

Scientific Program

Platform Presentations, Sessions 1–6 Sunday, July 22, 2007

8:00 – 9:30
Concurrent Sessions

Platform Session 1. Environment, Nutrition, & Toxicology 1: Developmental Effects of EDCs on Males

Chairs: Penny Swanson, Ph.D., and Vickie S. Wilson, Ph.D.
Sunday, July 22, 2007

08:00 - 09:30
Location: Salons A-B

08:00. 1. IN VIVO EXPOSURE TO 17 α -ETHYNYLES-TRADIOL CAUSES ANEUPLOID SPERM FORMATION IN MALE RAINBOW TROUT. Kim Brown, Joseph Cloud, Irvin Schultz, James Nagler. University of Idaho, Moscow, ID; Battelle PNNL, Sequim, WA.

08:15. 2. DIFFERENTIAL EFFECTS OF MONO-(2-ETHYL-HEXYL) PHTHALATE (MEHP) ON HYDROXYSTEROID DEHYDROGENASE ACTIVITIES IN PRIMARY RAT LEYDIG CELLS AND IMMORTALIZED GONADOTROPHS. Renshan Ge, Han Lin, Pankaj Lamba, Chantal Sottas, Daniel Bernard, Matthew Hardy. Population Council & Rockefeller University, New York, NY; McGill University, Montréal, QC, Canada; Wenzhou Medical College, Wenzhou, Zhejiang, China.

08:30. 3. IDENTIFICATION OF A BROMINATED FLAME RETARDANT AS A POTENT ACTIVATOR OF THE HUMAN ANDROGEN RECEPTOR. Anders Larsson, Leif Eriksson, Per Ivarsson, Per-Erik Olsson. Institution for Natural Sciences, Örebro, Sweden; Lantmännen AnalyCen AB, Lidköping, Sweden.

08:45. 4. TRANSGENERATIONAL EFFECTS OF THE XENOESTROGEN METHOXYCHLOR (M) IN RATS. Leon Gray, Johnathan Furr. RTD, NHEERL, ORD, US-EPA, Raleigh, NC.

09:00. 5. EFFECT OF 2,4-D EXPOSURE ON PUBERTAL DEVELOPMENT AND THYROID FUNCTION IN THE MALE WISTAR RAT. Tammy Stoker, Emilie Kaydos, Susan Jeffay, Ralph Cooper. U.S. EPA, Research Triangle Park, NC.

09:15. 6. EFFECTS ON THE REPRODUCTIVE SYSTEM FOLLOWING PERINATAL EXPOSURE TO BISPHENOL A AND DIETHYLSTILBESTROL IN CD-1 MICE. Maren Bell Jones, Julia Taylor, Cynthia Besch-Williford, Davide Ponzi, Benjamin Coe, James Kirkpatrick, Brittany Angle, Katherine Hurrelmeyer, Frederick vom Saal. University of Missouri, Columbia, MO.

Platform Session 2. Maturation, Aging, & Death

Chair: Wei Yan, M.D., Ph.D.
Sunday, July 22, 2007

08:00 - 09:30
Location: Salons C-D

08:00. 7. CHANGES IN ANGIOGENESIS AND BLOOD FLOW IN THE HUMAN CORPUS LUTEUM THROUGHOUT THE MENSTRUAL CYCLE AND DURING EARLY PREGNANCY. Ken Taniguchi, Hiroshi Tamura, Ryo Mae-kawa, Toshiaki Taketani, Norihiro Sugino. Yamaguchi University Graduate School of Medicine, Ube, Japan.

08:15. 8. NOVEL EXPRESSION OF THE PROAPOPTOTIC FACTOR PDCD4 IN THE RODENT OVARY. Yvonne Brown, Judy McNeilly, Kirsty Shearer, Chris Harlow, Kevin Morgan, Linda Nicol, Alan McNeilly. MRC Human Reproductive Sciences Unit, Edinburgh, United Kingdom; University of Edinburgh, Edinburgh, United Kingdom.

08:30. 9. RISING TRANSGENIC FSH IN FEMALE MICE INDUCED PREMATURE INFERTILITY AND REDUCED POST-IMPLANTATION EMBRYO-FETAL SURVIVAL. Kirsten McTavish, David Handelsman, Charles Allan. AN-ZAC Research Institute, Sydney, NSW, Australia.

08:45. 10. CHANGES IN THE AMOUNTS OF MITOCHONDRIAL DESOXYRIBONUCLEIC ACID DELETIONS AND TRANSCRIPTS IN OOCYTES FROM AGED MICE. Francisco Viramontes, France Fillion, Lawrence Smith. Faculté de médecine vétérinaire, Université de Montréal, St-Hyacinthe, QC, Canada.

09:00. 11. EFFECT OF FETAL AND NEONATAL HYPOTHYROIDISM ON FOLLICULAR DEVELOPMENT IN THE RAT OVARY. Katja Teerds, Isolde van der Vaart, Hans Swarts, Anita van Kesteren-Buiting, Eddy Rijntje. Wageningen University, Wageningen, Netherlands.

09:15. 12. EFFECTS OF AGING AND CALORIC RESTRICTION ON THE GLOBAL GENE EXPRESSION PROFILES OF TESTIS AND OVARY. Geppino Falco, Alexei Sharov, Yulan Piao, Suresh Poosala, Kevin Becker, Alan Zonderman, Dan Longo, David Schlessinger, Minoru Ko. NIH/NIA, Baltimore, MD.

Platform Session 3. Gene Expression in Endocrine Tissues 1: Receptors and Their Actions

Chairs: Jeffrey V. May, Ph.D., and Jodi Ann Flaws, Ph.D.
Sunday, July 22, 2007

08:00 - 09:30
Location: Salon E

08:00. 13. REGULATED EXPRESSION OF ADAM 8 IN OVARY: EVIDENCE FOR THE ROLE OF LUTEINIZING HORMONE AND PROGESTERONE RECEPTOR. Venkataraman Sriraman, Ursula Eichenlaub-Ritter, Jorg Bartsch, Sabine Mulders, JoAnne Richards. University of Texas Medical Branch, Galveston, TX; NV Organon, Oss, Netherlands; King's College, London, United Kingdom; University of Bielefeld, Bielefeld, Germany; Baylor College of Medicine, Houston, TX.

08:15. 14. CONDITIONAL OVEREXPRESSION OF ESTROGEN RECEPTOR ALPHA IN THE MOUSE OVARY. Tessie Paulose, Jodi Flaws. University of Illinois at Urbana-Champaign, Urbana, IL.

08:30. 15. EXPRESSION AND IMMUNOLocalIZATION OF GnRH RECEPTORS IN BOVINE UTERUS AND OVIDUCTS. Ravinder Singh, Marcia Graves, Calvin Roskelley, Rajadurai Rajamahendran. University of British Columbia, Vancouver, BC, Canada.

08:45. 16. HORMONE- AND STRESS-INDUCED RELIEF OF A TISSUE-SPECIFIC TRANSCRIPTIONAL ELONGATION BLOCK. Manjeet Rao, Sreenath Shanker, Yuiko Matsumoto, Anjana Bharadwaj, Miles Wilkinson. Children's Cancer Research Institute, The U.T. Health Science Center, San Antonio, TX; The U.T. M.D. Anderson Cancer Center, Houston, TX.

09:00. 17. TRANSCRIPTIONAL REGULATION CONFERRED THROUGH THE 5' UNTRANSLATED REGION: RHOX5-MEDIATED REPRESSION OF THE *Unc5c* NETRIN RECEPTOR GENE IN SERTOLI CELLS. Zhiying Hu. UT MD Anderson Cancer Center, Houston, TX.

09:15. 18. EFFECTS OF ESTRADIOL, METHYL-PIPERIDINO-PYRAZOLE (MPP), AND RALOXIFENE ON GENE EXPRESSION IN THE MURINE UTERUS. Angela Davis, Bushra Naz, Jessica Kohl, Robert Rooney, Cheryl Rosenfeld. University of Missouri-Columbia, Columbia, MO; Genome Explorations, Inc., Memphis, TN.

Platform Session 4. Fertilization and Early Embryogenesis 1

Chair: Monika Ward, Ph.D.
Sunday, July 22, 2007

08:00 - 09:30
Location: Salon F

08:00. 19. EVIDENCE FOR THE INVOLVEMENT OF THE IMMUNOGLOBULIN SUPERFAMILY MEMBER EWI-2 IN FERTILIZATION: LOCALIZATION ON EGGS, ASSOCIATION WITH TETRASPANINS, AND ANTIBODY PERTURBATION OF GAMETE ADHESION. Amanda Glazar, Janice Evans. Johns Hopkins University, Baltimore, MD.

08:15. 20. OOCYTE FERTILIZATION AND UTERINE MORPHOLOGY IN AGED FEMALE CHEETAHS (*Acinonyx jubatus*) ARE SIMILAR TO YOUNGER COUNTERPARTS. Adrienne Crosier, Pierre Comizzoli, Tom Baker, Budhan Pukazhenthi, JoGayle Howard, Laurie Marker, David Wildt. Reproductive Sciences, Smithsonian's National Zoological Park, Washington, DC; Smithsonian's National Zoo, Front Royal, VA; Cheetah Conservation Fund, Otjiwarongo, Namibia, Namibia; University of California - Davis, Davis, CA.

08:30. 21. PRAP/17BETA-HYDROXYSTEROID DEHYDROGENASE TYPE 7 GENE PLAYS A CRUCIAL ROLE IN EMBRYONIC DEVELOPMENT AND FETAL SURVIVAL. Aurora Shehu, Jifang Mao, Gil Gibori, Julia Halperin, Jamie Le, Hiroaki Kiyokawa, Geula Gibori. University of Illinois at Chicago, Chicago, IL; Northwestern University, Chicago, IL.

08:45. 22. *Zscan4*: A NOVEL GENE EXPRESSED EXCLUSIVELY IN LATE 2-CELL EMBRYOS. Sung-Lim Lee, Geppino Falco, Ilaria Stanghellini, Uwem C. Bassey, Toshio Hamatani, Minoru S. H. Ko. National Institute on Aging, National Institute of Health, Baltimore, MD; Keio University School of Medicine, Tokyo, Tokyo, Japan.

09:00. 23. IDENTIFICATION OF TLE6 AS A PROTEIN KINASE A SUBSTRATE DURING MOUSE OOCYTE MATURATION. Carmen Williams, Teri Ord, Stuart Moss. University of Pennsylvania, Philadelphia, PA.

09:15. 24. TRANSLATIONAL CONTROL OF STORED MATERNAL RNAs IN *C. elegans*. Melissa Richardson, Elizabeth Cronland, Susan Strome, Brett Keiper. East Carolina University, Greenville, NC; Indiana University, Bloomington, IN.

Platform Session 5. Current Advances in Comparative Reproduction

Chairs: Stephen Hammes, M.D., Ph.D., and Makoto Nagano, Ph.D., D.V.M.
Sunday, July 22, 2007

08:00 - 09:30
Location: Salons J-K

08:00. 25. PROGESTIN EXPOSURE OF *Micropogonias undulatus* GRANULOSA AND THECA CELL PRIMARY CULTURES TO PROGESTIN RESULTS IN RAPID G PROTEIN SIGNALING AND THE ALTERATION OF SERUM STARVATION-INDUCED CELL DEATH. Gwen Dressing, Peter Thomas. University of Texas at Austin, Port Aransas, TX.

08:15. 26. INSULIN-LIKE GROWTH FACTOR-1 STIMULATES GONADOTROPIN-RELEASING HORMONE SYNTHESIS AND RELEASE IN FISH. Maelanie Galima, Izhar Khan. The University of Texas at Austin-Marine Science Institute, Port Aransas, TX.

08:30. 27. INHIBIN: ITS PRESENCE, REGULATION AND FUNCTION IN THE ZEBRAFISH. Shui-Kei Poon, Wei Ge. The Chinese University of Hong Kong, Hong Kong, China.

08:45. 28. THE GH-IGF AXIS AND ITS POTENTIAL ROLE IN THE OVARY OF ZEBRAFISH, *Danio rerio*. Susana Man

Ying Yu, Wei Ge. The Chinese University of Hong Kong, Hong Kong, China.

09:00. 29. THE RHOX5 HOMEODOMAIN PROTEIN DIRECTS REGION-SPECIFIC GENE EXPRESSION IN THE EPIDIDYMIS. James MacLean, Terry Turner, Miles Wilkinson. UT MD Anderson Cancer Center, Houston, TX; University of Virginia, Charlottesville, VA.

09:15. 30. POSTNATAL UTERINE DEVELOPMENT IN INVERDALE EWE LAMBS. Kanako Hayashi, Anne O'Connell, Jenny Juengel, Ken McNatty, George Davis, Fuller Bazer, Thomas Spencer. Texas A&M University, College Station, TX; Invermay Agricultural Centre, Mosgiel, New Zealand; Victoria University, Wellington, New Zealand; Wallaceville Animal Research Centre, Upper Hutt, New Zealand.

Platform Session 6. Signal Transduction in the Testis

Chairs: Michael K. Dyck and Maren Godmann, Ph.D.
Sunday, July 22, 2007

08:00 - 09:30
Location: Salons L-M

08:00. 31. PKA-DEPENDENT ASSOCIATIONS WITH AKAP121 ENHANCE StAR -MEDIATED STEROIDOGENESIS. Matthew Dyson, Douglas Stocco. Texas Tech University Health Sciences Center, Lubbock, TX.

08:15. 32. SEXUALLY DIMORPHIC FUNCTIONS OF SMAD3 IN GONADAL TUMORIGENESIS. Qinglei Li, Jonathan Graff, Anne O'Connor, Kate Loveland, Martin Matzuk. Baylor College of Medicine, Houston, TX; University of Texas Southwestern Medical Center, Dallas, TX; Monash University, Clayton, Victoria, Australia.

08:30. 33. DKKL1 REGULATES SPERMATOCYTES APOPTOSIS AND TESTOSTERONE PRODUCTION IN MOUSE TESTIS. Olga Dakhova, Diana O'Day, Nur Yucer, Mary Wiese, Gunapala Shetty, Patricia Ducy. Baylor College of Medicine, Houston, TX; MD Anderson Cancer Center, Houston, TX.

08:45. 34. G-OLFACTORY PROTEINS ARE ACTIVATED BY THE TELEOST PROGESTIN, 17,20 β ,21-TRIHYDROXY-4-PREGNEN-3-ONE, TO STIMULATE SPERM HYPERMOTILITY IN THE ATLANTIC CROAKER (*Micropogonius undulatus*). Christopher Tubbs, Peter Thomas. University of Texas at Austin, Port Aransas, TX.

09:00. 35. FUNCTIONAL REGULATION OF FasL EXPRESSION AND SPERMATOGENESIS BY $\text{sTNF-}\alpha$ IN RESPONSE TO SERTOLI CELL INJURY. Pei-Li Yao, Yi-Chen Lin, John Richburg. University of Texas at Austin, Austin, TX.

09:15. 36. G PROTEIN-COUPLED RECEPTOR-MEDIATED ADENOSINE SIGNALING IN SPERMATOZOA: A REASSESSMENT. Fang Xie, Bijay Jaiswal, Joy Chen, Marco Conti. Stanford University School of Medicine, Stanford, CA.

POSTER SESSION A
Sunday, July 22, 2006

14:30 – 16:30

Salons G, H, and I

Educational and Research Resources

37. FELLOWSHIPS IN RESEARCH AND SCIENCE TEACHING (FIRST) PROVIDES POSTDOCTORAL FELLOWS A UNIQUE OPPORTUNITY TO ENHANCE BOTH RESEARCH AND TEACHING SKILLS. Jackie Hoffman, Arri Eisen, J.K. Haynes, Doug Eaton. Emory University, Athens, GA; Morehouse College, Atlanta, GA.

38. FACILITATING REPRODUCTIVE RESEARCH WITH THE ONLINE MOUSE GENOME INFORMATICS RESOURCES. David Shaw, Judith Blake, Carol Bult, James Kadin, Joel Richardson, Martin Ringwald, Janan Eppig. The Jackson Laboratory, Bar Harbor, ME.

39. MOUSE EMBRYO/SPERM BANK AT THE CENTER FOR ANIMAL RESOURCES AND DEVELOPMENT (CARD), KUMAMOTO UNIVERSITY. Takehito Kaneko, Yukie Haruguchi, Tomoko Yanagita, Hiromi Machida, Kiyoko Fukumoto, Yoshiko Nakagawa, Mika Koga, Shuuji Tsuchiyama, Naoko Nakamura, Satomi Yoshizumi, Mari Koga, Toru Urano, Naomi Nakagata. Center for Animal Resources and Development, Kumamoto University, Kumamoto, Japan.

Environment, Nutrition, and/or Toxicology

40. EFFECT OF UREA IN DIET ON FOLLICULAR RECOVERY AND OOCYTE QUALITY IN NONLACTATING GOATS. Lincoln Amorim, Ciro Torres, Nadja Alves, Elenice Amorim, Jeferson Fonseca, Joao Henrique Viana, Jose Henrique Bruschi, Marcelo Rodrigues, Luiz Gustavo Siqueira, David Walker, Eliza Souza, Marina Santos. Federal University of Vicosa, Vicosa, MG, Brazil; Colorado State University, Fort Collins, CO; Embrapa Dairy Cattle Research Center, Juiz de Fora, MG, Brazil; Embrapa Small Ruminant Research Center, Sobral, CE, Brazil; Federal University of Lavras, Lavras, MG, Brazil.

41. METHOXYCHLOR EXPOSURE DURING THE FETAL/NEONATAL PERIOD OF DEVELOPMENT IMPAIRS ADULT OVARIAN FUNCTION AND LEADS TO REDUCED FERTILITY IN RATS. AnnMarie Armenti, Lisa Passantino, Mehmet Uzumcu. Rutgers, The State University of New Jersey, New Brunswick, NJ.

42. IPRADIONE DELAYS MALE RAT PUBERTAL DEVELOPMENT, REDUCES SERUM TESTOSTERONE, AND DECREASES EX VIVO TESTICULAR TESTOSTERONE PRODUCTION. Chad Blystone, Christy Lambright, Johnathan Furr, Vickie Wilson, Leon Gray, Jr. NC State University, Raleigh, NC; NHEERL, ORD, US EPA, Research Triangle Park, NC.

43. POTENTIAL OF NON-STEROIDAL TRICLOCARBAN AND ITS DERIVATIVES AS STEROID HORMONE AMPLIFIERS. Jiangang Chen, Ki Chang Ahn, Nancy Gee, Shirley Gee, Bruce Hammock, Bill Lasley. University of California, Davis, Davis, CA.

44. DESCRIPTION OF GROWTH DYNAMICS OF BIOFILM BACTERIA FOUND IN EXTENDED PORCINE SEMEN. Sherrie Clark, Amanda Ness, Brian Payne, Luke Borst, Carol Maddox. University of Illinois, Urbana, IL; Bethany Swine Health Services, Sycamore, IL.

45. OVEREXPRESSION OF GLUTAMATE CYSTEINE LI-GASE CATALYTIC SUBUNIT PROTECTS GRANULOSA CELLS AGAINST OXIDANT INJURY. Mabel Cortes, Ulrike Luderer. University of California Irvine, Irvine, CA.

46. HIGH FAT DIET DURING THE FIRST HALF OF GESTATION ENHANCES FETAL CNS ARACHIDONIC ACID IN SHEEP. Stephen Ford, Yunhua Zhou, Myrna Miller, Peter Nathanielsz, J. Thomas Brenna. University of Wyoming - Laramie, Laramie, WY; The University of Texas Health Science Center at San Antonio, San Antonio, TX; Cornell University, Ithaca, NY.

47. PRENATAL EXPOSURE TO LOW DOSE PERFLUORO-OCTANOIC ACID (PFOA) IN MICE INDUCES LOW DEVELOPMENTAL BODY WEIGHT FOLLOWED BY ADULT ONSET OBESITY THAT IS NOT AFFECTED IN OVARECTOMIZED ANIMALS. Erin Hines, Sally White, Jason Stanko, Suzanne Fenton. US EPA, ORD, NHEERL, DBB, RTP, NC; US EPA, Durham, NC; UNC, Chapel Hill, NC.

48. FOLLICLE-STIMULATING HORMONE STIMULATES GLUTATHIONE SYNTHESIS IN PRIMARY RAT GRANULOSA CELLS BY UPREGULATING GLUTAMATE CYSTEINE LIGASE: ROLE OF CYCLIC AMP. Yvonne Hoang, Ulrike Luderer. University of California Irvine, Irvine, CA.

49. IN UTERO EXPOSURE TO AN ENVIRONMENTAL ANDROGEN, TRENBOLONE, MASCULINIZES FEMALE RATS. Andrew Hotchkiss, Johnathan Furr, Elizabeth Makyne, Gerald Ankley, Earl Gray. NC State University/US EPA, Research Triangle Park, NC; US EPA, Research Triangle Park, NC; US EPA, Duluth, MN.

50. STRUCTURE ACTIVITY RELATIONSHIP OF PHTHALATE ESTERS TO SUPPRESSION OF FETAL TESTICULAR TESTOSTERONE PRODUCTION AND *insl3* mRNA EXPRESSION IN THE SPRAGUE DAWLEY RAT. Kembra Howdeshell, Johnathan Furr, Christy Lambright, Vickie Wilson, L. Earl Gray, Jr. U.S. Environmental Protection Agency, Research Triangle Park, NC.

