developmental Competence and Expression of Nucleolus Component Protein in Interspecies Cloned Embryos. Bong-Seok Song, Ji-Su Kim, Xue-Long Jin, Cheol-Hee Kim, Kyung-Kwang Lee, Deog-Bon Koo.

**7:00 AM. 651.** Man or Mouse? A Comparison of Global Gene Expression in the Human and Murine Embryonic Gonad. Chris Small, Brenda Houmard, Edith Cheng, Lizhong Yang, Michael Griswold.

**7:00 AM. 652.** Dynamics of Micro-RNAs Expressed in Mouse Oocytes and Preimplantation Embryos. Yanhong Yang, Wentao Bai, Liang Zhang, Guowu Yin, Xiaohong Wang, Jun Wang, Hongxi Zhao, Yibing Han, Yuanqing Yao.

**7:00 AM. 653.** Na-K ATPase Pump as a Receptor for Ouabain-Induced Signaling via SRC During Preimplantation Development. Holly Giannatselis, Andrew Watson.

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### Environmental Influences on Reproduction

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**7:00 AM. 654.** Association Between Period 1 mRNA Levels in Leukocytes and Initiation of Estrous Cycles in Peripubertal Beef Heifers. Sarah Fields, Brandi Perry, George Perry, Robert Cushman.

**7:00 AM. 655.** The Effects of Arsenic Dieldrin Mixture on the Reproductive Development and Function in Female Mice. Kennesha Forbes, Lanell Ogden, Olga Bolden-Tiller.

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### Epigenetics

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**7:00 AM. 656.** Specialized Spermiogenic Distribution of Histone Lysine Methyltransferase KMT6 and Demethylase KDM5A. Romain Lambrot, Chai Tian, Steven Jones, Shawna Saint-Phar, Maren Godmann, Sarah Kimmins.

**7:00 AM. 657.** ATP-dependent Chromatin Remodeling Factors Regulate Nuclear and Epigenetic Maturation of Bovine Oocytes. Gabbine Wee, Sang-Tae Shin, Yong-Mahn Han.

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### Female Gametes

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**7:00 AM. 658.** Effect of Maternal Lineage of Donor and Season on the Number of Oocytes Recovered by Ovum Pick-up in Nellore Cows. Renata Calegari, Camila Silva, Andre Crespilho, Alicio Martins Jr.

**7:00 AM. 659.** A Two-Step Culture System for Development of Mouse Early Preantral Follicles. Takatoshi Kinuta, Shinji Komori, Akiko Hasegawa, Naoko Mochida, Koji Koyama.

**7:00 AM. 660.** In Vitro Formation and Developmental Activation of Primordial Follicles Derived from Fetal Mouse Gonad Cells. Lilan Sun, Xiangwei Zhai, Huansheng Dong, Lan Li, Qingjie Pan, Wei Shen.

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### Female Reproductive Tract

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**7:00 AM. 661.** Involvement of CFTR and SLC26A6 in Mediating the Cyclic Changes in Uterine Bicarbonate Secretion. Qiong He, Connie Hau Yan Wong, Hsiao Chang Chan.

**7:00 AM. 662.** The Distribution of *Ulex europaeus* Agglutinin-1 Receptors in Rabbit Uterus During Early Pregnancy and Its Hormonal Regulation. Zhan-Peng Yue, Qiao-Ling Zhang, Hai-Hua Feng, Xue-Ming Zhang, Xu-Ming Deng, Ju-Xiong Liu, Zi-Yi Li.

**7:00 AM. 663.** The Distribution and Hormonal Regulation of *Ulex Europaeus* Agglutinin-1 Receptors in Canine Uterus during Early Pregnancy. Li-Hong Zhao, Hai-Hua Feng, De-Guang Song, Xue-Ming Zhang, Ju-Xiong Liu, Xu-Ming Deng, Zhan-Peng Yue.

**7:00 AM. 664.** Adiponectin Regulates Gene Expression in the Porcine Uterus. Karine Brochu-Gaudreau, Daniele

Beaudry, Richard Blouin, Vilceu Bordignon, Bruce Murphy, Marie-France Palin.

**7:00 AM. 665.** Human Granulosa Cells Exhibit a Variety of Calcium-dependent Ion Channel Families. Artur Mayerhofer, Jacob Menzler, Mathias Traut, Frank Dieter Berg, Ulrike Berg, Lars Kunz.