51. EFFECTS OF CLONED CATTLE MEAT POWDER ON REPRODUCTIVE AND DEVELOPMENTAL PARAMETERS IN F0 & F1 RATS. Seongsoo Hwang, Byoung-Chul Yang, Hyun-Joo Lim, Yeoung-Gyu Ko, Hwan-Hoo Seong. National Livestock Research Institute, Suwon, Gyeonggi-do, South Korea.

Fertilization and Early Embryogenesis

52. ACTIVITY OF THE BETAINE/PROLINE TRANSPORTER IN MOUSE PARTHENOGENETIC EMBRYOS: EFFECTS OF PROTEIN SYNTHESIS INHIBITION AND CYTOSKELETON DISRUPTION. Mohamed-Kheir Anas, Jay Baltz. Ottawa Health Research Institute, Ottawa, ON, Canada.

53. MOLECULAR CLONING OF CHICKEN DEAD-END HOMOLOGUE (CDH) AND IDENTIFICATION OF PRIMORDIAL GERM CELLS USING CDH GENE. Shinya Aramaki, Fuminori Sato, Takako Kato, Yukio Kato, Masa-aki Hattori. Kyushu University, Fukuoka, Japan; Meiji University, Fukuoka, Kanagawa, Japan.

54. THE MODULATION OF OXIDATIVE STRESS WITHIN THE EARLY BOVINE EMBRYO AND ITS EFFECTS ON DEVELOPMENT. Nathan Bain, Dean Betts. University of Guelph, Guelph, ON, Canada.

55. IMPAIRED MATURATION, FERTILIZATION, AND PRE-EMBRYO DEVELOPMENT OF IN VITRO-MATURED OOCYTES COLLECTED AT IN VITRO FERTILIZATION (IVF) CYCLES IN HUMANS. Shalom Bar-Ami, Johnny S. Younis, Orit Radin, Moshe Ben-Ami. Poriya Medical Center, Tiberias, Israel; Hillel-Yaffe Medical Center, Haifa, Israel.

56. VALIDATION OF QUANTITATIVE FLUORESCENCE FOR DETERMINING LIPID CONTENT OF BOVINE BLASTOCYSTS STAINED WITH NILE RED DYE. Moises Barcelo-Fimbres, George Seidel, Jr. Colorado State University, Fort Collins, CO.

57. PURIFICATION OF BOVINE SPERM MEMBRANE-PROTEINS INVOLVED IN SPERM-OOCYTE INTERACTIONS: ADHESION, FUSION, AND ACTIVATION. Ammon Bayles, Benjamin Sessions, Kenneth Aston, John Brinkerhoff, Dong Chen, Bart Weimer, Kenneth White. Utah State University, Logan, UT.

58. CULTURE STRESS REDISTRIBUTES AQUAPORINS DURING MOUSE PREIMPLANTATION DEVELOPMENT. Christine Bell, Andrew Watson, Patricia Watson. University of Western Ontario, London, ON, Canada.

59. TWO POTENTIAL OOCYTE RECEPTORS FOR PORCINE SPERM. Trish Berger. University of California, Davis, Davis, CA.

60. EFFECTS OF GLUTATHIONE ON THE IN VITRO DEVELOPMENT OF PORCINE EMBRYOS IN TWO DIFFERENT CULTURE MEDIA. Dilip Bhandari, Mohammad Hossein, Yeon Woo Jeong, Sue Kim, Ji Hye Kim, Woo Suk Hwang. Heifer International, Little Rock, AR; Soom Biotech Research Foundation, Seoul, South Korea.

61. THE HISTONE METHYLTRANSFERASE G9A ADOPTS A NUCLEAR LOCALIZATION IN CLEAVED PORCINE EMBRYOS, BUT RARELY IN PRONUCLEAR STAGE EMBRYOS. Monica Biancardi, Ryan Cabot, Luca Magnani. Purdue University, West Lafayette, IN.

62. DYNAMIC MICROFLUIDIC EMBRYO CULTURE ENHANCES BLASTOCYST DEVELOPMENT OF MURINE AND BOVINE EMBRYOS. Charles Bormann, Lourdes Cabrera, Yun Sheok Heo, Shuichi Takayama, Gary Smith. University of Michigan, Ann Arbor, MI.

63. THE SOMATIC FORM OF THE MOUSE DNMT1 MAINTENANCE METHYLTRANSFERASE IS EXPRESSED THROUGHOUT PREIMPLANTATION DEVELOPMENT. Richard Chaillet, Cecilia Cirio, Chris Navara. University of Pittsburgh, Pittsburgh, PA.

64. SECRETORY LEUKOCYTE PROTEASE INHIBITOR (SLPI) REGULATE THE EMBRYONIC DIFFERENTIATION DURING PERIIMPLANTATION STAGE. Yong-Pil Cheon, Hyun Sook Kim, Kwon Soo Ha. Sungshin Women's University, Seoul, South Korea; Kangwon University, Chuncheon, Kangwondo, South Korea.

Gametogenesis

65. A MUTATION CAUSING ABNORMAL SPLICING OF *TMEM48/NDC1* GENE IS RESPONSIBLE FOR IMPAIRED GAMETOGENESIS IN *SKS* MUTANT MOUSE. Kouyou Akiyama, Junko Noguchi, Mai Kanaeda, Takehito Tsuji, Tetsuo Kunieda. Okayama University, Okayama-City, Okayama, Japan; National Institute of Agrobiological Sciences, Tsukuba-City, Ibaraki, Japan.

66. OVARIAN AND OOCYTE CHARACTERISTICS OF HYPER- AND HYPO-PROLIFIC SOWS. Marcelo Albornoz, Ana Rita Coutinho, Jean-Charles Neel, Daniel Godbout, Marie-France Palin, Vilceu Bordignon. McGill University, Ste-Anne-de-Bellevue, QC, Canada; Agriculture and Agri-Food Canada, Sherbrooke, QC, Canada; Génétiporc Inc., St-Bernard, QC, Canada.

67. GENERATION AND ANALYSIS OF ESTs FROM MOUSE SPERMATOGENIC CELL AND SERTOLI CELL cDNA LIBRARIES. Paula Brown, Dipak Mahato, Tong Zhou, John McCarrey, Edward Eddy. NIH-NIEHS, Research Triangle Park, NC; University of Texas, San Antonio, TX.

68. NOVEL CHROMOSOME-SPECIFIC PATTERNS IN HUMAN PACHYTENE SPERMATOCYTES DEMONSTRATE SUMO-1 ASSOCIATION WITH THE SYNAPTONEMAL COMPLEX. Petrice Brown, Peter Schlegel, Patricia Morris. Population Council, New York, NY; Weill Medical College of Cornell University and New York-Presbyterian Hospitals, New York, NY; Population Council and The Rockefeller University, New York, NY.

69. ESTRADIOL INHIBITS CYST BREAKDOWN THROUGH ESTROGEN RECEPTORS IN NEONATAL MOUSE OVARY ORGAN CULTURE. Ying Chen, Melissa Pepling. Syracuse University, Syracuse, NY.

70. LHX8 DEFICIENCY DISRUPTS EARLY FOLLICULOGENESIS AND OOCYTE-SPECIFIC GENE EXPRESSION

IN THE MOUSE OVARY. Youngsok Choi, Daniel Ballow, Yangu Zhao, Heiner Westphal, Aleksandar Rajkovic. Baylor College of Medicine, Houston, TX; National Institute of Child Health and Human Development, Bethesda, MD.

71. SPATIAL AND TEMPORAL EXPRESSION OF THE THREE ISOFORMS OF THE ANTIOXIDANT SUPEROXIDE DISMUTASE DURING BOVINE FOLLICULOGENESIS AND OOGENESIS. Catherine Combelles, Suzanne Czerniak, Rachel Schiffer, David Walker, Jennifer Williams. Middlebury College, Middlebury, VT.

72. LONG-TERM EFFECTS OF A SHORT PERIOD OF MODERATELY HIGH TESTICULAR TEMPERATURES ON RAT SPERMATOGENESIS. Dirk de Rooij, Brian Setchell. Faculty of Biology, University of Utrecht, Utrecht, Netherlands; University of Adelaide, Adelaide, SA, Australia.

73. FUNCTIONAL STUDIES OF A NOVEL OOCYTE-SPECIFIC GENE, Gpr149. Mark Edson, Yi-Nan Lin, Martin Matzuk. Baylor College of Medicine, Houston, TX.

74. THE CONTRIBUTION OF Na^+ , $\text{HCO}_3^-/\text{Cl}^-$ EXCHANGER ACTIVITY ON RECOVERY FROM INDUCED-ACIDOSIS IN OOCYTE, ZYGOTE AND EMBRYO OF BALB/c STRAIN MOUSE. Seref Erdogan, Ali Cetinkaya, Ayse Dogan. Cukurova University Medical Faculty, Balcali/Adana, Turkey.

75. GRANULOSA CELLS ASSIST THE GROWING MOUSE OOCYTE IN MANAGING ACIDOSIS VIA SEVERAL MECHANISMS. Greg FitzHarris, Jay Baltz. Ottawa Health Research Institute, Ottawa, ON, Canada.

76. STRAIN DIFFERENCES IN NEONATAL OOCYTE DEVELOPMENT AND SENSITIVITY TO ESTRADIOL. Grant Gephardt. Syracuse University, Syracuse, NY.

77. JUNCTIONAL ADHESION MOLECULES IN MOUSE AND HUMAN TESTIS AND SPERMATOZOA. Myung Chan Gye, Hyun Jun Park, Hyun Joo Kim, Nam Chul Park. Hanyang University, Seoul, South Korea; Pusan National University, Pusan, South Korea.

78. TRANSCRIPTS EXPRESSED DURING EARLY MOUSE SPERMATOGENESIS. Tetsuo Hayashi, Takumi Yamada, David deKretser, Kate Loveland. Saitama Medical Center, Saitama Medical University, Kawagoe, Saitama, Japan; Monash Institute of Medical Research, Melbourne, Victoria, Australia.

79. PROSPECTIVE IDENTIFICATION AND ISOLATION OF TYPE-A SPERMATOGONIA FROM JUVENILE RHEMUS MACAQUE TESTES. Brian Hermann, Meena Sukhwani, Chih-Cheng Lin, Yi Sheng, Tony Plant, Kyle Orwig. University of Pittsburgh School of Medicine, Pittsburgh, PA; University of Pittsburgh, Pittsburgh, PA; Magee-Womens Research Institute and Foundation, Pittsburgh, PA.

Gene Expression in Endocrine Tissues

80. LOCALIZATION AND CHANGES OF eNOS IN THE CORPUS LUTEUM AFTER ADMINISTRATION OF PGF_{2alpha} DURING EARLY AND MID LUTEAL PHASE IN THE COW. Takayuki Asahi, Koumei Shirasuna, Motoki

Sasaki, Takashi Shimizu, Motozumi Matsui, Yoshinobu Akemi, Akio Miyamoto. Obihiro Univ of Ag & Vet Med, Obihiro, Japan; Genetics Hokkaido Association, Sapporo, Japan.

81. COMPARISON OF EXPRESSION LEVELS OF GENES ASSOCIATED WITH PROGESTERONE SYNTHESIS IN DAIRY HEIFERS AND MATURE COWS. Anusha Balendran, Gnanaratnam Giritharan, Miriam Gordon, Nelson Dinn, Rajamahendran Rajadurai. University of British Columbia, Vancouver, BC, Canada; University of California San Francisco, San Francisco, CA.

82. LOSS OF THE PROTEIN p8 LEADS TO DELAYED EXPRESSION OF THE LH-beta GENE, DELAYED SEXUAL MATURATION IN FEMALES, AND A SERTOLI-CELL-ONLY SYNDROME-LIKE PHENOTYPE IN MALES. Laurel Bender, Crystal White, Christine Quirk. Indiana University, Bloomington, IN.

83. EXPRESSION OF EXTRACELLULAR MATRIX DEGRADING PROTEASES AND VEGF IN FOLLICLES BEFORE AND AFTER GnRH APPLICATION AND AFTER OVULATION IN THE COW. Bajram Berisha, Harald Welter, Heike Kliem, Heinrich Meyer, Dieter Schams. Technische Universität München, Feising, Germany.

84. DIFFERENT PATTERNS OF LIPOXYGENASE GENE EXPRESSION IN BOTH HUMAN GRANULOSA-LUTEIN CELLS AND CUMULUS CELLS FROM WOMEN UNDERGOING IN VITRO FERTILIZATION. Reem Biadisy-Atamny, Shalom Bar-Ami, Adrian Ellenbogen, Moshe Ben-Ami, Johnny S. Younis, Madeia Michaeli, Orit Radin, Anat Jaffe. Hillel-Yaffe Medical Center, Hadera, Israel; Poriya Medical Center, Tiberias, Doar Na Hagalil Hatachton, Israel.

85. EXPRESSION OF SERINE PROTEASE Htra3 DURING FOLLICULOGENESIS AND LUTEINISATION IN THE RAT OVARY. Marissa Bowden, Ann Drummond, Lois Salamonsen, Jock Findlay, Guiying Nie. Monash University, Clayton, Victoria, Australia; Prince Henry's Institute of Medical Research, Clayton, Victoria, Australia.

86. GELATINASES AND THEIR INHIBITORS ARE EXPRESSED IN THE HUMAN FOLLICLE DURING OVULATION. Mats Brännström, Anna-Karin Lind, Pernilla Dahm-Kähler. Sahlgrenska Academy, Göteborg University, Göteborg, Sweden.

87. ENDOTHELIN-2 (EDN2) INDUCED OVARIAN AND OVIDUCTAL CONSTRICTION VIA ENDOTHELIN RECEPTOR A (ETA) IN RATS. Phillip Bridges, Linah Al-Alem, Wen Su, Ming Gong, CheMyong Ko. Univ. of Kentucky, Lexington, KY.

88. EXPRESSION OF THE IGF SYSTEM DURING LUTEINIZATION OF MACAQUE GRANULOSA CELLS. Rebecca Brogan, Catherine VandeVoort, Muraly Puttabyatappa, Charles Chaffin. Loyola College in Maryland, Baltimore, MD; University of Maryland School of Medicine, Baltimore, MD; California National Primate Research Center, Davis, CA; University of Maryland Baltimore, Baltimore, MD.

89. FIBROBLAST GROWTH FACTOR 13 GENE EXPRESSION IN THE BOVINE OVARY. José Buratini Jr, Isabela

Costa, Namibia Teixeira, Anthony Castilho, Christopher Price. Institute of Biosciences, UNESP, Botucatu, SP, Brazil; University of Montreal, St-Hyacinthe, QC, Canada.

90. CIRCULATING ADIPONECTIN ISOFORMS INFLUENCE OVULATORY PATTERN IN PIGS. Danila Campos, Marcelo Albornoz, Mira Dobias-Goff, Paula Papa, Vilceu Bordignon, Marie-France Palin, Bruce Murphy. Faculté de médecine vétérinaire, Université de Montréal, St-Hyacinthe, QC, Canada; Universidade de São Paulo, Piracicaba, São Paulo, Brazil; Setor de Anatomia, Faculdade de Medicina Veterinária e Zootecnia, Universidade de São Paulo, São Paulo, Brazil; Agriculture and Agri-Food Canada, Lennoxville, QC, Canada; McGill University, St-Anne de Bellevue, QC, Canada.

91. SPATIAL-TEMPORAL ANALYSIS OF PROGRANULIN EXPRESSION IN PIG PERI-OVULATORY FOLLICLES AND CORPUS LUTEUM. Mingju Cao, Leonor Miranda-Jiménez, Bruce Murphy, Andrew Bateman. McGill University, Montreal, QC, Canada; University of Montreal, St-Hyacinthe, QC, Canada.

92. REGULATION OF THE NATRIURETIC PEPTIDE PATHWAY BY LH AND CEBPB IN MOUSE GRANULOSA AND CUMULUS CELLS. Martha Carletti, Karla Hutt, Elizabeth Dille, Lane Christenson. University of Kansas Medical Center, Kansas City, KS.

93. POSTTRANSCRIPTIONAL REGULATION OF *egr1* IN L BETA T2 CELLS IS INFLUENCED BY CSDA. Theodore Chauvin, John Nilson. Washington State University, Pullman, WA.

94. EXPRESSION AND REGULATION OF HEAT SHOCK PROTEINS IN CULTURED MONKEY SERTOLI CELLS. Min Chen. Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

95. THE EXPRESSION PATTERN OF CORE BINDING FACTOR DURING THE PERIOVULATORY PERIOD IN THE RAT OVARY. Seungho Choi, Eunsil Park, Misung Jo. University of Kentucky, Lexington, KY.

Genomics and Proteomics of the Reproductive System

96. GENE EXPRESSION PROFILING OF BOVINE OVARIAN FOLLICULAR SELECTION. Eric Antoniou, Zhilin Liu, Robert Youngquist, Allen Garverick. University of Missouri/Columbia, Columbia, MO; Baylor College, Houston, TX.

97. ALTERED OVARIAN GENE EXPRESSION IN OBESE (LETHAL YELLOW) MICE MAY IMPACT REPRODUCTIVE FUNCTION. John Brannian, Kathleen Eyster, Cody Henrickson, Maureen Diggins. Sanford School of Medicine of The University of South Dakota, Sioux Falls, SD; Augustana College, Sioux Falls, SD.

98. GENE EXPRESSION IN THE EQUINE ENDOMETRIUM DURING MATERNAL RECOGNITION OF PREGNANCY. Jason Bruemmer, Matthew Lewis, Jessica Prenni, Edward Squires, Thomas Hansen. Colorado State University, Fort Collins, CO.

99. LUTEINIZING MACAQUE GRANULOSA CELLS ARE REFRACTORY TO THE MITOGENIC ACTIONS OF EGF-LIKE LIGANDS. Charles Chaffin, Catherine Vandevoort, Muraly Puttabyatappa. University of Maryland School of Medicine, Baltimore, MD; California National Primate Research Center, Davis, CA; University of Maryland Baltimore, Baltimore, MD.

100. WITHDRAWN.

101. LIPOPROTEIN SUPPORT OF STEROIDOGENESIS BY LUTEINIZING MACAQUE GRANULOSA CELLS: DIFFERENTIAL EFFECTS OF VLDL, LDL, AND HDL. Mary Cherian-Shaw, Catherine VandeVoort, Annabelle Rodriguez, Charles Chaffin. University of Maryland School of Medicine, Baltimore, MD; California National Primate Research Center, Davis, CA; Johns Hopkins University, Baltimore, MD.

102. SPERM ADHESION MOLECULE 1 IN THE BOAR REPRODUCTIVE TRACT. Eva Cibulkova, Andriy Dorosh, Pavla Manaskova, Vera Jonakova. Institute of Molecular Genetics Academy of Sciences Czech Republic, Prague, Czech Republic.

103. IN VIVO CHANGES IN PROTEIN EXPRESSION OF THE GELATINASES, MATRIX METALLOPROTEINASES - 2 AND -9 (MMP-2 AND MMP-9), AND TISSUE INHIBITORS OF METALLOPROTEINASES-1 (TIMP-1) IN THE OVINE CORPUS LUTEUM (CL) AFTER MULTIPLE PULSES OF PROSTAGLANDIN F₂alpha (PGF₂a). Darren Ferguson, Paul Tsang, David Schreiber, Christopher Keator, Robert Milvae, John McCracken. University of New Hampshire, Durham, NH; University of Connecticut, Storrs, CT.

104. TRANSCRIPTS OF BULL SPERMATOOZOA. Jean Magloire Feugang, Abdullah Kaya, Einko Topper, Charles Ostermeier, Erdogan Memili. Mississippi State University, Mississippi State, MS; The Jackson Laboratory, Bar Harbor, ME; University of Wisconsin-Madison, Madison, WI.

105. EFFECT OF VARIATION OF BODY WEIGHT, BODY CONDITION, LEPTIN, AND LUTEINIZING HORMONE RECEPTOR EXPRESSION IN POSTPARTUM ANOVULATION OF ZEBU COWS (*Bos indicus*). Carlos Giraldo-Echeverri, Martha Olivera-Ángel, Tatiana Ruiz-Cortés. Universidad de Antioquia, Medellín, Antioquia, Colombia.

106. IDENTIFICATION AND LOCALIZATION OF Na⁺ K⁺ATPase IN BOVINE SPERMATOOZOA. Katie Hickey, Mary Buhr. University of Guelph, Guelph, ON, Canada.

Implantation, Pregnancy, and Parturition

107. IDENTIFICATION AND CONFIRMATION OF PROGESTERONE AND INTERFERON TAU-REGULATED GENES IN THE OVINE UTERINE ENDOMETRIUM. Hyo Won Ahn, Fuller Bazer, Thomas Spencer. Texas A&M University, College Station, TX.

108. ESTROGEN DIFFERENTIALLY REGULATES THE EXPRESSION OF CYCLIN-DEPENDENT KINASE 1 (CdK1) IN PRIMARY AND SECONDARY DECIDUAL COMPARTMENTS DURING IMPLANTATION. Kannan Athilakshmi, Quanxi Li, Indrani Bagchi, Milan Bagchi. University of Illinois at Urbana-Champaign, Urbana, IL.

109. WITHDRAWN.

110. INVOLVEMENT OF 20alpha-HYDROXYSTEROID DEHYDROGENASE GENE IN FETAL SURVIVAL IN MICE. Jae Hyek Choi, Maho Ishida, Takashi Matsuwaki, Keitaro Yamanouchi, Masugi Nishihara. The University of Tokyo, Tokyo, Japan; University of Yamanashi, Yamanashi, Japan.

111. PROGRAMULIN IS EXPRESSED DURING MINK EMBRYO IMPLANTATION AND PLACENTA FORMATION. Joelle Desmarais, Mingju Cao, Andrew Bateman, Bruce Murphy. Faculté de Médecine Vétérinaire, Université de Montréal, St-Hyacinthe, Québec, Canada; McGill University, Montreal, Quebec, Canada.

112. COMPARISON OF THE HEMOCHORIAL PLACENTAL LABYRINTH OF THE HYENA WITH THE ENDOTHELIOCHORIAL LABYRINTH OF MUSTELIDS. Allen Enders, Tom Blankenship, Alan Conley. University of California, Davis, CA.

113. PREGNANCY STATUS AND STEROID EXPOSURE IMPACT THE ABUNDANCE OF ENDOMETRIAL CYCLO-OXYGENASE-2 mRNA IN MARES. Michelle Eroh, Alan Ealy, Dan Sharp. University of Florida, Gainesville, FL.

114. PROTEIN EXPRESSION OF VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF), BASIC FIBROBLAST GROWTH FACTOR (FGF2), AND THEIR RECEPTORS IN OVINE PLACENTOMES IN SINGLE, TWIN, AND TRIPLET PREGNACIES. Anna Grazul-Bilska, Christopher Boehler, Justin Luther, Mary Lynn Johnson, Dale Redmer, Lawrence Reynolds, Kimberly Vonnahme. Center for Nutrition and Pregnancy, Fargo, ND; North Dakota State University, Fargo, ND.

115. GENES EXPRESSION PROFILE IN SUBPLACENTOMES DEVELOPED ON INTERCARUNCULAR AREA IN BOVINE ENDOMETRIUM. Kazuyoshi Hashizume, Keiichiro Kizaki, Koichi Ushizawa, Misa Hosoe, Toru Takahashi. Iwate University, Morioka, Iwate, Japan; National Institute of Agrobiological Sciences, Tsukuba, Ibaraki, Japan.

116. PREGNANCY LOSS IN ISG15 NULL MICE IS A MATERNAL PHENOTYPE THAT IS MANIFEST DURING IMPLANTATION. Luiz Henkes, James Pru, Thomas Hansen. Colorado State University, Fort Collins, CO; Massachusetts General Hospital, Boston, MA.

117. MARINE MICROALGAE EFFECTS ON ENDOMETRIAL EXPRESSION OF KEY MOLECULES IN PREGNANT DAIRY COWS. Jacqueline Hoyt, Alan Fredeen, Kathleen Glover, Catherine Enright, Leslie MacLaren. Nova Scotia Agricultural College, Truro, NS, Canada.

118. THE SHEEP CONCEPTUS DIFFERENTIALLY REGULATES UTERINE-SECRETED PHOSPHOPROTEIN 1 THAT CORRELATES WITH INCREASED HISTOTROPHIC AND HEMATOTROPHIC SUPPORT OF PREGNANCY. Greg Johnson, Kathrin Dunlap, David Erikson, Kristey Reed, Frankie White, Robert Burghardt, Kayla Bayless. Texas A&M University, College Station, TX; Texas A&M University Health Science Center, College Station, TX.

Neuroendocrinology and Behavior

119. INTERACTION OF GENOMIC AND NON-GENOMIC ACTIONS OF ESTRADIOL (E2) ON THE EXPRESSION OF THE PREOVULATORY LIKE-SURGE OF LH: THE ROLE OF ESTROGEN RECEPTOR SUBTYPES IN THE SYNTHESIS OF GnRH RECEPTORS IN OVX EWES. J Alejandro Arreguin-Arevalo, Ryan Ashley, Terry Nett. Colorado State University, Fort Collins, CO.

120. INFLUENCE OF SCROTAL NERVES ON THE PROSTATE GLAND FUNCTION IN MALE RATS. Maria Elena Hernandez, Luis Garcia, Jose Locia, Milagros Silva, Rebeca Toledo, Gonzalo Aranda-Abreu, Rosaura Diaz, Jorge Manzo. Universidad Veracruzana, Xalapa, Ver., Mexico.

121. CHANGE OF ACTIVE GHRELIN, LEPTIN, AND FEMALE ENDOCRINE PROFILES AT LATE FOLLICULAR PHASE DURING 1-MONTH ENDURANCE TRAINING IN THE CHINESE POPULATION. Yawen Hsu, Paulus Wang. National Yang-Ming University, Taipei, Taiwan.

122. PERIPHERAL ADMINISTRATION OF KISSPEPTIN-10 INCREASES BLOOD CONCENTRATIONS OF LUTEINIZING HORMONE AND GROWTH HORMONE IN PRE-PUBERTAL HOLSTEIN HEIFERS. Hiroya Kadokawa, Motozumi Matsui, Ken-Go Hayashi, Nobuyoshi Matsunaga, Chiho Kawashima, Takashi Shimizu, Akio Miyamoto. Yamaguchi University, Yamaguchi, Japan; Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Japan.

123. CLONING AND EXPRESSION OF V1R1 GENE, A PUTATIVE PHEROMONE RECEPTOR, IN CATTLE. Keiichiro Kizaki, Kanako Maeda, Yuki Nakaya, Yoshio Yamamoto, Kazuyoshi Hashizume. Iwate University, Morioka, Iwate, Japan.

124. NEUROPROTECTIVE ROLE OF NELL2 IN THE SEXUALLY DIMORPHIC NUCLEUS OF THE MALE RAT PREOPTIC AREA. Byung Ju Lee, Jin Kwon Jeong, Joong Jean Park. University of Ulsan, Ulsan, South Korea; Korea University College of Medicine, Seoul, South Korea.

125. STIMULATORY ACTIONS OF KISSPEPTIN ON GONADOTROPIN SECRETION IN PREPUBERTAL SWINE. C Lents, C Barb. The University of Georgia, Athens, GA; USDA-ARS Russell Research Center, Athens, GA.

126. ROLE AND REGULATION OF MATERNAL MELATONIN DURING PREGNANCY IN RATS. Ryo Maekawa, Hiroshi Tamura, Ken Taniguchi, Toshiaki Taketani, Norihiro Sugino. Yamaguchi University School of Medicine, Ube-city, Yamaguchi-prefecture, Japan.

127. MOLECULAR SPECIES OF PROSTAGLANDINS MEDIATING STRESS-INDUCED SUPPRESSION OF GONADOTROPIN SECRETION IN THE BRAIN. Takashi Matsuwaki, Keitaro Yamanouchi, Masugi Nishihara. The University of Tokyo, Tokyo, Japan.

128. CHANGES IN THE NUMBER OF ESTROGEN RECEPTOR ALPHA AND BETA IMMUNOREACTIVE CELLS ON POA-AHA DURING THE ESTROUS CYCLE OF THE RAT. Luciano Mendoza-Garces, Paola Artega-Lopez, Roberto Domínguez, Marco Cerbon, Isabel Arrieta-Cruz, Angelica Flores, Maria Cruz. Facultad de Química. UNAM, Mexico

City, D.F., Mexico; FES Zaragoza-UNAM, Mexico City, D.F., Mexico.

129. IS AGING SIMILAR TO REPRODUCTIVE REFRACTORINESS: INSIGHTS FROM AGE-RELATED CHANGES IN GnRH AND GnIH. Mary Ann Ottinger, Nicola Thompson, Kazuyoshi Tsutsui. University of Maryland, College Park, MD; Waseda University, Tokyo, Japan.

130. MORPHOLOGICAL EFFECTS OF ESTRADIOL-17beta AND SELECTIVE ESTROGEN RECEPTOR ALPHA AND BETA AGONISTS ON LUTEINIZING HORMONE-SECRETING CELLS IN TAMOXIFEN-TREATED OVARIECTOMIZED RATS. Jose Sanchez-Criado, Jose Garrido-Gracia, Ana Gordon, Rafaela Aguilar, Alfonso Blanco, Juana Martin de las Mulas. University of Cordoba, Cordoba, Spain.

131. CHANGES IN PATTERNS OF CORTISOL CONCENTRATIONS INVOLVED WITH THE BIOSTIMULATORY EFFECT OF BULLS IN POSTPARTUM, ANESTROUS, SUCKLED BEEF COWS. Shaun Tauck, Jesse Olsen, Jarrod Wilkinson, James Berardinelli. Montana State university, Bozeman, MT.

132. DOMINANT NEGATIVE ACTION OF FOLLICLE-STIMULATING HORMONE RECEPTOR (FSHR) MUTANTS ON WILD-TYPE FSHR CELL SURFACE MEMBRANE EXPRESSION. Alfredo Ulloa-Aguirre, Teresa Zariñán, Aída Uribe, Guadalupe Maya-Núñez, P. Michael Conn, Marco Pérez-Solis. Instituto Mexicano del Seguro Social, México D.F., Mexico; Oregon Health Sciences University, Beaverton, OR.

133. ASSESSMENT OF MOTIVATION USING CANTAB IN BABOON OFFSPRING: AN APPROACH TO STUDYING DEVELOPMENTAL ORIGINS OF BEHAVIORAL DISORDERS. Nicole Zurcher, Mark Nijland, Kate Keenan, Thad Bartlett, Peter Nathanielsz. The University of Texas Health Science Center at San Antonio, San Antonio, TX; University of Chicago, Chicago, IL; University of Texas San Antonio, San Antonio, TX.

Reproductive Technologies

134. VITRIFICATION OF CANINE OOCYTES AND EMBRYOS, AND PREGNANCY AFTER NON-SURGICAL TRANSFER OF VITRIFIED EMBRYOS. Yasuyuki Abe, Yoshinori Suwa, Dong-Soo Lee, Sang-Keun Kim, Hiroshi Suzuki. Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Hokkaido, Japan; College of Veterinary Medicine, Chungnam National University, Yuseong-gu, Daejeon, South Korea; Hokkaido Guide Dog Association, Obihiro, Hokkaido, Japan.

135. GIANT PANDA SPERM TOLERATE CRYOPRESERVATION AT RAPID FREEZING AND THAWING RATES. Copper Aitken-Palmer, Rong Hou, David Wildt, Mary Ann Ottinger, Rebecca Spindler, JoGayle Howard. Smithsonian's National Zoo, Washington, DC; Toronto Zoo, Scarborough, ON, Canada; Smithsonian's National Zoo, Front Royal, VA; University of Maryland, College Park, MD; Chengdu Research Base of Giant Panda Breeding, Chengdu, Sichuan, China.

136. OVARIAN HYPERSTIMULATION UPREGULATE CFTR EXPRESSION IN VIVO: IMPLICATIONS FOR EN-

LARGEMENT OF HYDROSALPINX AND UTERINE FLUID ACCUMULATION DURING OVULATION INDUCTION. Louis Ajonuma, Lai Tsang, SUN Lam, Hsiao Chan. The Chinese University of Hong Kong, Shatin, NT, Hong Kong, China.

137. ICSI OUTCOME IN LUTEAL PHASE-DEFECTIVE, INFERTILE PATIENTS. Saeeda Alansari, Mundhir Ridha-Albarzanchi, Zuher Kanan, Ahmed Taiyeb, Shahla Al-Atraqchi, Areej Al-Jabar. Baghdad University Teaching Hospital, Al-Rasafa, Baghdad, Iraq; Texas A&M University, College Station, TX; Kanaqin General Hospital, Kanaqin, Diyala, Iraq.

138. ULTRA-STRUCTURAL EVALUATION OF OOCYTES FROM SUPEROVULATED MARES. Marco Alvarenga, Marcio Carmo, Jose Victor Oliveira, Fernanda Landim-Alvarenga. FMVZ - UNESP, Botucatu, Sao Paulo, Brazil; APTA, Colina, Sao Paulo, Brazil.

139. THE EFFECT OF ADDING CHOLESTERYL-HEPTANOATE, -PALMITATE, -PELARGONATE, OR -STEARATE LOADED CYCLODEXTRIN ON BULL SPERM CRYOSURVIVAL. Elenice Amorim, James Graham, Beth Spizziri, Mindy Meyers, Lincoln Amorim, Ciro Torres. Colorado State University, Fort Collins, CO; Federal University of Vicos, Vicos, MG, Brazil.

140. COMPARISON AMONG THAWING TEMPERATURES OF ROOSTER SPERM FROZEN WITH DIMETHYLACETAMIDE. Denise Bongalhardo, Rossana Miranda, Eder Oliveira, Kerlin Calderam, Guilherme van der Laan, Joao Carlos Deschamps. Federal University of Pelotas, Pelotas, RS, Brazil.

141. ISOLATION AND CULTURING OF EMBRYONIC STEM CELL-LIKE CELLS FROM IN VITRO-PRODUCED BUFFALO (*Bubalus bubalis*) PARTHENOTES. Manmohan Singh Chauhan, Verma Vinod. National Dairy Research Institute, Karnal, Haryana, India.

142. CpG MOTIF-BASED ADJUVANT ENHANCES IMMUNOGENICITY OF A RECOMBINANT LHRH VACCINE. Valeria Conforti, David de Avila, Kenny Wells, Ricardo Zanella, Nada Cummings, Hasan Ülker, Jerry Reeves. Washington State University, Pullman, WA; Yüzüncü Yil University, Van, Turkey.

143. APPLICATION OF MICROMANIPULATION TECHNIQUES FOR THE REMOVAL OF YEAST COLONIZATION (*Candida albicans*) FROM EMBRYOS CULTURED IN VITRO. Juan Correa-Perez, Amber Haley, Andrea Levin, Ronald Wilbois. Infertility & IVF Center, St. Louis, MO.

144. IMMUNOGLOBULIN SUBTYPES RECOVERED FROM BLOOD DRIED ON PAPER PROVIDE ACCESS TO IMMUNE STATUS. Jacqueline Draper, Alexandra Evindar, Kenneth Campbell. University of Massachusetts Boston, Boston, MA; Albany Medical College, Albany, NY.

145. INFLUENCING FACTORS OF GOAT SPERMATOZOA INTERACTION WITH EXOGENOUS DNA. Yongwei Fang, Huan Du, Zhenhua Song, Jianbo Han, Jianxing Chen, Lingjiang Min, Qingjie Pan, Wei Shen. Institute of Animal Reproduction Development and Genetic Engineering, Qingdao, Shandong, China.

POSTER SESSION B
Monday, July 23, 2007

07:30 – 10:00

Salons G, H, and I

Fertilization and Early Embryogenesis

146. DIFFERENTIAL PRESENCE OF ACTIVE CASPASES 3 IN PARTHENOGENETICALLY ACTIVATED PORCINE EMBRYOS OF HIGH AND LOW DEVELOPMENTAL CAPACITY. Anna Rita Coutinho, José Visintin, Mayra Assumpção, Vilceu Bordignon. McGill University, Ste-Anne-de-Bellevue, QC, Canada; University of São Paulo, São Paulo, SP, Brazil.

147. DIFFERENTIAL METHYLATION AT MOUSE *Rasgrf1* IS MAINTAINED IN EMBRYONIC, EXTRAEMBRYONIC AND NEONATAL TISSUES, REGARDLESS OF IMPRINTING STATUS. Lauren Dockery, Rachel Horton, Jennifer Gerfen, Charlotte Rahn-Lee, Tamara Davis. Bryn Mawr College, Bryn Mawr, PA.

148. ISOLATION AND CULTURE OF CANINE MESENCHYMAL STEM CELL. Camila Dores, Joao Lima Neto, Tatiana Rascado, Claudia Fernades, Fernanda Landin-Alvarenga. UNESP Botucatu Brazil, São Paulo, SP, Brazil.

149. QUANTITATIVE EXPRESSION ANALYSIS OF OCT4 AND NANOG IN DAY 8 VS. 14 BOVINE EMBRYOS. Will Eyestone, Jolynne Tschetter, Forrest Axson, Bill Beal. Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA; Virginia Tech, Blacksburg, VA.

150. IDENTIFICATION OF NOVEL PROTEINS INVOLVED IN SPERM-EGG INTERACTION USING MOUSE KNOCK-OUT MODELS: AN APPROACH TO IDENTIFY TARGETS FOR NON-HORMONAL MALE CONTRACEPTIVES. Greg Fontenot, David Powell. Lexicon Genetics, The Woodlands, TX.

151. EPIGENETIC CONTROL OF BLASTOMERE CYTOFRAGMENTATION IN EARLY MOUSE EMBRYOS. Zhiming Han, Keith Latham. The Fels Institute for Cancer Research and Molecular Biology, Temple University School of Medicine, Philadelphia, PA.

152. TRANSFECTION OF BOVINE OOCYTES AND PRE-IMPLANTATION EMBRYOS WITH COMMERCIAL TRANSFECTION REAGENTS: COMPARISON OF EMBRYONIC STAGE AND ZONA INTEGRITY ON TRANSFECTION EFFICIENCY. Carol Hanna, Charles Long, Mark Westhusin, Duane Kraemer. Texas A&M University, College Station, TX.

153. OSTEOPONTIN IMPROVES IN VITRO MATURATION AND DEVELOPMENT OF PORCINE OOCYTES VIA ACTIVATION OF THE PHOSPHATIDYLINOSITOL 3-KINASE/Akt SIGNALING PATHWAY. Yanhong Hao, Zhisheng Zhong, Lee Spate, Clifton Murphy, David Wax, Rongfeng Li,

Melissa Samuel, Randall Prather. University of Missouri-Columbia, Columbia, MO.

154. EARLY EMBRYONIC DEFECTS IN CHROMOSOME AND BLASTOMERE ALLOCATION ARE INDUCED BY THE ARYL HYDROCARBON RECEPTOR-SPECIFIC ENVIRONMENTAL TERATOGEN, 2,3,7,8-TETRACHLORODIBENZO-*p*-DIOXIN. Karla Hutt, Zhanquan Shi, David Albertini, Brian Petroff. University of Kansas Medical Center, Kansas City, KS.

155. OSMOLARITY AT EARLY CULTURE STAGE AFFECTS DEVELOPMENT AND APOPTOSIS OF PREIMPLANTATION PORCINE NT AND IVF EMBRYOS. In-Sun Hwang, Mi-Rung Park, Hyo-Jin Moon, Boh-Suk Yang, Hee-Tae Cheong, Gi-Sun Im. National Livestock Research Institute, Suwon, Kyunggi, South Korea.

156. HISTONE METHYLTRANSFERASE GLP SHOWS REDUCED AMOUNT OF TRANSCRIPT FROM THE GV-STAGE OOCYTE TO THE 8-CELL STAGE IN PORCINE PARTHENOGENETIC EMBRYOS. Christine Johnson, Luca Magnani, Ryan Cabot. Purdue University, West Lafayette, IN.

157. UNIQUE GLOBAL TRANSCRIPTOME ANALYSIS OF MOUSE TROPHECTODERM AND INNER CELL MASS. Mandy Katz-Jaffe, Jessica Filipovits, Blair McCallie, David Gardner. Colorado Center for Reproductive Medicine, Englewood, CO.

158. ESTABLISHMENT OF PORCINE EMBRYONIC STEM CELLS DERIVED FROM CLONED BLASTOCYSTS RECONSTRUCTED WITH FETAL AND NEWBORN FIBROBLASTS OF HUMAN DECAY-ACCELERATING FACTOR (HDAF) TRANSGENIC PIGS. Sue Kim, Ji Hye Kim, Eu Gene Lee, Yeon Woo Jeong, Sun Mi Park, M. S. Hossein, Sun Woo Park, Jong Yun Lee, Yeon Ik Jeong, Yeon Wook Kim, Sang Hwan Hyun, Woo Suk Hwang. Soom Biotech Research Foundation, Seoul, South Korea.

Gametogenesis

159. LOSS OF SPERMATOCYTES AND SPERMATIDS UNDERLIES THE ACTION OF *l*-CDB-4022 TO INDUCE SEVERE OLIGOSPERMIA IN ADULT MALE CYNOMOLGUS MONKEYS (*Macaca fascicularis*). Sheri Hild, Tony Plant, Barbara Attardi, Jerry Reel, Gary Marshall. BIOQUAL, Inc., Rockville, MD; University of Pittsburgh School of Medicine, Pittsburgh, PA.

160. PROFILING OF THE SUPEROXIDE DISMUTASE ANTIOXIDANTS IN BOVINE FOLLICULAR FLUIDS

FROM DEVELOPING ANTRAL FOLLICLES. Emily Holick, Louis Paolella, Suzanne Czerniak, David Walker, Catherine Combelles. Middlebury College, Middlebury, VT.