**7:00 AM. 666.** Mechanical Stretch and 17 $\beta$ -Estradiol Regulate HspB1 (Hsp27) Expression in the Rat Myometrium. Bryan White, Daniel MacPhee.

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### Fertilization

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**7:00 AM. 667.** Biological Modifications of Zona Pellucida Affecting Resistance to Proteases Digestion, Sperm Binding, and Monospermy Are Mediated by Oviduct-Specific Glycoprotein in Pig and Cow. Pilar Coy, Maria Dolores Saavedra, Irene Mondejar, Sebastian Canovas, Raquel Romar, Manuel Aviles.

**7:00 AM. 668.** Recombinant Human Seminal DNase. Tod McCauley, Robert Buck, Sheldon Marks, Roy Ax.

**7:00 AM. 669.** Role of SPRASA in Sperm-Zona and Sperm-Oolemmal Binding. Angela Wagner, Andrew Shelling, Larry Chamley.

**7:00 AM. 670.** Investigation of the Role of SRC in Capacitation Associated Tyrosine Phosphorylation of Human Spermatozoa. Lisa Mitchell, Brett Nixon, Mark Baker, R. Aitken.

**7:00 AM. 671.** Comparative and Phospho Proteomics: Identification of Protein Changes During Sperm Maturation. Mark Baker, Louise Hetherington, Gabi Reeves, Nathan Smith, R. Aitken.

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### Gene Regulation and Function

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**7:00 AM. 672.** Does DAX1A (NR0B1A) Play a Role in Gonadal Function? William Rainey, Yasuhiro Nakamura, Claudia Morris.

**7:00 AM. 673.** Expression and Localization of Two-pore Domain K<sup>+</sup> Channels in Bovine Germ Cells. Jaehee Han, Changyong Choe, Jae-Yong Park, Seong-Geun Hong, Dawon Kang.

**7:00 AM. 674.** Disruption of miR-200b Leads to Female Infertility. Hidetoshi Hasuwa, Masahito Ikawa, Masaru Okabe.

**7:00 AM. 675.** Levels and Expression Patterns of Trp63 Isoforms in the Mammary Gland Change During the Pregnancy, Lactation, and Involution Cycles. Shahin Assefnia, Priscilla Furth.

**7:00 AM. 676.** Functional Analysis of a Retrotransposon-derived Novel Gene Expressed in the Bovine Trophoblast. Yoshikage Muroi, Toshihiro Sakurai, Alan Ealy, James Godkin, Kentaro Nagaoka, Kazuhiko Imakawa.

**7:00 AM.** 677. WITHDRAWN.

**7:00 AM.** 678. A Novel Spermatogenic Cell-specific Protein Interacting with HSPA2 and HDAC. Eunyoung Choi, Heejin Choi, Edward M. Eddy, and Chunghee Cho.

**7:00 AM.** 679. The Good Oil: Investigations into the Fertility-enhancing Effect of Lipiodol. Santwona Baidya, Cristin Print, Larry Chamley, Andrew Shelling, Anita Muthukaruppan, Neil Johnson.

**7:00 AM.** 680. Expression and Effect of Proto-Oncogene *c-erbB<sub>2</sub>* During the Initiation of Primordial Follicle Growth. Jian Huang, Liping Zheng, Fang Li, Lei Wu, Aixia Xu, Liangquang Xu, Yuehui Zheng.

**7:00 AM.** 681. Neuregulin-1 and ErbB Receptors are Differentially Expressed During Follicular Maturation and Promotes Rat Granulosa Cell Proliferation. Alicia Branch, Indrajit Chowdhury, Byron Ford, Kelwyn Thomas, Jonathan Stiles, Ko CheMyong, Winston Thompson.

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### Growth Factors

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**7:00 AM.** 682. Vascular Endothelial Growth Factor (VEGFA) Inhibitory Isoforms Regulate Follicle Formation and Progression in the In Vivo Perinatal Rat Ovary. Racheal Slattery, Shantille Kruse, Debra Clopton, Andrea Cupp.

**7:00 AM.** 683. Vascular Endothelial Growth Factor A 164b (Vegfa164b) Inhibitory Isoform is Up-regulated in Bovine Granulosa Cells Prior to the LH Surge May Be a Marker of Follicle Status. Andrea Cupp, Robin Ten Broeck, Debra Clopton.

**7:00 AM.** 684. Effects of Evodiamine on the Expression and Secretion of Vascular Endothelial Growth Factor in Human Breast Cancer Cells. Paulus Wang, Ching-Han Yu, Jui-Chih Su.