161. CDK1 REGULATES ER EXIT SITE DISASSEMBLY AND IS INVOLVED IN GOLGI FRAGMENTATION DURING PORCINE OOCYTE MATURATION. Jurriaan Hölzenspies, Willem Stoorvogel, Ben Colenbrander, Bernard Roelen, Dagmar Gutknecht, Theo van Haeften. Utrecht University, Utrecht, Netherlands; Faculty of Veterinary Medicine, Utrecht University, Utrecht, Netherlands; University Medical Centre, Utrecht, Netherlands.

162. MEIOTIC SEX CHROMOSOME INACTIVATION IN MARSUPIALS—A POTENTIAL LINK TO NONRANDOM INACTIVITY OF THE PATERNAL X. Jacey Hornecker, Paul Samollow, Edward Robinson, John VandeBerg, John McCarrey. University of Texas at San Antonio, San Antonio, TX; Texas A&M University, College Station, TX; Southwest Foundation for Biomedical Research, San Antonio, TX.

163. DIRECT EVIDENCE THAT THE SPERM ANNULUS IS REQUIRED FOR MEMBRANE DOMAIN MAINTENANCE AND NORMAL SPERM MATURATION. Gary Hunnicutt, Maria Garcia-Fernandez, Hermann Steller, Susanna Kwitny. Population Council, New York, NY; The Rockefeller University, New York, NY.

164. DETERMINING THE ROLE OF MPF IN SPERMATOGENESIS: GENERATION OF *Cdc2a* AND *Ccnb1* CONDITIONAL KNOCK-OUT MICE. Amy Inselman, William Willis, Eugenia Goulding, Edward Eddy. National Institute of Environmental Health Sciences, National Institutes of Health, Research Triangle Park, NC.

165. IDENTIFICATION OF A NOVEL INTERCELLULAR BRIDGE PROTEIN, IBP2. Tokuko Iwamori, Michael Greenbaum, Yi-Nan Lin, Martin Matzuk. Baylor College of Medicine, Houston, TX.

166. CNP/NPRB PLAYS AN IMPORTANT ROLE IN FOLLICULAR DEVELOPMENT AND OOCYTE MATURATION. Chiyo Kiyosu, Takehito Tsuji, Tetsuo Kunieda. Okayama University, Okayama-city, Okayama, Japan.

167. CHANGE OF DNA METHYLATION STATUS OF DNA METHYLTRANSFERASE1 α (*Dnmt1 α*) DURING MOUSE FOLLILOGENESIS AND SPERMATOGENESIS. Yeoung-Gyu Ko, Gi-Sun Im, Seongsoo Hwang, Hyun-Joo Im, Boh-Suk Yang, Hwan-Hoo Seong. National Livestock Research Institute, Suwon, South Korea.

168. EXPRESSION DYNAMICS OF SUMOYLATION PATHWAY GENES IN MALE GERM CELLS. Sophie La Salle, Mary Ann Handel. The Jackson Laboratory, Bar Harbor, ME.

169. Sox3 IS IMPORTANT FOR THE INITIATION AND PROGRESSION OF EARLY SPERMATOGENESIS. Monica Laronda, Miranda Bernhardt, J. Larry Jameson. Northwestern University, Chicago, IL.

170. CUMULUS CELLS PROMOTED THE MEIOTIC PROGRESSION OF MOUSE PRIMORDIAL GERM CELLS (PGCS)-DERIVED OOCYTE IN VITRO. Lan Li, Wei Shen, Donghui Zhang, Zhaodai Bai, Hongguo Cao, Tingting Qing, Qingjie Pan, Mingxiao Ding, Hongkui Deng. Institute of

Animal Reproduction Development and Genetic Engineering, Qingdao, Shandong, China; College of Life Science, Beijing, China.

171. DEFECTIVE SPERMIOGENESIS IN C3Fe;B6-*repro29*, A GENETIC MOUSE MODEL OF MALE INFERTILITY. Carol Linder, Jennifer Woods, Leonela Mora, Lisa Bentson. New Mexico Highlands University, Las Vegas, NM.

172. CHARACTERIZATION OF THE REGULATORY ELEMENTS OF THE SPERMATOGENESIS-SPECIFIC ESX1 GENE. Neng-Wen Lo, Rui-Sheng Cheng, Yueh-Chiao Yeh, Vie-Cheng Yang. Tunghai University, Taichung, Taiwan.

173. LARGE-SCALE CHROMATIN STRUCTURE AND TRANSCRIPTIONAL ACTIVITY DURING FINAL DIFFERENTIATION OF BOVINE OOCYTE. Valentina Lodde, Silvia Modina, Poul Maddox-Hyttel, Federica Franciosi, Alberto Luciano. Veterinary Medicine School, University of Milan, Milano, Italy; University of Copenhagen, Frederiksberg C, Denmark.

Gene Expression in Endocrine Tissues

174. CARNITINE TRANSPORTER 2 (CT2): A TRANSPORTER PROPOSED TO BE INVOLVED IN OSMOPROTECTION OF THE EPIDIDYMAL ENVIRONMENT. Leanne Cotton, Debra Fisher, Barry Hinton. University of Virginia, Charlottesville, VA.

175. REGULATION OF ANGIOGENIC FACTORS BY PGF2 α IN THE OVINE CORPUS LUTEUM. Douglas Danforth, Stacey Moritz, Teresa Nguyen, Laura Arbogast, Ann Ottobre, Joseph Ottobre. The Ohio State University, Columbus, OH.

176. CHARACTERIZATION OF STEROID SULFATASE IN MC3T3-E1, A MOUSE PRE-OSTEOBLASTIC BONE CELL LINE. Heidi DiFrancesca, Kyle Selcer. Duquesne University, Pittsburgh, PA.

177. STEROL CLEAVAGE-ACTIVATING PROTEIN (SCAP) DELETION IN MOUSE GRANULOSA CELLS IN VITRO INTERFERES WITH CHOLESTEROL SUPPLY GENE EXPRESSION DURING OVARIAN FOLLICULAR CELL DIFFERENTIATION. Catherine Dolbec, Bruce Murphy. Université de Montréal, Saint-Hyacinthe, QC, Canada.

178. CHARACTERIZATION OF THE PLATELET-DERIVED GROWTH FACTOR RECEPTOR ALPHA (PDGF-R α) PROMOTER IN MOUSE LEYDIG CELLS. Charlotte Dubé, Jacques Tremblay. CHUL Research Centre, Quebec City, QC, Canada.

179. HORMONAL REGULATION OF THE Notch PATHWAY GENES IN THE GRANULOSA CELLS DURING GONADOTROPIN-INDUCED OVARIAN FOLLICULAR GROWTH. Raj Duggavathi, Charles Thomas, Johan Auwerx, Kristina Schoonjans, Bruce Murphy. CRRRA, St. Hyacinthe, Canada; IGBMC, Illkirch, France.

180. MICROARRAY ANALYSIS OF FOXL2-MEDIATED GENE REGULATION IN THE MURINE OVARY DERIVED KK1 GRANULOSA CELL LINE. Jean Escudero, Jodi Haller, Colin Clay, Kenneth Escudero. Texas A&M Kingsville, Kingsville, TX; Colorado State University, Fort Collins, CO.

181. DIFFERENT EXPRESSION PATTERN OF ESTROGEN RECEPTOR TYPES ALPHA AND BETA IN MALE AND FEMALE HAMSTER REPRODUCTIVE TRACTS.

Christoph Gabler, Christoph Holder, Melanie Hamann. Freie Universitaet Berlin, Berlin, Germany.

182. SEXUALLY DIMORPHIC EXPRESSION OF ANDROGEN RECEPTORS IN THE FETAL SHEEP ADRENAL GLAND.

Eva Gay, Sarah Campbell, Alan McNeilly, W. Colin Duncan. University Of Edinburgh, Edinburgh, United Kingdom; Medical Research Council, Edinburgh, United Kingdom.

183. LEPTIN AND PROSTAGLANDIN F RECEPTOR GENE EXPRESSION OF ADIPOCYTES OBTAINED AT ESTRUS AND THE MID-LUTEAL STAGE OF THE ESTROUS CYCLE OF HEIFERS TREATED WITH PROSTAGLANDIN F₂ α AND 15-KETO-PROSTAGLANDIN F₂ α REVISITED.

Elizabeth Gonzales, Chad O'Gorman, Marcella Torres, Duane Keisler, Randy Stanko, Michelle Garcia. Texas A&M University-Kingsville, Kingsville, TX; University of Missouri-Columbia, Columbia, MO.

184. ROLES OF STEROID RECEPTOR COACTIVATORS IN CATEGORICAL REPROGRAMMING DURING cAMP/PKA-MEDIATED DECIDUALIZATION IN HUMAN ENDOMETRIAL STROMAL CELLS.

Sang Jun Han, Francesco DeMayo, Bert O'Malley. Baylor College of Medicine, Houston, TX.

185. WITHDRAWN.

186. DOES THE LACK OF A CYCLICAL LUTEINIZING HORMONE-SURGE CONTRIBUTE TO THE POLYCYSTIC OVARIAN PHENOTYPE IN ESTROGEN RECEPTOR ALPHA-NULL MICE? FRIEDERIKE JAYES, JOHN COUSE, KARINA RODRIGUEZ, MARIANA YATES, KATHERINE HAMILTON, KENNETH KORACH. NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES, RESEARCH TRIANGLE PARK, NC.

187. EXPRESSION OF 24 DEHYDROCHOLESTEROL REDUCTASE AND EXONUCLEASE NEF GENES IN TESTICULAR TISSUES OF STALLIONS. Adriana Lee, Nancy Ing. Texas A&M University, College Station, TX.

188. INDUCTION OF CHEMOKINE mRNA BY PROSTAGLANDIN F₂ ALPHA (PGF) IS DEPENDENT UPON STAGE OF THE CORPUS LUTEUM (CL) AND INTRA-LUTEAL PROGESTERONE. Wenxiang Luo, Francisco Diaz, Milo Wiltbank. University of Wisconsin-Madison, Madison, WI.

189. REGULATION OF ANGIOTENSIN TYPE 2 RECEPTOR IN BOVINE GRANULOSA CELLS IN VITRO. Valerio M Portela, Paulo BD Gonçalves, Angela Veiga, Edmir Nicola, Gustavo Zamberlam, Christopher A Price. University of Montreal, St-Hyacinthe, QC, Canada; Universidade Federal de Santa Maria, Santa Maria, RS, Brazil.

Okayama University, Okayama, Japan; University of Warmia and Mazury, Olsztyn, Poland; Institute of Animal Reproduction and Food Research, Polish Academy of Sciences, Olsztyn, Poland.

191. SEMEN EXPOSURE REGULATES LYMPHANGIOGENESIS IN THE PERI-IMPLANATION MOUSE UTERUS.

John Bromfield, Sarah Robertson. University of Adelaide, Adelaide, SA, Australia; Kansas University Medical Center, Kansas City, KS.

192. TRANSPLANTATION OF NEONATAL PORCINE SERTOLI CELLS TO LEWIS RATS. Katie Halley, Jannette Dufour. Texas Tech University Health Sciences Center, Lubbock, TX.

193. THE SERTOLI CELL IS NOT A MACROPHAGE: DETERMINANTS OF SERTOLI CELL RESPONSES TO INFLAMMATION. Mark Hedger, Julie Muir, Wendy Winnall. Monash University, Clayton, Victoria, Australia.

194. PAA-NAG PROXIMAL PROMOTER, IN CONTRAST TO THAT OF HLA-G, IS INTACT AND FUNCTIONAL. Daudi Langat, Pedro Morales, Joan Hunt. University of Kansas Medical Center, Kansas City, KS.

195. IMMUNE-LIKE RESPONSE IN THE DEVELOPING MOUSE OVARY. Tamsin Lannagan, David Price, Norah Spears. University of Edinburgh, Edinburgh, United Kingdom.

196. EXPRESSION OF mRNA FOR MEMBRANE PROGESTERONE RECEPTORS BY BOVINE T LYMPHOCYTES. Kalidou Ndiaye, Daniel Poole, Joy Pate. OARDC-Ohio State University, Wooster, OH.

197. PHAGOCYTOSIS OF HUMAN POST-CAPACITATED SPERMATOZOA BY MACROPHAGES. Rony Oren Benaroya, Jonathan Kipnis, Michael Eisenbach. The Weizmann Institute of Science, Rehovot, Israel; Univ of Nebraska Medical Center, Omaha, NE.

198. EXPRESSION AND REGULATION OF FUNCTIONAL OXYTOCIN RECEPTORS IN BOVINE T LYMPHOCYTES. Daniel Poole, Kalidou Ndiaye, Joy Pate. OARDC-Ohio State University, Wooster, OH.

199. INCREASED APOPTOSIS IN UNILATERALLY TRAUMATIZED TESTES OF ALBINO RAT. Seppan Prakash, Prithiviraj Elumalai, Suresh Sekar. University of Madras, Chennai, Tamil Nadu, India.

200. BIN1B IMMUNIZATION IN RATS RESULTS IN DECREASED SPERM MOTILITY WITH COMPROMISED FERTILIZING CAPACITY. Wenming Xu, Chenxi Zhou, Xiaohu Zhang, Wenying Chen, Hu Zhu, Hsiao Chang Chan. The Chinese University of Hong Kong, Hong Kong, China.

Immunology of the Reproductive System

190. ACUTE CHANGES IN CIRCULATING CONCENTRATIONS OF OXYGEN, NITRIC OXIDE, AND PROGESTERONE DURING PROSTAGLANDIN F₂ α -INDUCED LUTEOLYSIS IN COWS. Tomas Acosta, Mamadou Bah, Jerzy Jaroszeski, Dariusz Skarzynski, Kiyoshi Okuda.

Implantation, Pregnancy, and Parturition

201. EFFECTS OF ABERRANT EXPRESSION OF APOPTOSIS-RELATED AND IMPRINTING GENE ON FETAL DEVELOPMENT OF CLONED PIG FETUS. Hyun Ju Jung, Gi-Sun Im, Seongsoo Hwang, Hee-Ja Park, Na-Young Lee, Hwan-Hoo Seong, Choon-Keun Park, Yeoung-Gyu Ko. Ani-

mal Biotechnology Division, National Livestock Research Institute, Suwon, South Korea; Kangwon National University, Chuncheon, Kangwon-do, South Korea.

202. GHRELIN AND GHRELIN RECEPTOR IN MOUSE UTERUS: CYCLIC CHANGE DURING ESTROUS CYCLE AND REGULATION BY OVARIAN STEROIDS. Hanseung Kang, Won Heum Na, Jae Eun Lee, Hae Sun Ahn, Hee Gyoo Kang, Myung Chan Gye. Hanyang University, Seoul, South Korea; Eulji University, Gyeonggido, South Korea.

203. INSULIN-LIKE GROWTH FACTOR 2 (IGF2) ACTIVATES PI3K-AKT1 SIGNALING IN OVINE TROPHOBLAST CELLS. Jinyoung Kim, Thomas Spencer, Haijun Gao, Guoyao Wu, Gregory Johnson, Fuller Bazer. Texas A&M University, College Station, TX.

204. DIFFERENTIALLY EXPRESSED GENES IN THE UTERINE ENDOMETRIA ON DAY 12 OF THE ESTROUS CYCLE AND PREGNANCY IN PIGS. Mingoo Kim, Heewon Seo, Chang-Kyu Lee, Hakhyun Ka. Seoul National University, Seoul, South Korea; Yonsei University, Wonju, Gangwondo, South Korea.

205. NEGATIVE EFFECT OF A TRANSCRIPTION FACTOR, Oct-4, ON OVINE INTERFERON-TAU GENE EXPRESSION DIMINISHES WHEN TROPHOBLAST-SPECIFIC Cdx-2 EXPRESSION PREDOMINATES. Min-Su Kim, Toshihiro Sakurai, Atsushi Sakamoto, Daisuke Sato, Kyu-Tae Chang, Greg Ochs, Mary Roberts, James Godkin, Senkiti Sakai, Kentaro Nagaoka, Kazuhiko Imakawa. The University of Tokyo, Tokyo, Japan; The University of Tennessee, Knoxville, TN; Korea Research Institute of Bioscience & Biotechnology, Daejeon, South Korea.

206. FETAL GROWTH IS PREDICTED BY DIFFERENCES IN PLACENTAL BLOOD FLOW TO FETUSES IN A CROWDED UTERINE HORN IN MICE. James Kirkpatrick, Benjamin Coe, Maren Bell Jones, Brittany Angle, Julia Taylor, Hsiao Tung Yang, Frederick vom Saal. University of Missouri-Columbia, Columbia, MO.

207. TRANSFORMING GROWTH FACTOR BETA AND PI3K/AKT PATHWAY ACTIVITY REGULATE RAT TROPHOBLAST CELLS INVASION. Lyne Lafontaine, Isabelle St-Louis, Eric Aselin. Université du Québec à Trois-Rivières (UQTR), Trois-Rivières, QC, Canada.

208. INTRAVENOUS ADMINISTRATION OF ARGININE OR CITRULLINE INCREASED PLASMA CONCENTRATIONS OF ARGININE IN PREGNANT EWES. Arantatzu Lassala, Thomas Spencer, Tim Cudd, Michael Satterfield, Peng Li, Fuller Bazer, Guoyao Wu. Texas A&M University, College Station, TX.

209. INTERFERON TAU REGULATES PROSTAGLANDIN F2a RELEASE THROUGH JAK/SRC/EGFR/ERK1/2 PATHWAYS IN OVINE ENDOMETRIAL EPITHELIAL CELLS. JeHoon Lee, Sakhila Banu, Joe Arosh. Texas A&M University, College Station, TX.

210. WITHDRAWN.

211. REGULATED CHANGES IN SMALL LEUCINE-RICH PROTEOGLYCAN COMPOSITION ACCOMPANY CERVICAL RIPENING IN PREPARATION FOR PARTURITION.

Mala Mahendroo, Meredith Williams, Monika Ruscheinsky. University of Texas Southwestern Medical Center, Dallas, TX.

212. DIFFERENTIAL GENE REGULATION OF ESTROGEN RECEPTOR 1 AND 2 IN THE PORCINE ENDOMETRIUM DURING THE PRE-IMPLANTATION PERIOD OF PREGNANCY. Jeremy Miles, Jeffrey Vallet. USDA-ARS US Meat Animal Research Center, Clay Center, NE.

Maturation, Aging, and Death in Reproductive Tissues

213. MITOCHONDRIAL TESTICULAR FUNCTION: EFFECTS OF AGE AND DIABETES. Sandra Amaral, Luís Martins, Paula Mota, Paulo J. Oliveira, João Ramalho-Santos. University of Coimbra, Coimbra, Portugal.

214. OVEREXPRESSION OF MITOCHONDRIAL PROHIBITIN 1 (Phb1) INHIBITS N-OCTANOYLSPINGOSINE INDUCED CYTOCHROME C RELEASE AND CASPASE 3 EXPRESSION IN RAT GRANULOSA CELLS. Indrajit Chowdhury, Alicia Branch, Jonathan Stiles, Anthony Zeleznik, Roland Matthews, Kelwyn Thomas, Winston Thompson. Morehouse School of Medicine, Atlanta, GA; University of Pittsburgh, Pittsburgh, PA.

215. PROTECTIVE AND APOPTOTIC CASPASES CONTROL THE SURVIVAL OF THE RAT INITIAL SEGMENT THROUGH CLEAVAGE OF THE REACTIVE OXYGEN SPECIES GENERATOR PHOSPHOLIPASE A2. Sallie Crenshaw, Ling Yang, Barry Hinton. University of Virginia, Charlottesville, VA.

216. HEAT SHOCK INDUCES APOPTOSIS IN EQUINE SPERMATOZOA. Andria Doty, Susanne Benson, Margolotza Pozor, Margo Macpherson, William Buhi, Charlotte Dow, Mats Troedsson. University of Florida, Gainesville, FL.

217. DEVELOPMENT OF NEWBORN HAMSTER TESTICULAR GRAFTS IS ENHANCED IN OLD NUDE MOUSE RECIPIENTS. Jens Ehmcke, Kathrin Gassei, Stefan Schlatt. University of Pittsburgh School of Medicine, Pittsburgh, PA.

218. VARIATION IN NUMBER OF FOLLICLES GROWING DURING FOLLICULAR WAVES REFLECTS SIZE OF THE OVARIAN RESERVE IN CATTLE. Janet Ireland, Fermin Jimenez-Krassel, George Smith, Pat Lonergan, Alex Evans, James Ireland. Michigan State University, East Lansing, MI; University College Dublin, Dublin, Ireland.

219. TESTICULAR DEVELOPMENT IN ADULT MALE RATS EXPOSED TO GENISTEIN AT GESTATIONAL AND LACTATIONAL PERIODS. Soon Sun Kim, Rhee Da Lee, Kwon Jo Lim, Gyu-Seek Rhee, Ji Hyun Seok, Yoon Jae Kim, Jin-Yong Chung, Jong-Min Kim, Soo Yeon Chung, Dae Hyun Cho. National Institute of Toxicological Research, Korea Food and Drug Administration, Seoul, South Korea; Dong-A University, Busan, South Korea; Busan, South Korea.

220. LUTEAL OXYTOCIN SECRETION AND OVARIAN BLOOD FLOW IS STIMULATED BY NEUROPEPTIDE Y IN SHEEP. John McCracken, Edward Custer, David Schreiber, Thomas Hoagland, Christopher Keator. University of Connecticut, Storrs, CT; Oregon National Primate Research

Center, Beaverton, OR; University of Massachusetts Medical School, Worcester, MA.

Reproductive Technologies

221. PRIMARY STUDY ON THE MATURE METHODS OF IN VITRO CUMULUS-FREE BUFFALO OOCYTES. Gui-xue Feng, Gui-hua Bian, Shu-fang Yang, Xiao-li Wang. Animal Reproduction Institute of Guangxi University, Nanning, Guangxi, China; Maternity and Children Hospital of Guangxi, Nanning, China; Guangxi University, Nanning, Guangxi, China.

222. THE USE OF DEMECOLCINE FOR CHEMICAL ENUCLEATION OF EQUINE OOCYTES DESTINED FOR NUCLEAR TRANSFER. Claudia Fernandes, Lilian Martins, Liani Devito, Patricia Tsuribe, Naiara Saraiva, Joaquim Garcia, Fernanda Landim-Alvarenga. FMVZ - UNESP, Botucatu, São Paulo, Brazil; FCAV-UNESP, Jaboticabal, São Paulo, Brazil.

223. A COMPARISON OF TWO SUSTAINED FSH RELEASE IMPLANTS. Colette Floyd, Sandra Gray, Laura Riggs, John Gibbons. Clemson University, Clemson, SC; University of Georgia, Clemson, SC.

224. EFFECT OF TWO DIFFERENT SEXED SPERM-WASHING METHODS ON IN VITRO BOVINE EMBRYO DEVELOPMENT. Roseli Gonçalves, Valquiria Barnabe. College of Veterinary Medicine and Animal Science of São Paulo University, São Paulo, SP, Brazil.

225. INCREASED OVULATION RATE AFTER A SINGLE DRENCH WITH GLYCEROL SOLUTION AT THE TIME OF LUTEOLYSIS IN SHEEP. Carlos Gutierrez, Victor Martinez, Adriana Saharrea, Lucia Rangel, Arantza Lassala, Hugo Perez. Universidad Nacional Autónoma de México, Mexico, DF, Mexico.

226. SCREENING OF GERMLINE CHIMERIC CHICKENS BY BREED-SPECIFIC DNA POLYMORPHISMS IN PMEL17 GENE. Jae Han, Jin Choi, Yinghui Zheng, Heebal Kim, Eun Lee, Ji Shin, Jin-Kyoo Kim. Seoul National University, Seoul, South Korea; Changwon National University, Changwon, South Korea; Avicore Biotechnology Institute Inc., Gunpo, South Korea.

227. RELATIONSHIP OF SPERM UBIQUITIN LEVELS WITH SEMEN QUALITY IN STALLIONS AND CONCEPTION RATES IN MARES. Melodee Heidmiller. Cal Poly State University, San Luis Obispo, CA.

228. IN VITRO FUNCTION OF BLACK-FOOTED CAT (*Felis nigripes*) SPERMATOZOA FOLLOWING CRYOPRESERVATION. Jason Herrick, Mark Campbell, Keith Benson, Rob Coke, William Swanson. Cincinnati Zoo and Botanical Garden, Cincinnati, OH; San Antonio Zoo, San Antonio, TX; Riverbanks Zoo and Garden, Columbia, SC.

229. DEVELOPMENT OF A PROTOCOL FOR RECOVERY OF IN VIVO-MATURED CANINE OOCYTES BASED ON ONCE DAILY MEASUREMENT OF SERUM PROGESTERONE. Mohammad Hossein, Yeon Woo Jeong, Sue Kim, Jeong Joo Kim, Sun Woo Park, Yeon Wook Kim, Sang Hwan Hyun,

Woo Suk Hwang. Soom Biotech Research Foundation, Seoul, South Korea.

230. CONSTRUCTION AND EXPRESSION OF AN OVINE SINGLE-CHAIN TRIPLE-DOMAIN CHIMERIC GONADOTROPIN: TANDEM LINKAGE OF THE GENES ENCODING THE α - AND FSH β AND LH β SUBUNITS. Albina Jablonka-Shariff, Anna Comstock, Mark Colgin, Thomas Adams, Irving Boime. Washington University School of Medicine, St. Louis, MO; University of California, Davis, CA; Castle Rock, CO.

231. IN VITRO CULTURE OF BOVINE EMBRYOS WITH A SERUM REPLACER IMPROVES SURVIVAL FOLLOWING VITRIFICATION AND WARMING. Sarah Johnson, Ewa Wroclawska, Aline Bonilla, Karen Moore. University of Florida, Gainesville, FL.

232. IN VITRO DEVELOPMENT OF PORCINE PARTHENOGENETIC AND NUCLEAR TRANSFER EMBRYOS FOLLOWING DIFFERENT COMBINED WITH CYCLOHEXIMIDE AND ELECTRICAL PULSE TREATMENTS. Baek Chul Kim, Kenji Naruse, Yan Shi Quan, Hong Rye Kim, Suk Min Chang, Rong Xun Han, Chang Sik Park, Dong Il Jin. Chungnam National University, Daejeon, South Korea.

Sex Determination and Development

233. CONTRASTING EFFECTS OF AD LIBITUM AND RESTRICTED FEEDING OF A DIET HIGH IN SATURATED FAT ON THE SEX RATIO PUPS BORN TO MATURE NIH SWISS MICE. Andrei Alexenko, Angela Davis, Stacey Schlanker, Cheryl Rosenfeld, Mark Ellersieck, R Michael Roberts. University of Missouri-Columbia, Columbia, MO.

234. TRANSCRIPTIONAL REGULATION OF CYP26B1 IN A MOUSE SERTOLI CELL LINE. Miranda Bernhardt, J. Larry Jameson. Northwestern University, Chicago, IL; Northwestern University Feinberg School of Medicine, Chicago, IL.

235. REGULATION OF Nt3 IN THE EMBRYONIC GONAD AT THE TIME OF TESTIS DIFFERENTIATION AND IDENTIFICATION OF NEW CANDIDATE GENES. Tracy Clement, Matthew Anway, Michael Skinner. Washington State University, Pullman, WA.

236. WNT4 EXPRESSION IN OVARIAN GRANULOSA CELL PRECURSORS IS REQUIRED FOR FOLLICLE FORMATION. Aron Cory, Marilene Paquet, Richard Behringer, Francesco DeMayo, JoAnne Richards, Derek Boerboom. University of Montreal, St. Hyacinthe, QC, Canada; Baylor College of Medicine, Houston, TX; McGill University, Montreal, QC, Canada; University of Texas, Houston, TX.

237. VASCULAR ENDOTHELIAL GROWTH FACTOR INHIBITORY ISOFORM 164B IS EXPRESSED IN A SEX-SPECIFIC MANNER AND MAY REGULATE ENDOTHELIAL CELL MIGRATION AND VASCULAR DEVELOPMENT DURING GONADAL MORPHOGENESIS IN THE RAT. Andrea Cupp, Michelle Baltés-Breitwisch, Monika Burocziova, Renee Pohlmann, Debra Clopton. University of Nebraska-Lincoln, Lincoln, NE.

238. DIFFERENTIAL LOCALIZATION OF VIP AND VIP RECEPTOR IN CHICKEN GONADS DURING DEVELOPMENT. Margarita González del Pliego, Elsa Liliana Aguirre Benítez, Alfonso Velázquez Carranza, Rosa María Márquez García, Mariel Manzanarez Colín, Dolores Martín, Carmen Solano Agama, María Eugenia Mendoza Garrido. UNAM, México City, Mexico; CINVESTAV, Mexico City, Mexico.

239. NETRIN-1 SIGNALING AND GnRH NEURONAL MIGRATION. Mohammad Khan, Yu Liu, Darrell Brann, Wen-Cheng Xiong. Medical College of Georgia, Augusta, GA.

240. ABNORMAL DEVELOPMENT IN FEMALE GONADS OF FUSED TOES MUTANT MICE. Bongki Kim, Youngha Kim, Joan Jorgensen. University of Illinois at Urbana-Champaign, Urbana, IL.

241. STAGE-DEPENDENT EXPRESSION OF THREE GENES IN GROWING OOCYTES OF THE FROG *Rana rugosa*. Masahisa Nakamura, Goro Okada, Koichi Maruo, Sadahiro Funada. Waseda University, Tokyo, Japan.

242. PLACENTAL GENE EXPRESSION IS FETAL SEX- AND NUTRITIONAL STAGE-DEPENDENT. Natalia Schlabritz-Loutsevitch, Laura Cox, Gene Hubbard, Peter Nathanielsz. The University of Texas Health Science Center at San Antonio, San Antonio, TX; Southwest National Regional Primate Center, San Antonio, TX; Southwest Foundation for Biomedical Research, San Antonio, TX.

243. MOLECULAR MECHANISM OF SRY ACTION DURING TESTICULAR DIFFERENTIATION IN THE MOUSE. Ghazaleh Tavallaee, Yunmin Li, Y.-F. Chris Lau, Teruko Taketo. McGill University, Montreal, QC, Canada; VA Medical Center, San Francisco, CA.

244. DEVELOPMENTAL PROGRAMMING: EFFECTS OF PRENATAL STEROID AND POSTNATAL ESTRADIOL TREATMENT ON PUBERTAL ONSET IN EWE LAMBS. Aimee Wurst, Almudena Veiga-Lopez, Teresa Steckler, E. Keith Inskeep, Vasantha Padmanabhan. West Virginia University, Morgantown, WV; University of Michigan, Ann Arbor, MI.

Signaling and Signal Transduction in Endocrine Tissues

245. A NOVEL MAPK PATHWAY ACTIVATED BY CHORIONIC GONADOTROPIN IN PRIMATE ENDOMETRIAL EPITHELIAL CELLS. Prajna Banerjee, Paula Cameo, Santha Srisuparp, Zuzana Strakova, Asgerally Fazleabas. University of Illinois at Chicago, Chicago, IL; Rajavithi Hospital, Bangkok, Thailand.

246. ECTOPIC ACTIVATION OF THE HEDGEHOG PATHWAY INDUCES APPEARANCE OF LEYDIG-LIKE CELLS IN FETAL OVARIES. Ivraym Barsoum, Humphrey Yao. University of Illinois at Urbana-Champaign, Urbana, IL.

247. ISOLATION AND CHARACTERIZATION OF A cDNA FROM ATLANTIC CROAKER (*Micropogonias undulatus*) OVARIES ENCODING A NOVEL PROTEIN WITH THE CHARACTERISTICS OF A MEMBRANE ANDROGEN RECEPTOR. Hakan Berg, Peter Thomas. University of Texas at Austin, Port Aransas, TX.

248. REGULATORY EFFECTS OF ESTROGEN AND PROGESTERONE ON THE ADIPOSE RESISTIN EXPRESSION. Chih-Ling Chang, Seng-Wong Huang, Chi-Chang Juan. National Yang-Ming University, Taipei, Taiwan.

249. EFFECT OF HYPOXIA ON THE VEGF SECRETION IN MA-10 LEYDIG CELLS. Pradeep Kumar Chaturvedi, Garima Nirwal, Anand Kumar. All India Institute of Medical Sciences, New Delhi, India.

250. EPIDERMAL GROWTH FACTOR RECEPTOR SIGNALING IS REQUIRED FOR STEROIDOGENESIS IN THE OVARY, TESTES, AND ADRENAL GLANDS. Kristen Evaul, Michelle Jamnongjit, Stephen Hammes. UT Southwestern Medical Center at Dallas, Dallas, TX; Tufts University, Boston, MA.

251. TESTOSTERONE REGULATION OF TISSUE-TYPE PLASMINOGEN ACTIVATOR (TPA) AND PLASMINOGEN ACTIVATOR INHIBITOR TYPE-1 (PAI-1) EXPRESSION IN SERTOLI CELLS. Jian Guo, Yu-Qiang Shi, Wei Yang, Yin-Chuan Li, Zhao-Yuan Hu, Yi-Xun Liu. Beijing University of Chinese Medicine, Beijing, China; State Key Laboratory of Reproductive Biology, Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

252. CELL-SPECIFIC EXPRESSION AND ACTIVATION OF LKB1 IN THE RAT OVARY. Mehnaaz Haniff, Jenny Paiva, Angela Venegas, Jean Chen, Philip LaPolt. California State University - Los Angeles, Los Angeles, CA.

253. INHIBITOR OF DIFFERENTIATION/DNA BINDING (ID) PROTEIN EXPRESSION, AND PROPOSED ROLE IN GRANULOSA CELL DIFFERENTIATION. Morgan Haugen, Dori Woods, Alan Johnson. The University of Notre Dame, Notre Dame, IN.

254. ANGIOTENSIN II-DEPENDENT GENE REGULATION IN HUMAN UMBILICAL VEIN ENDOTHELIAL CELLS INVOLVES VEGF-SIGNALING AND ANGIOGENESIS. Daniel Herr, Miriam Rodewald, Gerda Hack, Rolf Kreienberg, Christine Wulff. University Hospital Ulm, Ulm, Germany.

255. BONE MORPHOGENETIC PROTEIN 2 STIMULATES INHIBITOR OF DNA BINDING 3 TRANSCRIPTION IN GONADOTROPE CELLS. Catherine Ho, Katharine Lee, Daniel Bernard. McGill University, Montreal, QC, Canada.

256. EARLY ACTIVATION OF THE EGFR SIGNALLING PATHWAY BY LH IN PREEVULATORY FOLLICLES. Minnie Hsieh, Sara Panigone, Maoyong Fu, Luca Persani, Marco Conti. Stanford University School of Medicine, Stanford, CA; University of Milan, Milano, Italy.

257. ESTROGEN RAPIDLY ACTIVATES THE PI3K/AKT PATHWAY AND INDUCES VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) GENE EXPRESSION IN LUMINAL EPITHELIAL CELLS ISOLATED FROM RAT UTERI. Armina Kazi, Kristin Molitoris, Robert Koos. University of Maryland School of Medicine, Baltimore, MD.

258. CHARACTERIZATION OF STIM1 GENE EXPRESSION IN PORCINE OOCYTES. Sehwon Koh, Kiho Lee,

Chunmin Wang, Zoltan Machaty. Purdue University, Lafayette, IN.

259. GLUCOCORTICOID IS A SUPPRESSOR OF APOPTOSIS IN BOVINE CORPUS LUTEUM. Junichi Komiyama, Ryo Nishimura, Hwa-Yong Lee, Ryosuke Sakumoto, Masafumi Tetsuka, Tomas J. Acosta, Kiyoshi Okuda. Okayama University, Okayama, Japan; Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Japan; National Institute of Agrobiological Sciences, Tsukuba, Japan.

260. THE PKA DECLINE IN RAT MYOMETRIAL PLASMA MEMBRANE PRIOR TO DELIVERY OCCURS WITH THE

ONSET OF PARTUITION AND IS ENHANCED BY THE PRESENCE OF FETUSES. Chun-Ying Ku, Yoonsun Kim, Robert E. Garfield, Barbara M. Sanborn. Colorado State University, Fort Collins, CO; Univ. Texas Medical Branch, Galveston, TX.

261. DISTINCT MECHANISMS OF ACTIVIN-REGULATED FSH BETA-SUBUNIT TRANSCRIPTION ARE PREDICTIVE OF PHYSIOLOGICAL PATTERNS OF FSH SECRETION IN DIFFERENT MAMMALIAN SPECIES. Pankaj Lamba, Vishal Khivansara, Michelle Santos, Daniel Bernard. McGill University, Montreal, QC, Canada; Population Council, New York, NY.

Platform Presentations, Sessions 7–12
Monday, July 23, 2007

14:00 – 16:00
Concurrent Sessions

**Platform Session 7. Fertilization & Early Embryogenesis 2:
 Signaling in Oocytes and Follicles**

Chairs: Rafael Fissore, Ph.D., D.V.M., and Anna Ajduk
 Monday, July 23, 2007

14:00 - 16:00
 Location: Salons A-B

14:00. 262. DECREASED OOCYTE DAZL EXPRESSION IN MICE RESULTS IN INCREASED LITTERS BY MODULATING FSH-INDUCED FOLLICLE GROWTH. Judith McNeilly, Elaine Hulme, Yvonne Brown, Norah Spears, Alison Murray, Alan McNeilly. MRC Human Reproductive Sciences Unit, Edinburgh, United Kingdom; University of Edinburgh, Edinburgh, United Kingdom.

14:15. 263. ACTIVATION OF TOLL-LIKE RECEPTORS 2 AND 4 ON CUMULUS CELLS OF OVULATED CUMULUS OOCYTE COMPLEXES STIMULATES PRODUCTION OF CYTOKINES/CHEMOKINES THAT CAN INDUCE SPERM CAPACITATION LEADING TO SUCCESSFUL FERTILIZATION. Masayuki Shimada, Yoshiari Yanai, Tetsuji Okazaki, JoAnne Richards. Hiroshima University, Higashi-Hiroshima, Hiroshima, Japan; Baylor College of Medicine, Houston, TX.

14:30. 264. AMP-ACTIVATED PROTEIN KINASE (AMPK) IS INVOLVED IN FOLLICLE-STIMULATING HORMONE (FSH)-INDUCED MOUSE OOCYTE MEIOTIC MATURATION. Jing Chen, Stephen Downs. Marquette University, Milwaukee, WI.

14:45. 265. REGULATION OF CUMULUS-OOCYTE GAP-JUNCTIONAL COMMUNICATION IN PORCINE DURING IN VITRO MATURATION; GONADOTROPIN-INDEPENDENT INCREASES OF CONNEXIN 43 PROTEIN. Maxime Sasseville, Marie-Claude Gagnon, Christine Guillemette, Robert Gilchrist, Francois Richard. Université Laval, Québec, QC, Canada; University of Adelaide, Adelaide, South Australia, Australia.

15:00. 266. AURORA KINASES REGULATE MOUSE OOCYTE CHROMATIN REMODELING AND HISTONE H3 PHOSPHORYLATION. Jason Swain, Jingwen Wu, Jun Ding, Gary Smith. University of Michigan, Ann Arbor, MI; Fertility Center of San Antonio, San Antonio, TX; Shanghai Jiaotong University School of Medicine, Shanghai, China.

15:15. 267. PROTEIN KINASE C DELTA INTERACTS WITH MICROTUBULE ORGANIZING CENTER (MTOC)-ASSOCIATED PROTEINS AND REGULATES MEIOTIC SPINDLE ORGANIZATION IN MOUSE OOCYTES. Wei Ma, Jessica Koch, Maria Viveiros. School of Veterinary Medicine, University of Pennsylvania, Kennett Square, PA.

15:30. 268. FERTILIZATION-INDUCED CALCIUM RELEASE IN THE ZEBRAFISH EGG: POLARITY AND COMPARTMENTALIZATION. William Kinsey, Dipika Sharma. Univ. of Kansas Medical Center, Kansas City, KS.

15:45. 269. ELECTRON AND FLUORESCENT MICROSCOPIC ANALYSES OF THE EFFECTS OF SUPPRESSION OF SPERM-INDUCED Ca²⁺ SIGNALING ON POST-FERTILIZATION MEMBRANE AND CORTICAL REMODELING IN MOUSE EGGS. Diane Dalo, Allison Gardner, John McCaffery, Janice Evans. Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; Johns Hopkins University, Baltimore, MD.

**Platform Session 8. Reproductive Technologies 1:
 Nuclear Transfer**

Chair: TBA
 Monday, July 23, 2007

14:00 - 16:00
 Location: Salons C-D

14:00. 270. A CLONED TOY POODLE PRODUCED FROM SOMATIC CELLS DERIVED FROM AN AGING (14-YEAR-OLD) FEMALE DOG. Goo Jang, Sogun Hong, HyunJoo Oh, MinKyu Kim, Jungeun Park, HyeJin Kim, SungKeun Kang, DaeYong Kim, ByeongChun Lee. College of Vet. Med., Seoul National University, Seoul, South Korea.

14:15. 271. EFFECT OF SEASON AND OVARIAN STATUS ON IN VITRO NUCLEAR MATURATION OF DOMESTIC CAT OOCYTES. Lilian Martins, Claudia Fernandes, Fernanda Landim-Alvarenga, Maria Denise Lopes. FMVZ/Unesp, Botucatu, Sao Paulo, Brazil.

14:30. 272. WITHDRAWN.

14:45. 273. CULTIVATION PERIOD FOR MATURATION OF RECIPIENT OOCYTES AND THE DEVELOPMENTAL ABILITY OF CLONED PORCINE EMBRYOS. Takuya Wakuya, Satoshi Sugimura, Ken-ichi Ymanaka, Hiroshi Sasada, Eimei Sato. Tohoku University, Sendai, Japan.

15:00. 274. PRIMARY FOLLICLE CULTURE FOR SECURING DEVELOPMENTALLY COMPETENT OOCYTE; BLASTOCYST FORMATION AFTER IN VITRO CULTURE AND PARTHENOGENETIC ACTIVATION. Cho Rong Yoo, Moon Hwan Choi, In Wook Kim, Seung Pyo Gong, Eun Ju Lee, Jeong Mook Lim. Seoul National University, Seoul, South Korea.