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### Hormone Action

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**7:00 AM.** 685. Two Forms of Sex Hormone-Binding Globulin in Salmonid Blood. Solange Miguel-Queralt, Caroline Underhill, Geoffrey Hammond.

**7:00 AM.** 686. Regulation of Sertoli Cell Steroidogenic Acute Regulatory (StAR)-Related Lipid Transfer (START-Domain-Containing) StARD1 and StARD4 Expression by Follicle Stimulating Hormone (FSH) Requires Multiple Protein Kinases. Tomomoto Ishikawa, Masato Fujisawa, Patricia Morris.

**7:00 AM.** 687. Effects of Type 2 Diabetes on Testosterone Production in Male Rats. Yen-Jui Chang, Cai-Yun Jian, Chih-Yung Lin, Ya-Wen Hsu, Paulus Wang.

**7:00 AM.** 688. Role of Sex Steroid Hormones and ERK1/2 in Pregnancy-Suppressed Uterine Artery Myogenic Tone. Shumei Yang, Daliao Xiao, Lubo Zhang.

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### Implantation and Pregnancy

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**7:00 AM.** 689. Model of the Caruncular Cell Proliferation in Bovine and Gene Expression Profiling in the Model. Keiichi Kizaki, Kumiko Sugawara, Yoshihisa Hasegawa, Kazuyoshi Hashizume.

**7:00 AM.** 690. Influence of Maternal Nutrition on Placental mRNA Expression of Angiogenic Factors (AF) and Their Receptors (AFR) in Adolescent Sheep at Days 50 and 75 of Pregnancy. Dale Redmer, Raymond Aitken, John Milne, Mary Johnson, David Carlson, Larry Reynolds, Jacqueline Wallace.

**7:00 AM.** 691. ADAMTS-12 Promotes an Invasive Capacity in Human Trophoblastic Cells Independent of Its Intrinsic Proteolytic Activity. Junxuan Zou, Hua Zhu, Colin MacCallman.

**7:00 AM.** 692. Focal Adhesions Disassemble During Early Pregnancy In Rat Uterine Epithelial Cells. Yui Kaneko, Laura Lindsay, Christopher Murphy.

**7:00 AM.** 693. Smurf2, by Targeting TGF- $\beta$  Type E3 Receptor, Is Involved in the Invasion of Human Cytotrophoblast Cells During Early Pregnancy. Hongmei Wang, Baohua Zhang, Qing Yang, Chuang Li, Haiyan Lin, Cheng Zhu.

**7:00 AM.** 694. Placental Hyaluronidase Expression during Gestation in Swine. Jeffrey Vallet, Jeremy Miles, Brad Freking.

**7:00 AM.** 695. A Retrospective Study Comparing Four Different Assisted Hatching Techniques. Huai Feng, Avner Hershlag, Gerald Scholl, Mathew Cohen.

**7:00 AM.** 696. Vascularization and Expression of Fibroblast Growth Factor (FGF) 2 and FGF Receptor (FGFR) 2 IIIc Protein in Endometrium During Early Pregnancy in Sheep. Larry Reynolds, Megan Minten, Mary Johnson, Pawel Borowicz, Dale Redmer, Jerzy Bilski, Lee Kiedrowski, Grazyna Ptak, Pasqualino Loi, Anna Grazul-Bilska.

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### Male Gametes

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**7:00 AM.** 697. Clathrin-Coated Vesicles Leaving the Caudal Margin of the Developing Acrosome Facilitate Acrosomal Shaping During Mouse Spermiogenesis. Han-Chen Ho.

**7:00 AM.** 698. Mammalian Sperm MN9 Antigen *N,O*-sialoglycoprotein EQUATORIN: Biochemical Characterization and Identification of the Gene. Kenji Yamatoya, Keiichi Yoshida, Ito Chizuru, Mamiko Maekawa, Mitsuaki Yanagida, Yoshihiko Araki, Kenji Miyado, Yoshiro Toyama, Fumie Suzuki-Toyota, Kiyotaka Toshimori.

**7:00 AM.** 699. Human Sperm EQUATORIN Analyzed by Anti-EQUATORIN Antibodies, MN9 and EQ<sub>70-83</sub>. Kiyotaka Toshimori, Chizuru Ito, Kenji Yamatoya, Keiichi Yoshida, Mamiko Maekawa, Yoshiro Toyama, Fumie Suzuki-Toyota.

**7:00 AM.** 700. Mouse Sperm EQUATORIN Analyzed by Anti-EQUATORIN Antibodies, MN9 and EQ<sub>70-83</sub>. Keiichi

Yoshida, Chizuru Ito, Kenji Yamatoya, Ryoji Furuse, Tomoyuki Araki, Mamiko Maekawa, Yoshiro Toyama, Fumie Suzuki-Toyota, Kiyotaka Toshimori.

**7:00 AM.** 701. Role of EGTA on Mouse Sperm EGTA Dependent Nuclease. Kenneth Dominguez, W. Steven Ward.

**7:00 AM.** 702. Effect of Long-Term Treatment of Sildenafil Citrate on Epididymial Spermatozoa in Wister Albino Rat. Prakash Seppan, Suresh Sekar, Prithiviraj Elumalai.

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### Male Reproductive Tract

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**7:00 AM.** 703. An Interlocking Meshwork of Covalent Cross-Links between SVS I-III from the Mouse Seminal Vesicle are involved in Copulatory Plug Formation Yee-Hsiung Chen, Huan-Chin Tseng, Han-Jia Lin, Chia-Yih Wang.

**7:00 AM.** 704. Relationship of Sperm Parameters with Oxidative Stress in Fertile and Infertile Males. Hassan Hassani Bafrani, Mohammad Esmail Shahaboddin.

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### Meiosis

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**7:00 AM.** 705. The Roles of Different Types of Progesterin Receptors in Steroid Induction of Oocyte Maturation in Zebrafish. Peter Thomas, Caleb Harris, Yefei Pang.

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### Neuroendocrinology

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**7:00 AM.** 706. Peripheral Kisspeptide Administration Elicits an Increase in Serum FSH in the Diestrous Mare. Christianne Magee, Alejandro Arreguin-Arevalo, Jason Bruemmer, Mary Mrdutt, Jeremy Cantlon, Patrick McCue, Colin Clay.

**7:00 AM.** 707. Surge-Like Release of LH Following Administration of a Neurokinin-3 Receptor Agonist to the Retrochiasmatic Area of Early Follicular Phase Ewes. Casey Nestor, Ida Holaskova, Robert Goodman, Heather Billings.

**7:00 AM.** 708. Changes in Galaninergic mRNA Expression Throughout the Ovine Oestrus Cycle. Christine Whitelaw, George Chambers, Jane Robinson, Neil Evans.

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### Nutrition and Reproduction

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**7:00 AM.** 709. Perturbations in Fetal Development Following In Vivo Glucosamine Administration During Conception in Mice. Cheryl Schelbach, Karen Kind, Jeremy Thompson.

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### Ovary

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**7:00 AM.** 710. Granulosa Cell-Specific Inactivation of  $\beta$ -Catenin Alters Aromatase Production and Normal Folliculo-

genesis Jennifer Hernandez Gifford, Mary Hunzicker-Dunn, John Nilson.

**7:00 AM.** 711. Intraovarian Actions of Androgens on Macaque Follicles In Vivo. Maralee Lawson, Michael Britton, Yufei Cao, Natausha MacLean, Mary Zelinski.

**7:00 AM.** 712. Inhibition of Matrix Metalloproteinases (MMPs) in Siberian Hamsters (*Phodopus sungorus*) Impedes Photostimulated Recrudescence of Ovaries. Julie Whited, Asha Shahed, Kelly Young.

**7:00 AM.** 713. WITHDRAWN.

**7:00 AM.** 714. The Role of Angiotensin II in Bovine Follicular Growth. Rogerio Ferreira, Bernardo Gasperin, Rodrigo Bohrer, Monique Rovani, Marcos Barreta, Joabel Santos, Christopher Price, Paulo Bayard Goncalves.

**7:00 AM.** 715. The Aryl Hydrocarbon Receptor May Regulate the Number of Germ Cell Nests During Neonatal Life in the Mouse. Bethany Karman, Jodi Flaws.

**7:00 AM.** 716. Oocyte-Specific Expression of Fibroblast Growth Factor 8 and Its Functional Role During Ovarian Development. Zi-Jian Lan, Heng Zhang, Huaxin Zhou, Lan-Hsin Liu, Leslie Denhard, Austin Cooney.

**7:00 AM.** 717. Characterization of Conditional Dicer Knockdown in the Mouse Ovary. Lacey Luense, Xiaoman Hong, Lane Christenson.