15:15. 275. RETRIEVAL OF PREANTRAL FOLLICLE FROM NEONATAL OVARY FOR UTILIZING AS OOCYTE

DONOR. In Wook Kim, Cho Rong Yoo, Moon Hwan Choi, Seung Pyo Gong, Eun Ju Lee, Jae Hee Lee, Jeong Mook Lim. Seoul National University, Seoul, South Korea.

15:30. 276. NUCLEAR TRANSFER AND EMBRYONIC STEM CELL TECHNIQUES CAN RESCUE GENOME OF MOUSE CELLS FROZEN WITHOUT CRYOPROTECTOR. Jinsong Li, Peter Mombaerts. The Rockefeller University, New York, NY.

15:45. 277. SOMATIC CELL NUCLEAR TRANSFER USING DONOR CELLS SELECTED FOR DNA METHYLTRANSFERASE 1 (DNMT1) EXPRESSION. Karen Moore, Stacey Goicoa, Ewa Wroclawska. University of Florida, Gainesville, FL.

Platform Session 9. Gene Expression in Endocrine Tissues 2: Novel Regulators and Mechanisms

Chairs: Lane K. Christenson, Ph.D., and Sylvia C. Hewitt
Monday, July 23, 2007

14:00 - 16:00
Location: Salon E

14:00. 278. A ROLE FOR NOTCH SIGNALING DURING FOLLICULOGENESIS IN THE MOUSE. Daniel Trombly, Kelly Mayo. Northwestern University, Evanston, IL.

14:15. 279. DELETION OF RETINOBLASTOMA PROTEIN (RB) IN MOUSE OVARIAN GRANULOSA CELLS LEADS TO PROGRESSIVE INFERTILITY. Claudia Andreu-Vieyra, Ruihong Chen, Martin Matzuk. Baylor College of Medicine, Houston, TX.

14:30. 280. HORMONAL REGULATION OF BONE MORPHOGENETIC PROTEIN RECEPTOR (BMP) EXPRESSION IN PERINATAL HAMSTER OVARY, AND THE EFFECT OF BMPs ON THE FORMATION AND DEVELOPMENT OF PRIMORDIAL FOLLICLES. Cheng Wang, Shyamal Roy. University of Nebraska Medical Center, Omaha, NE.

14:45. 281. mTOR KINASE FUNCTIONS AS A NOVEL MITOTIC CHECKPOINT IN MAMMALIAN GRANULOSA CELLS. Joshua Johnson, Aylin Yaba, Andrea Borini, Veronica Bianchi, William Murk. Yale University School of Medicine, New Haven, CT; Tecnobios Riproduzione, Bologna, Italy.

15:00. 282. ROLE OF TETHERED ESTROGEN RECEPTOR MECHANISMS IN UTERINE RESPONSES. Sylvia Hewitt, J. Larry Jameson, Kenneth Korach. NIEHS, Research Triangle Park, NC; Northwestern University Feinberg School of Medicine, Chicago, IL.

15:15. 283. AN UPSTREAM ENHANCER REGION LOCATED AT -1810/-1666 bp OF 5' FLANKING SEQUENCE PARTIALLY CONFERS DIFFERENTIAL ACTIVITY OF THE PORCINE GnRH RECEPTOR GENE PROMOTER IN SWINE LINES WITH DIVERGENT OVULATION RATES. Jacqueline Smith, Rebecca Cederberg, Brett White. University of Nebraska-Lincoln, Lincoln, NE.

15:30. 284. INCREASED LGR8 EXPRESSION BY ANDROGENS IS NECESSARY FOR GUBERNACULUM DEVELOPMENT AND INGUINOSCROTAL TESTIS DESCENT IN LH RECEPTOR KNOCKOUT ANIMALS. Fangping Yuan, Ch.V. Rao, Zhenmin Lei. University of Louisville Health Sciences Center, Louisville, KY.

15:45. 285. INSULIN REDUCES THE mRNA ABUNDANCE OF THE PROGESTERONE CATABOLIC ENZYMES CYTOCHROME P450 2C AND 3A IN THE DAIRY COW. Caleb Lemley, Stephen Butler, W. Ronald Butler, Matthew Wilson. West Virginia University, Morgantown, WV; Cornell University, Ithaca, NY.

Platform Session 10. Implantation, Pregnancy, & Parturition 1

Chairs: Zuzana Strakova, Ph.D., and Prajna Banerjee
Monday, July 23, 2007

14:00 - 16:00
Location: Salon F

14:00. 286. FOXA2 IS ESSENTIAL FOR MURINE ENDOMETRIAL GLAND DEVELOPMENT AND FERTILITY. Jae-Wook Jeong, Kevin Lee, Inseok Kwak, Klaus Kaestner, John Lydon, Francesco DeMayo. Baylor College of Medicine, Houston, TX; University of Pennsylvania School of Medicine, Philadelphia, PA.

14:15. 287. FOCAL ADHESIONS ASSEMBLE BETWEEN OVINE MYOMETRIAL CELLS DURING PREGNANCY IN RESPONSE TO MECHANOSENSATION/MECHANOTRANSDUCTION AND ARE DISMANTLED AFTER PARTURITION. Robert Burghardt, Bar Nguyen, James Burghardt, James Taylor II, Thomas Spencer, Greg Johnson. Texas A&M University, College Station, TX.

14:30. 288. PROKINETICIN 1 INDUCES COX-2 EXPRESSION AND PROSTAGLANDIN SYNTHESIS IN HUMAN ENDOMETRIAL CELLS AND FIRST TRIMESTER DECIDUA VIA A Gq-COUPLED PATHWAY. Jemma Evans, Kevin Morgan, Hilary Critchley, Robert Millar, Henry Jabbour. Medical Research Council, Edinburgh, United Kingdom; MRC Human Reproductive Sciences Unit, Edinburgh, United Kingdom; University of Edinburgh, Edinburgh, United Kingdom.

14:45. 289. INVOLVEMENT OF SPHINGOSINE-1-PHOSPHATE (S1P) AND SECRETED PHOSPHOPROTEIN 1 (SPP1) IN REGULATING UTERINE ANGIOGENESIS FOR OVINE PREGNANCY. Kathrin Dunlap, Esther Mendoza, Robert Burghardt, Thomas Spencer, Fuller Bazer, Kayla Bayless, Greg Johnson. Texas A&M University, College Station, TX; Texas A&M University System Health Science Center, College Station, TX.

15:00. 290. SECRETED PHOSPHOPROTEIN 1 ISOLATED FROM UTERINE SECRETIONS PROMOTES INTEGRIN-MEDIATED ADHESION OF PORCINE TROPHECTODERM CELLS. David Erikson, Robert Burghardt, Laurie Jaeger, Kayla Bayless, Greg Johnson. Texas A&M University, College Station, TX; Texas A&M University System Health Science Center, College Station, TX.

15:15. 291. DOWN-REGULATION OF AMP-ACTIVATED PROTEIN KINASE IN FETAL MUSCLE OF OBESE, OVERNOURISHED PREGNANT SHEEP. Min Du, Bing

Han, Mei Zhu, Peter Nathanielsz, Stephen Ford. University of Wyoming, Laramie, WY; University of Texas, Health Sciences Center, San Antonio, TX.

15:30. 292. INSULIN SIGNALING AND AMP-ACTIVATED PROTEIN KINASE ARE DOWN-REGULATED IN SKELETAL MUSCLE OF OVERNOURISHED, OBESE PREGNANT SHEEP. Bing Han, Stephen Ford, Mei Zhu, Peter Nathanielsz, Min Du. University of Wyoming, Laramie, WY; University of Texas, Health Sciences Center, San Antonio, TX.

15:45. 293. INTENSE BUT SHORT TERM STRESS FOLLOWING CONCEPTION ALTERS OVINE FETAL DEVELOPMENT. Jonathan Hill, Jennifer Smith, Drewe Ferguson, Guillermo Jauregui, Martín Panarace, Jonathan Hill. CSIRO Livestock Industries, Armidale, NSW, Australia; Goyaike S.A.A.C.I y F Biotecnología Animal, San Joaquín, Carmen de Areco CP, Argentina.

Platform Session 11. Genomics and Proteomics 1

Chairs: Aleksandar Rajkovic, M.D., Ph.D., and
Joy McIntosh, Ph.D.
Monday, July 23, 2007

14:00 - 16:00
Location: Salons J-K

14:00. 294. MTHFR-DEFICIENT MICE AS A MODEL FOR EPIGENETIC DISTURBANCE OF SPERMATOGENESIS THROUGH FOLATE PATHWAY DISRUPTION. Duncan Cushnie, Donovan Chan, Oana Neaga, Andrea Lawrence, Rozen Rima, Jacquetta Trasler. McGill University, Montreal Children's Hospital Research Department, Montreal, QC, Canada.

14:15. 295. MICROARRAY ANALYSIS OF GENE EXPRESSION IN THE PRIMATE OVULATORY FOLLICLE: VALIDATION OF SELECTED GENE TRANSCRIPTS BY REAL-TIME PCR. Fuhua Xu, Richard Stouffer, Jay Wright, Alistair Bahar, Joerg Mueller, Gabriele Leder, Michaele Peters, Tim Wintermantel, Bernhard Lindenthal. Oregon National Primate Research Center, Beaverton, OR; Bayer Schering Pharma AG, Berlin, Germany; Oregon Health & Science University, Portland, OR.

14:30. 296. DIFFERENTIAL GENE EXPRESSION PROFILING OF DAY 45 PLACENTA IN CHROMATIN TRANSFER AND IN VITRO FERTILIZATION-DERIVED CATTLE FETUSES EVALUATED BY TWO MICROARRAY PLATFORMS. Sergio Machado, Fernando Mesquita, Angela Edwards, Zhongde Wang, Poothappillai Kasinathan, James Robl, Romana Nowak. University of Illinois, Urbana, IL; Hematech, Inc., Sioux Falls, SD.

15:00. 297. THE EFFECTS OF LUTEINIZING HORMONE ABLATION/REPLACEMENT VERSUS STEROID ABLATION/REPLACEMENT ON GENE EXPRESSION IN THE PRIMATE CORPUS LUTEUM. Cecily Bishop, Jon Hennebold, Richard Stouffer. Oregon National Primate Research Center, Oregon Health and Sciences University, Beaverton, OR.

15:15. 298. THE OVIDUCTAL SPERM RESERVOIR: OVIDUCTAL ANNEXINS AS RECEPTORS FOR BULL SPERM BSP PROTEINS. George Ignatz, Margaret Cho, Susan Suarez. Cornell University, Ithaca, NY.

15:30. 299. BOTH GROWTH DIFFERENTIATION FACTOR 9 (GDF9) AND BONE MORPHOGENETIC PROTEIN 15 (BMP15) REGULATE OVULATION RATE IN CATTLE. Jennifer Juengel, Norma Hudson, Keith Hamel, Martin Berg, Kenneth McNatty. AgResearch, Wallaceville Animal Research Centre, Upper Hutt, New Zealand; AgResearch, Reproductive Technologies, Hamilton, New Zealand.

15:45. 300. ENDOGENOUS JAAGSIEKTE SHEEP RETROVIRUSES (enJSRVs): LOCI IDENTIFICATION AND TRANSCRIPTION PROFILE IN THE CONCEPTUS. Sarah Black, Frederic Arnaud, Marco Carporale, Massimo Palmarini, Thomas Spencer. Texas A&M University, College Station, TX; University of Glasgow Veterinary School, Glasgow, Scotland, United Kingdom.

14:45. 301. CHANGES IN THE TRANSCRIPTOME OF BOVINE OVARIAN CORTICAL PIECES DURING FOLLICLE ACTIVATION IN VITRO. Ming Yang, Joanne Fortune. Cornell University, Ithaca, NY.

Platform Session 12. Environment, Nutrition & Toxicology 2: Developmental Effects of EDCs on Females

Chairs: Patricia A. Hunt, Ph.D., and Melissa Pepling
Monday, July 23, 2007

14:00 - 16:00
Location: Salons L-M

14:00. 302. METHOXYCHLOR EXPOSURE REDUCES THE LEVELS OF CELL CYCLE REGULATORS IN MOUSE OVARIAN ANTRAL FOLLICLES. Rupesh Gupta, Sharon Meachum, Humphrey Yao, Jodi Flaws. University of Illinois at Urbana-Champaign, Urbana, IL.

14:15. 303. DEVELOPMENTAL EXPOSURE TO XENOBIOTIC ESTROGENS PERMANENTLY PROGRAMS EXPRESSION OF EXTRACELLULAR MATRIX AND ADHESION MOLECULES IN A MOUSE ENDOMETRIOSIS MODEL. Alison Ghormley, Jake Redel, Amy Schroder, Maija Steinberg, Kathy Sharpe-Timms, Susan Nagel. University of Missouri-Columbia, Columbia, MO.

14:30. 304. ESTROGEN EXPOSURE FROM BIRTH AFFECTS UTERINE GENE EXPRESSION IN NEONATAL GILTS THAT PERSISTS IN PREGNANT ADULTS. Joseph Chen, Amy-Lynn Frankshun, Anne Wiley, Teh Yuan Ho, Frank Bartol, Carol Bagnell. Rutgers University, New Brunswick, NJ; Auburn University, Auburn, AL.

14:45. 305. EARLY INVOLVEMENT OF AKT SIGNALING IN 4-VINYLCYCLOHEXENE DIEPOXIDE-INDUCED OVARIAN FOLLICLE LOSS IN RATS. Patricia Hoyer, Patricia Christian, Shannon Fernandez. University of Arizona, Tucson, AZ.

15:00. 306. EFFECT OF DIBUTYL PHTHALATE ON URINARY ESTROGEN EXCRETION IN THE PREGNANT

LABORATORY MACAQUE. Nancy Gee, Jiangang Chen, James Overstreet, Bill Lasley. University of California, Davis, Davis, CA.

15:15. 307. SUPPRESSION OF THE PROLIFERATION OF GRANULOSA CELLS BY 2,3,7,8-TETRACHLORODIBENZO-*p*-DIOXIN IN GONADOTROPIN-TREATED IMMATURE RAT OVARY. Nak kun Jung. Chonnam National University, Gwang-Ju Metro-City, Chonnam, South Korea.

15:30. 308. EXPOSURE TO ARSENIC COMPROMISES ZONA ESCAPE IN HAMSTER EMBRYO. Moussa Diawara, Dave Unis. Colorado State University-Pueblo, Pueblo, CO.

15:45. 309. INVESTIGATING THE MECHANISM OF NEONATAL DIETHYLSTILBESTROL-INDUCED OVARIAN DISRUPTION BY ORGAN TRANSPLANTATION INTO THE HAMSTER CHEEK POUCH. Imala Alwis, Jeffrey May, William Hendry. Wichita State University, Wichita, KS.

POSTER SESSION C
Tuesday, July 24, 2007

07:30 – 10:00
Salons G, H, and I

Comparative Reproduction

310. OBSTRUCTIVE SLEEP APNEA IN MALE VERSUS FEMALE. Bharat Bhushan, Randeep Guleria. All India Institute of Medical Sciences, New Delhi, India.

311. THE PRESENCE AND ROLES OF GONADOTROPIN-RELEASING HORMONE IN THE REPRODUCTION OF CORALS. Ching-Fong Chang, Wen-Hung Twan, Jiang-Shiou Hwang, Hua-Fang Wu. National Taiwan Ocean University, Keelung, Taiwan.

312. OVARIAN EXPRESSION OF GENES ENCODING FIGalpha AND DAZL IN A MARSUPIAL, THE BRUSHTAIL POSSUM (*Trichosurus vulpecula*). Douglas Eckery, Lisa Haydon, Brian Thomson, Jennifer Juengel. Victoria University of Wellington, Wellington, New Zealand; AgResearch, Ltd, Upper Hutt, New Zealand.

313. ANALYSIS OF IMMUNOREACTIVE INHIBIN α -SUBUNIT THROUGHOUT THE ESTROUS CYCLE OF ASIAN AND AFRICAN ELEPHANTS. Jackie Hoffman, Coralie Munro, Adam Davis, Janine Brown. Emory University, Athens, GA; UC Davis, Davis, CA; University of Georgia, Athens, GA; Smithsonian National Zoological Park Conservation & Research Center, Front Royal, VA.

314. DETECTION OF TESTICULAR GERM STEM CELLS USING EMA-1 AND SSEA-1 ANTIBODIES IN NONDOMESTIC AVIAN SPECIES. Thomas Jensen, Barbara Durrant. Zoological Society of San Diego, Escondido, CA.

315. EVIDENCE THAT LUTEINIZATION CAPACITY OF GRANULOSA CELLS FROM DOMINANT FOLLICLES IS DIMINISHED IN CATTLE WITH A DEPLETED OVARIAN RESERVE. Fermin Jimenez-Krassel, George Smith, Pat Lonergan, Alexander Evans, James Ireland. Michigan State University, East Lansing, MI; University College Dublin, Belfield, Dublin, Ireland.

316. GALECTIN-15 (LGALS15): A GENE UNIQUE TO SHEEP AND GOATS? Shaye Lewis, Jennifer Farmer, Robert Burghardt, Gary Newton, David Adelson, Fuller Bazer, Thomas Spencer. Texas A&M University, College Station, TX; Prairie View A&M University, Prairie View, TX.

317. METABOLITE, ELECTROLYTE, AND ENZYMATIC COMPOSITION OF BUBALINE FOLLICULAR FLUID. Sumanta Nandi, V. Girish Kumar, B.M. Manjunatha. NIANP, Bangalore, India; KVAFSU, Bangalore, India.

318. TESTOSTERONE STIMULATION OF PROGESTERONE PRODUCTION BY HEN (*Gallus domesticus*) GRANULOSA CELLS DIFFERS ACCORDING TO THE DEGREE

OF FOLLICLE MATURATION. Lucia Rangel, Ana Rodriguez, Susana Rojas, Carlos Gutierrez. Universidad Nacional Autonoma de México, Mexico City, D.F., Mexico.

319. EXPRESSION OF MMP-2, -9, AND TIMP-2 IN EQUINE GRANULOSA CELLS AND THE IMPACT OF ELEVATED INSULIN IN VITRO. Dawn Sessions, Mandi Vick, Barry Fitzgerald. University of Kentucky, Lexington, KY.

320. REPRODUCTIVE MONITORING OF FEMALE GREAT APES BY URINARY ANALYSIS. Keiko Shimizu, Toshifumi Udono, Masato Takeda, Etsuo Narushima, Masato Yoshihara, Chisato Douke, Chihiro Tanaka, Linda van Elsacker. Primate Research Institute, Kyoto University, Inuyama, Aichi, Japan; Sanwa Kagaku Kenkyusho Co., Ltd., Kumamoto, Japan; Osaka Municipal Tennoji Zoological Gardens, Osaka, Japan; Ueno Zoological Gardens, Ueno, Tokyo, Japan; Tokyo University of Agriculture and Technology, Fuchu, Tokyo, Japan; Royal Zoological Society of Antwerp, Antwerpen, Belgium.

321. PHOTOSTIMULATION INDUCES IN SITU HYBRIDIZATION EXPRESSION OF DEIODINASE II IN THE TUBERAL HYPOTHALAMUS OF PHOTOSTIMULATED-PHOTOSENSITIVE BUT NOT PHOTOSTIMULATED-PHOTOREFRACTORY TURKEY HENS. Michael Steinman. University of California, Davis, CA.

322. HUMAN-LIKE MENSTRUAL CYCLE EXHIBITED IN WILD FULVOUS FRUIT BATS (*Rousettus leschenaultia*). Hongmei Wang, Xiaoping Zhang, Cheng Zhu, Haiyan Lin, Shuyi Zhang. Institute of Zoology, Chinese Academy of Sciences, Beijing, China; East China Normal University, Shanghai, China.

Diseases of the Reproduction System

323. EPITHELIAL LINEAGE OF OVARIAN CARCINOMA OF THE LAYING HEN *Gallus domesticus*. Kristine Ansenberger, Yan Zhuge, Jo Ann Lagman, Cassandra Mahon, Janice Bahr, Dale Hales. University of Illinois at Chicago, Chicago, IL; University of Illinois at Urbana-Champaign, Urbana, IL.

324. PROSTAGLANDIN E2 SIGNALING IN PATHOPHYSIOLOGY OF ENDOMETRIOSIS IN HUMAN. Joe Arosh, JeHoon Lee, Royce Rodriguez, Anna Starzinski-Powitz, Sakhila Banu. College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX; Texas A&M University, College Station, TX; Johann-Wolfgang-Goethe-Universitaet, Frankfurt, Germany.

325. CURCUMIN-INDUCED CHANGES IN TP53 AND CYCLIN D1 ENHANCE CYTOTOXIC EFFECT OF CISPLATIN IN HUMAN OVARIAN CANCER CELLS. Kathleen Austin, Edward Van Kirk, N. Sreejayan, William Murdoch, Brenda Alexander. University of Wyoming, Laramie, WY.

326. GENE EXPRESSION PROFILES IN HUMAN IMMORTALIZED ENDOMETRIOTIC EPITHELIAL AND STROMAL CELLS: CYCLOOXYGENASE-2 REGULATES CELL PROLIFERATION, MIGRATION AND INVASION. Sakhila Banu, Thenmozhi Subbarao, JeHoon Lee, Anna Starzinski-Powitz, Joe Arosh. College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, College Station, TX; Texas A&M University, College Station, TX; Johann-Wolfgang-Goethe-Universitaet, Frankfurt, Germany.