**7:00 AM.** 718. Expression of the Mitotic Kinases Nek2 and Nek4 is Coordinately Regulated in the Ovary during Estrus. Kathryn Cockerill, Jill Kerl, Jennifer Wood.

**7:00 AM.** 719. Flaxseed/Omega-3 Fatty Acid Dietary Intervention in Ovarian Cancer in the Laying Hen, *Gallus Domesticus*. Kristine Ansenberger, Yan Zhuge, Cassandra Mahon, Animesh Barua, Judith Luborsky, Janice Bahr, Dale Hales.

**7:00 AM.** 720. WITHDRAWN.

**7:00 AM.** 721. The Dynamics of Scavenger Receptor BI Expression During Luteinization. Mario Binelli, Leonor Jimenez, Vickie Roussel, Bruce Murphy.

**7:00 AM.** 722. Relationship of Antral Follicle Counts to Fertility and Ovarian AMH mRNA Levels in Beef Cows. Robert Cushman, Jeremy Miles, Mark Allan, Larry Kuehn, Sherrill Echternkamp, Harvey Freetly.

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### Reproductive Aging

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**7:00 AM.** 723. Obesity-Related Modification of Ovarian Gene Expression and Glucocorticoid Metabolism in Aging

Lethal Yellow Mice. John Brannian, Kathleen Eyster, Mandi Greenway, Kim TeSlaa, Maureen Diggins.

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### Reproductive Behavior

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**7:00 AM.** 724. Effects of Copulatory Vagino-cervical Stimulation on the Amygdalar Functionality in the Female Rat. Marisela Hernandez-Gonzalez, Orlando Reynoso-Orozco, Miguel Angel Guevara.

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### Reproductive Technologies

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**7:00 AM.** 725. Sugar Concentration of the Freezing Extender Modulates the Motility Pattern of Frozen-Thawed Boar Spermatozoa. Jordi Roca, Marta Hernandez, Teresa Cremades, Juan Vazquez, Emilio Martinez.

**7:00 AM.** 726. Transgene Mapping and Expression Analysis in Transgenic Birds Produced by Lentiviral Transduction of Gonadal Primordial Germ Cells. Tae Kim, Sang Shin, Sun Kim, Tae Kim, Hee Seo, Seul Lee, Heebal Kim, Jeong Lim, Jae Han.

**7:00 AM.** 727. Generation of Transgenic Chickens Producing Human Erythropoietin. Teoan Kim, Mo Kwon, Ji Roh, Hyuna Lee, Nam-Hyung Kim, Bon Koo.

**7:00 AM.** 728. Production of Transgenic Pig Expressing Human Decay-Accelerating Factor and Tissue Factor Pathway Inhibitor-Cd4 Fused Protein by Somatic Cell Nuclear Transfer. Ok Jae Koo, Hye Jin Lee, Dae Kee Kwon, Hee Jung Park, Jung Taek Kang, Hee Suk Shin, Dae Yong Kim, Nak Whan Paik, Hyune Mo Rho, Byeong Chun Lee.

**7:00 AM.** 729. Clinical Comparison of Traditional Semen Analysis Parameters and Sperm DNA Integrity Assays. Dennis Marchesi, Hannah Biederman, Y. E. Hung, J. Tai, A. Hershlag, Huai L. Feng.

**7:00 AM.** 730. Analysis of Sperm DNA Oxidation and Fragmentation after Cryopreservation in *Sparus aurata*. Serafin Perez-Cerezales, Sonia Martinez-Paramo, Jose Beirao, Elsa Cabrita, Maria Paz Herraes.

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### Reproductive Toxicology

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**7:00 AM.** 731. The Effects of Atrazine on the Production of Steroids in Rat Granulosa Cells. Nicole Tinfo, Michelle Hotchkiss, Ralph Cooper, Susan Laws.

**7:00 AM.** 732. Developmental Exposure to PCB118 and PCB153: Effects on Ovine Hypothalamic Kisspeptin and GPR54 mRNA Expression. Michelle Bellingham, Christine Whitelaw, Arno Gutleb, Janneche Skaare, Mona Aleksandersen, Erik Ropstad, Neil Evans.

**7:00 AM.** 733. Effect of Simazine on Pubertal Development and Thyroid Function in the Female Wistar Rat. Leah Zorrilla, Emily Gibson, Tammy Stoker.