327. CYST FORMATION IN HIGH-YIELD DAIRY COWS IS ASSOCIATED WITH LOW INSULIN LEVEL. Ruth Brawtal, Svieta Pen. Agricultural Research Organization, Bet Dagan, Israel.

328. EFFECT OF PROGESTERONE AND RU486 ON CISPLATINUM RESISTANCE IN OVARIAN CANCER CELLS. Esther Calderon, Elizabeth Latsch, John Stalvey. Kent State University, Kent, OH.

329. ACCELERATION OF OVARIAN TUMORS IN FORKO MICE BRED IN A SUSCEPTIBLE SWXJ GENETIC BACKGROUND. Xinlei Chen, Jayaprakash Aravindakshan, M. Ram Sairam. Institute of Clinical Research of Montreal (IRCM), Montreal, QC, Canada.

330. EFFECTS OF TESTICULAR TORSION ON SERUM- AND GLUCOCORTICOID-RESPONSIVE KINASE (SGK) AND STEROIDOGENESIS IN RATS. Yu-Min Cho, Paulus Wang. Department of Physiology, National Yang-Ming University, Taipei, Taiwan.

331. WITHDRAWN.

332. PROTEIN EXPRESSION OF STEROIDOGENIC ENZYMES IN OVARIAN TUMORS OF THE DOMESTIC HEN. James Giles, J. Mason, Patricia Johnson. Cornell University, Ithaca, NY; University of Edinburgh, Edinburgh, Scotland, United Kingdom.

333. ACTIVATION OF SMOOTHENED IN THE MURINE UTERUS. Kevin Lee, Heather Franco, Jae-Wook Jeong, Lisa White, Sophia Tsai, John Lydon, Francesco DeMayo. Baylor College of Medicine, Houston, TX.

334. FSH MODULATES NOT ONLY THE PROLIFERATION BUT ALSO THE PACLITAXEL SENSITIVITY OF TUMORIGENIC MOUSE OVARIAN SURFACE EPITHELIAL CELLS (ID8). Yonghai Li, LaReash Bridges, Suhasini Ganta, Lisa Freeman. Kansas State University, Manhattan, KS.

Environment, Nutrition and/or Toxicology

335. SPECIES DIFFERENCES IN 7,12-DIMETHYLBENZ[A]ANTHRACENE (DMBA)-INDUCED OVOTOXICITY IN AN IN VITRO OVARIAN CULTURE SYSTEM. Yoshiyuki Igawa, Kathila Rajapaksa, Glenn Sipes, Patricia Hoyer. University of Arizona, Tucson, AZ.

336. GLUTATHIONE-S-TRANSFERASE EXPRESSION IN THE MURINE OVARY. Aileen Keating, I. Glenn Sipes, Patricia Hoyer. University of Arizona, Tucson, AZ.

337. PHYSICAL AND SEXUAL DEVELOPMENT AND REPRODUCTIVE FUNCTION OF THE FEMALE OFFSPRING OF DIABETIC RATS. Wilma Kempinas, Raquel Spadotto, Elaine Amorim, Juliana Perobelli, Antonio Godinho, Débora Damasceno. Institute of Biosciences, São Paulo State University, Botucatu, SP, Brazil; School of Medicine, São Paulo State University, Botucatu, SP, Brazil; Institute of Biology, State University of Campinas, Campinas, SP, Brazil.

338. THE EFFECT OF CISPLATIN ON THE COPPER TRANSPORTERS AND SPERMATOGENESIS IN THE TESTIS. Yichen Lin, Jessica Cobarrubia, Pragati Sawhney, John Richburg. University of Texas at Austin, Austin, TX.

339. EFFECTS OF NUTRIENT RESTRICTION DURING EARLY GESTATION ON POSTNATAL GROWTH, CARCASS AND ORGAN WEIGHTS OF BEEF STEERS. Nathan Long, Monica Prado-Cooper, Clinton Krehbiel, Robert Wettemann. Oklahoma State University, Stillwater, OK.

340. EFFECTS OF EYACULATORY FREQUENCY AND REMOVAL OF THE BULBOURETHRAL AND COAGULATING GLANDS ON THE CHARACTERISTICS OF SEMEN IN THE RAT. Aurora Lopez, Jose Tlachi-Lopez, Rene Zempoalteca, Javier Velazquez-Moctezuma, Rosa Angelica Lucio. Universidad Autonoma de Tlaxcala, Tlaxcala, Mexico; Universidad Autonoma Metropolitana-Iztapalapa, Mexico DF, Mexico.

341. EXAMINATION OF METABOLIC HORMONES AND BLOOD GLUCOSE CONCENTRATIONS IN FEMALE MICE ON DIETS THAT FAVOR PRONOUNCED CHANGES IN SEX RATIOS OF PUPS BORN. Jiude Mao, Andrei Alexenko, Emily Fountain, Jeffrey Whyte, Kristie Grimm, Michael Roberts, Cheryl Rosenfeld. University of Missouri-Columbia, Columbia, MO.

342. FETAL AND NEONATAL MXC EXPOSURE IN RATS ALTERS FOLLICLE STAGE DISTRIBUTION AND DECREASES THE OVARIAN LEVELS OF ANTI-MULLERIAN HORMONE IN EARLY POSTNATAL RATS. Jason Marano, Mehmet Uzumcu. Rutgers University, New Brunswick, NJ.

343. EFFECT OF FETAL EXPOSURE OF ALL-TRANS RETINOIC ACID ON DNA METHYLATION IN MOUSE FETUSES WITH CLEFT PALATE. Yoshiharu Matsuno, Motone Kuriyama, Hideki Fukata, Koji Sato, Chisato Mori. Chiba University, Chiba, Japan; Niigata University of Pharmacy and Applied Life Sciences, Nigata, Japan.

344. EFFECTS OF 30% NUTRIENT RESTRICTION (NR) ON THE MATERNAL AND FETAL BABOON HYPOTHALAMO-PITUITARY-ADRENAL AXES (HPAA) AT 0.5 AND 0.9 OF GESTATION (G). Thomas McDonald, Stephen Ford, Myrna Miller, Dean Myers, Peter Nathanielsz. University of Texas Health Science Center, San Antonio, TX; University of Oklahoma Health Sciences Center, Oklahoma City, OK; University of Wyoming, Laramie, WY.

345. EFFECTS OF LIGHT DURING POSTNATAL DEVELOPMENT ON TESTIS AND THYROID FUNCTION AT ADULTHOOD IN MALE MICE. Chamindrani Mendis-Han-

dagama, Kellie Fecteau, Nilanthi Jayasundera. The University of Tennessee, Knoxville, TN.

Fertilization and Early Embryogenesis

346. OOCYTE ACTIVATION BY STRONTIUM IN THE PRESENCE OF CALCIUM SUPPORTS FULL TERM DEVELOPMENT OF SOMATIC CELL CLONED EMBRYOS. Satoshi Kishigami, Teruhiko Wakayama. CDB, RIKEN, Hyogo, Japan.

347. GROWTH HORMONE ALTERS THE EARLY UTERINE ENVIRONMENT. Jill Koch, Caleb Lemley, Ronald Magness, Matthew Wilson. West Virginia University, Morgantown, WV; University of Wisconsin, Madison, WI.

348. EFFECT OF AMPHIREGULIN ON PREIMPLANTATION DEVELOPMENT OF IN VITRO FERTILIZED AND PARTHENOGENETIC PORCINE EMBRYOS. Ju Hyun Lee, Byeong Gyun Jeon, Eui Bae Jeung, Sang Hwan Hyun. College of Veterinary Medicine, Chungbuk National University, Cheongju, Chungbuk, South Korea.

349. CYCLOSPORIN A IMPROVES PROLIFERATION AND INVASIVENESS IN VITRO OF HUMAN FIRST-TRIMESTER TROPHOBLAST CELLS VIA ERK1/2-MEDIATED AP1 AND CA²⁺/CALCINEURIN/NFAT SIGNALING PATHWAYS. Da-Jin Li. Fudan University Shanghai Medical College, Shanghai, China.

350. ISOLATING Na⁺K⁺ATPase IN BOAR (*Sus scrofa*) SPERMATOZOA MEMBRANES. Ian Mahoney, Mary Buhr. University of Guelph, Guelph, ON, Canada.

351. EFFECT OF THE ABSENCE OF THE OOCYTE-DERIVED Dnmt1o PROTEIN: CONSEQUENCES OF EPIGENETIC MOSAICISM ON POSTIMPLANTATION EMBRYOS AND PLACENTAE. Josee Martel, Amanda Fortier, Raluca Verona, Marisa Bartolomei, J. Richard Chaillet, Jacquetta Trasler. McGill University-Montreal Children's Hospital Research Institute, Montreal, QC, Canada; University of Pennsylvania, Philadelphia, PA; University of Pittsburgh, Pittsburgh, PA.

352. BINDING PATTERNS OF BOVINE SEMINAL PLASMA PROTEINS BSP A1/A2, BSP 30 kDa AND OSTEOPOINTIN ON EJACULATED SPERM BEFORE AND AFTER INCUBATION WITH ISTHMIC AND AMPULLARY OVIDUCTAL FLUID. Arlindo Moura, Carlos Eduardo Souza, Elisa Monaco, Gary Killian. Federal University of Ceara, Fortaleza, Ceara, Brazil; Pennsylvania State University, State College, PA; The University of Illinois, Urbana, IL.

353. MAMU-AG TRANSCRIPTION IN PREIMPLANTATION EMBRYOS DERIVED FROM SCNT AND IVF IN RHESUS MONKEY. Yuyu Niu, Shihua Yang, Jifeng Yang, Xiechao He, Xianghui Tang, Yunhua Xie, Qi Zhou, Weizhi Ji. Kunming Institute of Zoology, Chinese Academy of Sciences, Kunming, Yunnan, China; Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

354. ANALYSIS OF PATERNAL ALLELE-SPECIFIC METHYLATION AT MOUSE *glt2* DURING EARLY EMBRYOGENESIS. Kamila Nowak, Geneva Stein, Lu Mei He,

Elizabeth Powell, Tamara Davis. Bryn Mawr College, Bryn Mawr, PA.

355. O-LINKED GLYCOSYLATION AND EMBRYONIC GLUCOSE SENSITIVITY IN THE MOUSE. Marie Pantaleon, Georgia Kafer, Peter Kaye. The University of Queensland, Brisbane, QLD, Australia.

356. INVOLVEMENT OF MICRORNAs IN EMBRYONIC GENOME ACTIVATION AS SHOWN BY DICER EXPRESSION IN RAINBOW TROUT. Raghuvveer Ramachandra, Scott Gahr, Caird Rexroad III, Jianbo Yao. West Virginia University, Morgantown, WV; National Center for Cool and Cold Water Aquaculture, Kearneysville, WV.

357. ISOLATION AND CHARACTERIZATION OF BOAR SPERM PROTEINS WITH AFFINITY TO *Concanavalina ensiformis* AGGLUTININ. Salvador Romo, Irma Jimenez, Reyna Fierro, Humberto Gonzalez-Marquez, Guillermo Mendoza-Hernandez, Miguel Betancourt. FES-C, UNAM, Mexico City, Mexico; UAM-IZTAPALAPA, Mexico City, Mexico; Fac. de Medicina, UNAM, Mexico City, Mexico.

358. GM1 DYNAMICS INDICATE MEMBRANE CHANGES ASSOCIATED WITH CAPACITATION IN MURINE SPERMATOZOA. Vimal Selvaraj, Danielle Buttke, Asano Atsushi, Jacquelyn Nelson, Angela Klaus, Gary Hunnicutt, Alexander Travis. Cornell University, Ithaca, NY; Seton Hall University, South Orange, NJ; The Rockefeller University, New York, NY.

Gametogenesis

359. GASZ IS ESSENTIAL FOR MEIOTIC PROGRESSION DURING SPERMATOGENESIS. Lang Ma, Angshumoy Roy, Gregory Buchold, Yi-Nan Lin, Wei Yan, Martin M Matzuk. Baylor College of Medicine, Houston, TX; University of Nevada, School of Medicine, Reno, NV.

360. IN VITRO MATURATION AFFECTS GLOBAL TRANSCRIPTOME ANALYSIS. Blair McCallie, Mandy Katz-Jaffe, David Gardner. Colorado Center for Reproductive Medicine, Englewood, CO.

361. ORGANIZATION OF THE ZONA PELLUCIDA ENVELOPE IN THE GILT HEAD SEABREAM (*Sparus aurata*). Carina Modig, Raldúa Demetrio, Joan Cerdà, Per-Erik Olsson. Department of Natural Sciences, Orebro, Sweden; Lab IRTA-ICM, CHIMA-CSIC, Barcelona, Spain.

362. EXPRESSION ANALYSIS OF TRANSCRIPTS FOR GERM CELL-SPECIFIC GLYCOLYTIC ENZYMES (HK1S, GAPDHS, PGK2, AND LDHC) USING LASER CAPTURE MICRODISSECTION. Chisato Mori, Haruna Shibata, Noriko Nakamura, Edward Eddy. Chiba University, Chiba City, Japan; NIEHS/NIH, Research Triangle Park, NC.

363. CHARACTERIZATION OF THE MITOCHONDRIAL MEMBRANE POTENTIAL IN DOMESTIC CAT TESTICULAR CELLS: POSSIBLE IMPLICATIONS FOR GERM CELL FUNCTION. Paula Mota, Luís Martins, Sandra Amaral, Paulo J. Oliveira, Joao Ramalho-Santos. Center for Neurosciences and Cell Biology, Coimbra, Portugal.

364. ARE STEROIDS OBLIGATORY MEDIATORS OF LH/hCG-TRIGGERED RESUMPTION OF MEIOSIS IN MAMMALS? Shmulik Motola, Malka Popliker, Alex Tsafiriri. The Weizmann Institute of Science, Rehovot, Israel.

365. PFKMS BINDS TO GSTM5 AND TETHERS HK1S TO THE FIBROUS SHEATH IN THE MOUSE SPERM FLAGELLUM. Noriko Nakamura, Chisato Mori, Edward Eddy. National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC; Chiba University, Chiba, Japan.

366. TESTICULAR CELL ADHESION MOLECULE 1 (TCAM1): AN IMPORTANT MEDIATOR OF GERM CELL-SERTOLI CELL INTERACTIONS? Roopa Nalam, Yi-Nan Lin, Martin Matzuk. Baylor College of Medicine, Houston, TX.

367. DIFFERENTIAL GOLGA3 EXPRESSION AND DEFECTIVE SPERMATOGENESIS IN C3FE;B6-repro27. Landry Nfonso, Lisa Bentson, Valentine Agbor, Njotu Agbor, Sara Jorgensen, Sheila Bornstein, Mary Ann Handel, Carol Linder. New Mexico Highlands University, Las Vegas, NM; The Jackson Laboratory, Bar Harbor, ME.

368. EFFECTS OF GROWTH HORMONE ON EMBRYO DEVELOPMENT FROM IN VITRO-MATURED RHESUS MACAQUE OOCYTES. Jenna Nyholt de Prada, Catherine VandeVoort. University of California, Davis, Davis, CA; UC Davis, Sacramento, CA.

369. APOPTOSIS AND IMPRINTING GENE EXPRESSION IN NUCLEAR TRANSFER EMBRYOS DERIVED FROM MHC INBRED MINIATURE PIG SOMATIC CELLS. Mi-Rung Park, In-Sun Hwang, Dong-Hoon Kim, Byoung-Chul Yang, Yeoung-Gyu Ko, Boh-Suk Yang, Gi-Sun Im. National Livestock Research Institute, RDA, Suwon, Kyunggi, South Korea.

370. THE ACTIVITY OF AMINO ACID TRANSPORT SYSTEMS IS DYNAMIC IN GROWING AND MATURING MOUSE OOCYTES. Amélie Pelland, Jay Baltz. Ottawa Health Research Institute, Ottawa, ON, Canada; University of Ottawa, Ottawa, ON, Canada.

371. ISOLATION AND IDENTIFICATION OF 14-3-3 BINDING PROTEINS IN BOVINE SPERMATOZOA. Pawan Puri, Kimberley Myers, Douglas W Kline, Srinivasan Vijayaraghavan. Kent State University, Kent, OH.

372. IDENTIFICATION OF A NOVEL GERM CELL-SPECIFIC mRNA-LIKE TRANSCRIPT (RtGST-1) PREDOMINANTLY EXPRESSED IN EARLY PREVITELLOGENIC OOCYTE IN RAINBOW TROUT (*Oncorhynchus mykiss*). Gao-Feng Qiu, Caird Rexroad III, Jianbo Yao. West Virginia University, Morgantown, WV; National Center for Cool and Cold Water Aquaculture, Kearneysville, WV.

373. DECREASED EXPRESSION OF LKB1, AN AMPK REGULATOR, IN OOCYTES OF DIABETIC MICE. Ann Ratchford, Cybill Esguerra, Kelle Moley. Washington University School of Medicine, St. Louis, MO.

374. CHARACTERIZATION OF THE HUMAN ALPHA SUBUNIT PROMOTER IN THE PLACENTA: DIVERGENT ROLES FOR DNA RESPONSE ELEMENTS IN BASAL ACTIVITY AND RETINOID RESPONSIVENESS. Emily McDonald, Theingi Thway, Michael Wolfe. University of Kansas Medical Center, Kansas City, KS; Amgen Inc., Thousand Oaks, CA.

375. EXPRESSION OF FSH RECEPTOR GENE DURING FSH-INDUCED DIFFERENTIATION OF BUFFALO (*Bubalus bubalis*) GRANULOSA CELLS MAINTAINED IN THE SERUM-FREE CULTURE. Archana Minj, Sukanta Mondal, AK Tiwari, Sadhan Bag, VP Varshney. Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India; National Institute of Animal Nutrition and Physiology, Bangalore, Karnataka, India.

376. THE EXPRESSION AND LOCALIZATION OF APELIN AND ITS RECEPTOR APJ IN THE BOVINE CORPUS LUTEUM. Akio Miyamoto, Kohei Sayama, Koumei Shirasuna, Takayuki Asahi, Takashi Shimizu, Motoki Sasaki, Motozumi Matsui, Yoshinobu Akemi, Dieter Schams, Bajram Berisha. Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Japan; TUM-Weihenstephaner, Munich, Germany; Genetics Hokkaido Association, Sapporo, Japan.

377. CHANGES IN mRNA EXPRESSION ON STEROID-GENIC ENZYMES ASSOCIATED WITH PROGESTERONE PRODUCTION DURING DIFFERENTIATION OF BOVINE THECA CELL IN VITRO CULTURE. Chiaki Murayama, Yuko Hirai, Hitoshi Miyazaki, Akio Miyamoto, Akio Miyamoto, Takashi Shimizu, Takashi Shimizu. Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Japan; University of Tsukuba, Tsukuba, Japan.

378. THE EXPRESSION OF TRANSCRIPTION FACTORS, DAX-1, SF-1 AND LRH-1 FOR REGULATING STEROID-GENESIS IN THE BOVINE CORPUS LUTEUM. Kaya Nagai, Kiemi Sasahara, Motozumi Matsui, Yoshinobu Akemi, Bajram Berisha, Dieter Schams, Takashi Shimizu, Akio Miyamoto. Obihiro University of Agriculture & Veterinary Medicine, Obihiro, Japan; Institute of Physiology, TUM-Weihenstephaner, Munich, Germany; Genetics Hokkaido Association, Sapporo, Japan.

379. INVESTIGATING THE ROLE OF INHIBINS IN OVARIAN FOLLICLE DEVELOPMENT. Ankur Nagaraja, Stephanie Pangas, Martin Matzuk. Baylor College of Medicine, Houston, TX.

380. EXPRESSION OF ADIPONECTIN AND ITS RECEPTORS, AdipoR1 AND AdipoR2, IN THE CHICKEN TESTIS. Olga Ocon-Grove, Susan Krzysik-Walker, Sreenivasa Madhineni, Gilbert Hendricks III, Ramesh Ramachandran. The Pennsylvania State University, University Park, PA.

381. LEPTIN RECEPTOR GENE EXPRESSION IN THE CHOROID PLEXUS IS INFLUENCED BY STAGE OF DEVELOPMENT AND MATERNAL STRESS IN THE GILT. Chad O'Gorman, Elizabeth Gonzales, Matthew Eaton, Paige Williams, Maribel Reyna, Jaimie Laurenz, Jeffery Carroll, Randy Stanko, Duane Keisler, Michelle Garcia. Texas A&M Kingsville, Kingsville, TX; University of Missouri-Columbia, Columbia, MO; USDA-ARS Lubbock, Lubbock, TX.

382. TURNOVER OF STAR PROTEIN: ROLES FOR THE PROTEASOME AND MITOCHONDRIAL PROTEASES. Joseph Orly, Assaf Bahat, Zvi Granot, Sarah Eimerl, Oren Kobilier, Bin Lu, Amos Oppenheim, Carolyn Suzuki. The Hebrew University of Jerusalem, Jerusalem, Israel; Inst. Life Sciences, Jerusalem, Israel; The Hebrew University-Hadassah Medical School, Jerusalem, Israel; Univ of Medicine and Dentistry of New Jersey, New Jersey Med School, Newark, NJ.