**7:00 AM.** 734. Reproductive and Genetic Toxicity Studies of Bisphenol A, an Endocrine Disrupter. Geeta Vanage, Smita Salian, Dinesh Tiwari, Jyoti Kamble, Varsha Padwal, Prakash Patil, Swapnil Chilgunde.

**7:00 AM.** 735. Vinclozolin Treatment Induces Reproductive Malformations and Infertility in Male Rats When Administered During Sexual but Not Gonadal Differentiation; However, the Effects Are Not Transmitted to the Subsequent Generations. Leon Gray Jr., Johnathan Furr.

**7:00 AM.** 736. Selective Induction of Glutathione S-transferases in Round Spermatozoa by the Chemotherapeutic Regimen for Testicular Cancer in the Brown-Norway Rat. Geraldine Delbes, Donovan Chan, Barbara Hales, Jacquetta Trasler, Bernard Robaire.

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### Sex Determination/Differentiation

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**7:00 AM.** 737. Ectopic Expression of Mouse Sry Inhibits Wnt/Beta-Catenin Signaling in Mammalian Cells. Dana Tamashiro, Vernadeth Alarcon, Yusuke Marikawa.

**7:00 AM.** 738. Primate Sequence Length Polymorphisms Within the Amelogenin and Amelogenin-Like Genes: Usefulness in Sex Determination. Benson Morrill, Lee Rickords.

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### Stem Cells

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**7:00 AM.** 739. The Role of the RNA-Binding Protein, Musashi-1, in Murine Spermatogonial Stem Cell Maintenance. Barbara Fraser, Alexander Sobinoff, Gary Hime, Nicole Siddall, Shaun Roman, Eileen McLaughlin.

**7:00 AM.** 740. Isolation, Culture, and Characterization of Porcine Germ Cells. Ewart Kuijk, Ben Colenbrander, Bernard Roelen.

**7:00 AM.** 741. Computer Modelling of the Rodent Spermatogonial Stem Cell Niche. Dirk de Rooij, Maria van Beek.

**7:00 AM.** 742. Establishment of Bovine Embryonic Stem-Like Cells from Cloned Bovine Blastocyst. Dae Kee Kwon, So Gun Hong, Jung Eun Park, Hee Jung Park, Jung Taek Kang, Ok Jae Koo, Byeong Chun Lee.

**7:00 AM.** 743. Mice Derived from Embryonic Stem Cells Injected into 4- or 8-Cell Embryos by Piezo Micromanipulation. Junjiu Huang, Kai Deng, Haojia Wu, Zhong Liu, Yifei Liu, Zhisheng Chen, Shanbo Cao, Xiaoying Ye, David Keefe, Lin Liu.

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### Testis

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**7:00 AM.** 744. Function of Ectoplasmic Specializations between the Sertoli Cells and Maturing Spermatozoa. Yoshiro Toyama, Fumie Suzuki-Toyota, Mamiko Maekawa, Chizuru Ito, Kiyotaka Toshimori.

**7:00 AM. 745.** Identification of Novel Retromer Complexes in the Mouse Testis. Ekyune Kim, Sang-Hyun Kim, Sang-Rae Lee, Myeong-Su Kim, Kazuhiko Imakawa, Kyu-Tae Chang.

**7:00 AM. 746.** In Vitro Murine Spermatogenesis from Spermatogonia in Organ Culture System. Takehiko Ogawa, Kumiko Katagiri, Kaoru Kita, Yoshinobu Kubota.

**7:00 AM. 747.** Expression Levels of Transcripts for Spermatogenic Cell-specific Glycolytic Enzymes (HK1S, GAPDHS and PGK2) in Juvenile Mice Assayed using RNA Isolated from Germ Cells by Laser Capture Microdissection. Yosuke Haga, Noriko Nakamura, Yoshiharu Matsuno, E. Mitch Eddy, Chisato Mori.

**7:00 AM. 748.** Comparison of Different Media for Short-Term Preservation of Testicular Cells. Ali Honaramooz, Yanfei Yang.

**7:00 AM. 749.** Fibroblast Growth Factor Receptor 3 (FGFR-3) Expression Indicates a Role in Proliferation or Survival of Human Spermatogonia but Not Germ Cell Neoplasms of Young Adults. Ewa Rajpert-De Meyts, Inge Olesen, Anders Juul.

**7:00 AM. 750.** Pathogenesis of Male Infertility Is Associated with Abnormal Expression of Both Progesterone and Estrogen Receptors in the Testis. Yibing Han, Huai Feng, Jay Sandlow, Christopher Haines.