383. CLONING, EXPRESSION, AND CHARACTERISTICS OF A G PROTEIN-COUPLED RECEPTOR, GPR30, IN ATLANTIC CROAKER. Yefei Pang, Jing Dong, Peter Thomas. University of Texas at Austin, Port Aransas, TX.

384. SPATIAL AND TEMPORAL REGULATION OF BMP-2, -6, -15 AND GDF-9 mRNA EXPRESSION IN DEVELOPING PORCINE OVARIAN FOLLICLES. Francois Paradis, Gordon Murdoch, Michael Dyck, George Foxcroft, Walter Dixon. University of Alberta, Edmonton, AB, Canada.

385. REGULATION OF THE EXPRESSION OF RESPONSE GENE TO COMPLEMENT 32 (Rgc32) IN RODENT OVARIES. Eunsil Park, Seungho Choi, Thomas Curry, Misung Jo. University of Kentucky, Lexington, KY.

386. EXPRESSION PATTERN OF 20 α -HYDROXYSTEROID DEHYDROGENASE (20 α -HSD) mRNA IN THE PLACENTOME OF SCNT PREGNANT COW AT PARTURITION. Hee-Ja Park, Kwan-Sik Min, Seongsoo Hwang, Byoung-Chul Yang, Gi-Sun Im, Hwan-Hoo Seong, Yeoung-Gyu Ko. Animal Biotechnology Division, National Livestock Research Institute, Suwon, Gyeonggi-do, South Korea; Graduate School of Bio & Information Technology, Hankyong National University, Ansong, Gyeonggi-do, South Korea.

387. EFFECT OF hTERT TRANSFECTION ON DIFFERENTIATION OF BeWo CELLS. Addicam Rao, S Neelima, Rekha Rao. Indian Institute of Science, Bangalore, Karnataka, India.

388. ANDROGENIC CAPACITY OF THE FOLLICLE-DEPLETED OVARY IN VCD-TREATED MICE. Zeliann Rivera, Patricia Christian, Sam Marion, Hedden Brooks, Patricia Hoyer. University of Arizona, Tucson, AZ.

Implantation, Pregnancy, and Parturition

389. PERIPHERAL PLASMA PROGESTERONE CONCENTRATION DURING PERIPARTURIENT PERIOD IN BLACK BENGAL GOATS. S Mondal, MC Pathak, DN Singh, VP Varshney. National Institute of Animal Nutrition and Physiology, Bangalore, Karnataka, India; Indian Veterinary Research Institute, Bareilly, Uttar Pradesh, India.

390. EXPRESSION OF OCCLUDIN IN MOUSE UTERUS DURING ESTROUS CYCLE AND PERIIMPLANTATION PERIOD. Won Heum Na, Han Seung Kang, Myung Chan Gye. Hanyang University, Seoul, South Korea.

391. BLOOD CELL Isg15 AND Oas1 mRNAs ARE INDUCED BY PREGNANCY-ASSOCIATED MECHANISMS OTHER THAN TRAFFICKING THROUGH THE UTERINE

ARTERY AND VEIN. Joao Oliveira, Luiz Henkes, Scott Purcell, Russell Anthony, Thomas Hansen. Colorado State University, Fort Collins, CO; Universidade Federal de Santa Maria, Santa Maria, RS, Brazil.

392. WITHDRAWN.

393. DIFFERENTIAL EXPRESSION OF TRAIL AND DR5 IN PERIIMPLANTATION UTERUS REVEALS DYNAMIC YET PARTIALLY COOPERATIVE PATTERN FOR IMPLANTATION PREPARATION AND DECIDUALIZATION IN MICE. Hongying Peng, Qi Chen, Dongmei Tan, Xiaowei Wei, Bangxia Zhao, Mingzhong He, Guoqi Lai, Yi Tan. Chongqing Medical University, Chongqing, China; Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

394. NONAROMATIZING AND AROMATIZING 19-DEMEETHYLASE PRODUCTS IN THE YOLK-SAC FLUID OF THE EARLY EQUINE CONCEPTUS. James Raeside, Heather Christie. University of Guelph, Guelph, ON, Canada.

395. EXPRESSION OF mRNA FOR ANGIOGENIC FACTORS IN PLACENTAL TISSUES DURING EARLY PREGNANCY IN SHEEP. Lawrence Reynolds, Megan Minten, Mary Lynn Johnson, Grazyna Ptak, Pascalino Loi, Pawel Borowicz, Dale Redmer, Anna Grazul-Bilska. Center for Nutrition and Pregnancy, Fargo, ND; North Dakota State University, Fargo, ND; University of Teramo, Teramo, Italy.

396. ESTROGEN AND INTERLEUKIN-1 β REGULATION OF OSTEOPONTIN, CYCLOOXYGENASE-1, AND CYCLOOXYGENASE-2 EXPRESSION IN THE PORCINE UTERUS. Rachel Roberts, Tamara Knaust, Jason Ross, Daniel Stein, Morgan Ashworth, Rodney Geisert, Frank White. Cameron University, Lawton, OK; Oklahoma State University, Stillwater, OK.

397. STUDY ON THE TEMPORAL EXPRESSION OF INTERFERON-TAU GENE USING CHROMATIN IMMUNOPRECIPITATION (ChIP). Toshihiro Sakurai, Atsushi Sakamoto, Min-Su Kim, Daisuke Sato, Greg Ochs, Mary Roberts, James Godkin, Kazuhiko Imakawa. The University of Tokyo, Tokyo, Japan; The University of Tennessee, Knoxville, TN.

398. EXPRESSION OF PERIATTACHMENT FACTOR mRNA DURING OVINE CONCEPTUS DEVELOPMENT. Purcell Scott, Jeremy Cantlon, Luiz Henkes, George Seidel, Jr., Russell Anthony. Colorado State University, Fort Collins, CO.

399. SALIVARY LIPOCALIN: UNIQUE EXPRESSION AND SECRETION IN THE UTERUS DURING THE ESTROUS CYCLE AND EARLY PREGNANCY IN PIGS. Heewon Seo, Hakhyun Ka. Yonsei University, Wonju, Gangwondo, South Korea.

400. CHARACTERIZATIONS OF TGF β 1 EXPRESSION IN PLACENTOME OF THE KOREAN NATIVE COWS SHOWED DELAYED PARTURITION OF SCNT CALVES. Hwan-Hoo Seong, Yoo-Min Chang, Seongsoo Hwang, Yeoung-Gyu Ko, Boh-Suk Yang. National Livestock Research Institute, Suwon, Gyeonggi-do, South Korea.

Reproductive Technologies

401. INFLUENCE OF OVULATION STATUS, SEASONALITY AND EMBRYO TRANSFER METHOD ON IN VIVO DEVELOPMENT OF CLONED PORCINE EMBRYOS. Ok Jae Koo, Dilip P. Bhandari, Sung Keun Kang, Pan Dong Ryu, Byeong Chun Lee. Seoul National University, Seoul, South Korea; College of Veterinary Medicine, Seoul National University, Seoul, South Korea; Heifer International, Little Rock, AR.

402. ENDOCRINE DYNAMICS SURROUNDING DOMINANT FOLLICLE SELECTION IN CATTLE. Morgan Krause, Sandra Gray, John Gibbons. Clemson University, Clemson, SC.

403. ANALYSIS OF CELL VIABILITY AND CELLULAR CYCLE IN EQUINE FIBROBLASTS CULTURED IN VITRO. Fernanda Landim-Alvarenga, Joao Lima-Neto, Camila Dores, Marjorie Golim, Valeria Silva. FMVZ - UNESP, Botucatu, Sao Paulo, Brazil.

404. THE EFFECT OF GnRH OR hCG GIVEN ON DAY MATING ON OVARIAN FUNCTION IN LOHI SHEEP AT MULTAN, PAKISTAN. Mushtaq Hussain Lashari, Zahida Tasawar. Institute of Pure and Applied Biology, B.Z. University Multan, Multan, Pakistan.

405. EFFECTS OF ANTIOXIDANT AND OXYGEN TENSION ON REACTIVE OXYGEN SPECIES-RESPONSIVE GENE EXPRESSION AFTER TRANSPLANTATION USING HYPOXIA-INDUCED BOVINE OVARIAN TISSUE. Hee Joung Lim, Hye Young Yang, Hee-gyoo Kang. Laboratory of Stem Cell Biology, Seoul, South Korea; Sungnam, Gyenggi, South Korea.

406. EVALUATION OF CULTURE SYSTEMS FOR ATTACHMENT AND PROLIFERATION OF THE SOMATIC CELLS CULTURED FROM OVINE SEMEN. Jie Liu, Mark Westhusin, Duane Kraemer. Texas A&M University, College Station, TX.

407. A SINGLE INJECTION OF LONG-ACTING HUMAN FSH-N4 INCREASES OOCYTE RETRIEVAL COMPARED TO FOLLISTIM DURING OVARIAN HYPERSTIMULATION IN THE DOMESTIC GOAT (*Capra hircus*). Randi Manier, Rhonda Trousdale, Todd Stroud, Abigail Casillo, Christy Bormann, Susan Pollak, Nabil Husami, Andrea Vidali, Charles Long, Joyce Lustbader. Texas A&M University, College Station, TX; Columbia University, New York, NY.

408. COMPARISON OF DIFFERENT CRYOPROTECTANTS ON FERTILITY OF EQUINE FROZEN SEMEN. Cely Melo, Marco Alvarenga, Ana Izabel Villaverde, Gabriel Felício, José Dell'Aqua Jr, Bruna DeVita, Frederico Papa. São Paulo State University - UNESP, Botucatu/SP, São Paulo, Brazil.

409. WITHDRAWN.

410. ANALYSIS OF THE FREQUENCY AND SPECTRUM OF SPONTANEOUS MUTATIONS IN CLONED MICE. Patricia Murphey, Yukiko Yamazaki, C. Alex McMahan, Christi Walter, Ryuzo Yanagimachi, John McCarrey. University of Texas at San Antonio, San Antonio, TX; University

of Hawaii, Honolulu, HI; University of Texas Health Science Center at San Antonio, San Antonio, TX.

411. OPTIMIZING RADIATION DOSES TO PREPARE RAM LAMBS FOR GERM CELL TRANSPLANTS. Jeanette Olejnik, Michael Jackson, Natalka Suchowerska, Sally Stockwell, Keryn Hutton, Muren Herrid, Geoff Hinch, Jonathan Hill. CSIRO Livestock Industries, Armidale, NSW, Australia; University of Sydney, Sydney, NSW, Australia; University of New England, Armidale, NSW, Australia.

**Signaling and Signal Transduction
in Endocrine Tissues**

412. REGULATION OF EXPRESSION OF Timp1 AND Timp3 mRNA IN RAT GRANULOSA CELLS DURING THE PERIOVULATORY PERIOD. Feixue Li, Thomas E. Curry, Jr. University of Kentucky, Lexington, KY.

413. EVIDENCE FOR A LOCAL INHIBITORY EFFECT OF THE CART PEPTIDE ON LH-INDUCED THECAL ANDROSTENEDIONE PRODUCTION. Lv Lihua, Fermin Jimenez-Krassel, Aritro Sen, James Ireland, George Smith. Michigan State University, East Lansing, MI.

414. NICOTINE DECREASES TESTOSTERONE PRODUCTION AND LEYDIG CELL VIABILITY THROUGH CDK5 HYPERACTIVATION. Ho Lin, Mei-Chih Chen, Paulus Wang. National Chung Hsing University, Taichung, Taiwan; National Yang Ming University, Taipei, Taiwan.

415. ACTIVATION OF DIFFERENT SIGNALING PATHWAYS UNDERLINES THE DIFFERENTIAL REGULATION OF eNOS EXPRESSION BY FGF2 AND VEGF IN PLACENTAL ARTERY ENDOTHELIAL CELLS. Eugenia Mata-Greenwood, Dongbao Chen. University of California at San Diego, San Diego, CA.

416. STEROL REGULATORY ELEMENT BINDING PROTEIN-1 IS ACTIVATED BY hCG AND INSULIN IN RAT THECA-INTERSTITIAL CELLS. Palaniappan Murugesan, Pradeep Kayampilly, K.M.J. Menon. University of Michigan Medical School, Ann Arbor, MI.

417. EFFECT OF hCG AND cAMP ON PROGESTERONE PRODUCTION IN LEYDIG CELLS, DURING HYPOXIC CONDITIONS. Garima Nirwal, Bharat Bhushan, Anand Kumar, Pradeep Kumar Chaturvedi. All India Institute of Medical Sciences, New Delhi, India.

418. POSSIBLE ANTIAPOPTOTIC ROLES OF PROSTAGLANDINS IN BOVINE LUTEAL CELLS. Kiyoshi Okuda, Anom Bowolaksono, Ryo Nishimura, Ryosuke Sakumoto, Junichi Komiyama, Tomas J. Acosta. Okayama University, Okayama, Japan; National Institute of Agrobiological Sciences, Ibaraki, Japan.

419. MATING SHUTS DOWN ESTRADIOL NONGENOMIC SIGNALING PATHWAY IN THE RAT OVIDUCT. Alexis Parada-Bustamante, Pedro Orihuela, Mariana Rios, Catherina Cuevas, Maria Ortiz, Horacio Croxatto. Pontificia Universidad Católica de Chile, Santiago, Chile.

420. TUMOR NECROSIS FACTOR alpha MODIFIES THE CILIARY BEAT FREQUENCY (CBF) OF OVIDUCTAL

CILIATED, THROUGH THE PROSTAGLANDINS AND THE NITRIC OXIDE PATHWAY. Alejandra Pérez Sepúlveda, Daniela Carreño, Manuel Villalón. Pontificia Universidad Católica de Chile, Santiago, Chile.

421. SUPPRESSION OF PHOSPHATASE 2A (PP2A) EXPRESSION DOES NOT INHIBIT FGF2- AND VEGF-INDUCED ERK1/2 ACTIVATION IN OVINE FETOPLACENTAL ARTERY ENDOTHELIAL (OFPAE) CELLS. Yang Song, Dongbao Chen, Jing Zheng. University of Wisconsin-Madison, Madison, WI; University of California-San Diego, San Diego, CA.

422. ROLE OF Src TYROSINE KINASE IN GnRH INDUCTION OF THE LUTEINIZING HORMONE BETA-SUBUNIT PROMOTER. Sara Turk, Michael Wolfe. University of Kansas Medical Center, Kansas City, KS.

423. THE MOUSE OVARIAN SURFACE EPITHELIUM IS HETEROGENEOUS AND CONTAINS A POPULATION OF BETA-CATENIN SIGNALING AND CYTOKERATIN-14 POSITIVE CELLS. Macalister Usongo, Pracha Vatsya, Juan Carlos Villaescusa, Albert Santamaria, Francina Munell, Riaz Farookhi. McGill University, Montreal, QC, Canada; Institut de Recerca Hospital Universitaria Vall d'Hebron, Barcelona, Spain; Insititute of Molecular Oncology, Milano, Italy.

424. IS THE UPREGULATION OF VEGF BY hCG IN HUMAN LUTEAL CELLS DEPENDENT ON HIF-1alpha EXPRESSION? Sander van den Driesche, Michelle Myers, Eva Gay, W. Colin Duncan. Centre for Reproductive Biology/QMRI, Edinburgh, United Kingdom.

425. KRUPPEL-LIKE FACTOR 9 REGULATES CELL PROLIFERATION AND COMPARTMENTAL EXPRESSION OF ESTROGEN AND PROGESTERONE RECEPTORS IN THE MOUSE UTERINE ENDOMETRIUM. Michael Velarde, Frank Simmen, Rosalia Simmen. University of Arkansas for Medical Sciences, Little Rock, AR.

426. ROLE OF PHOSPHODIESTERASE IN CYCLIC NUCLEOTIDE SIGNALING DURING OVARIAN FOLLICULAR DEVELOPMENT IN THE RAT. Zhengchao Wang, Fangxiong Shi. Nanjing Agricultural University, Nanjing, Jiangsu, China.

427. REGULATOR OF G PROTEIN SIGNALING 2 (RGS2) PROTEIN MODULATES LH RECEPTOR AND PGF2alpha RECEPTOR SIGNALING IN GRANULOSA CELLS. Yuh-Lin Wu, Hsiang-Hao Chuang, Tzong-Shyuan Lee, Yu-Ru Kou. National Yang-Ming University, Taipei, Taiwan.

Platform Presentations, Sessions 13–24
Tuesday, July 24, 2007

Sessions 13 – 18, 14:00–16:00
Sessions 19 – 24, 16:30–18:30
Concurrent Sessions

Platform Session 13. Neuroendocrinology & Behavior

Chairs: TBA
Tuesday, July 24, 2007

14:00 - 16:00
Location: Salons A-B

14:00. 428. EVIDENCE FOR AN EXTENDED CRITICAL PERIOD FOR THE ORGANIZING ACTIONS OF STEROIDS ON SEXUAL DIFFERENTIATION OF GnRH SECRETION IN SHEEP. Leslie Jackson, Kathleen Timmer, Douglas Foster. University of Michigan, Ann Arbor, MI.

14:15. 429. GONADAL STEROIDS OF THE FOLLICULAR PHASE ENABLE CORTISOL TO ACT CENTRALLY AND INHIBIT GnRH PULSE FREQUENCY. Amy Oakley, Alan Tilbrook, Elizabeth Wagenmaker, Fred Karsch. University of Michigan, Ann Arbor, MI; Monash University, Clayton, Victoria, Australia.

14:30. 430. ESTRADIOL ENABLES THE DIRECT PITUITARY ACTIONS OF CORTISOL TO SUPPRESS GONADOTROPIN-RELEASING HORMONE (GnRH)-INDUCED LH SECRETION IN OVARECTOMIZED HYPOTHALAMO-PITUITARY DISCONNECTED (HPD) EWES DURING THE BREEDING SEASON. Bree Pierce, Iain Clarke, Kellie Breen, Fred Karsch, Elizabeth Rivalland, David Caddy, Alan Tilbrook. Monash University, Victoria, Australia; University of Michigan, Ann Arbor, MI.

14:45. 431. DIFFERENTIAL SYNAPTIC MEDIATION OF ESTRADIOL NEGATIVE AND POSITIVE FEEDBACK EFFECTS ON GnRH NEURON FIRING ACTIVITY. Catherine Christian, Suzanne Moenter. University of Virginia, Charlottesville, VA.

15:00. 432. NEUROENDOCRINE REGULATION OF MULTIPLE GONADOTROPIN-RELEASING HORMONES IN A FISH MODEL: KISSPEPTIN-GPR54 PATHWAY. Izhar Khan, Junaith Mohamed, Maelanie Galima, Richard Kline. The University of Texas at Austin, Port Aransas, TX.

15:15. 433. DISTRIBUTION OF KISSPEPTIN AND GnRH IMMUNOREACTIVE NEURONAL CONTACTS IN THE PREOPTIC AREA AND HYPOTHALAMUS OF THE MARE. Christianne Magee, Chad Foradori, Jason Bruemmer, Patrick McCue, Robert Handa, Colin Clay. Equine Reproduction Lab - ARBL, CSU, Fort Collins, CO.

15:30. 434. ESTROGEN RESPONSE ELEMENT DEPENDENT AND INDEPENDENT ESTROGEN RECEPTOR ALPHA SIGNALING PATHWAYS DIFFERENTIALLY REGULATE PITUITARY GONADOTROPIN TRANSCRIPTION AND SECRETION IN THE FEMALE MOUSE.

Christine Glidewell-Kenney, Lisa Hurley, Liza Pfaff, Jon Levine, Jeffrey Weiss, J. Larry Jameson. Northwestern University Feinberg School of Medicine, Chicago, IL; Northwestern University, Chicago, IL.

15:45. 435. PRODUCTION AND FUNCTION OF SECRETONEURIN IN THE GOLDFISH (*Carassius auratus*) PITUITARY GLAND. E Zhao, Colin Cameron, Andrew Han Wen Chen, Ajoy Basak, Anderson On-Lam Wong, Vance Trudeau. University of Ottawa, Ottawa, ON, Canada; Ottawa Health Research Institute, Ottawa, ON, Canada; University of Hong Kong, Hong Kong, China.

Platform Session 14. Reproductive Technologies 2: Stem Cells and Epigenetics

Chairs: TBA
Tuesday, July 24, 2007

14:00 - 16:00
Location: Salons C-D

14:00. 436. ISOLATION AND CULTURE OF MESONEPHRIC STEM-LIKE CELLS FROM PORCINE FETUS. Chang-Kyu Lee, Hye-Young Son, Eugene Lee, Hye-Seon Kim, Min-Goo Kim. Seoul National University, Seoul, South Korea.

14:15. 437. CULTURE AND PASSAGE OF HUMAN EMBRYONIC STEM CELLS ON AN ARTIFICIAL SYNTHETIC MATRIX COMPOSED OF POLYMEDSAH HYDROGEL. Luis Villa-Diaz, Himabindu Nandivada, Jun Ding, Sue O'Shea, Jorg Lahann, Gary Smith. University of Michigan, Ann Arbor, MI.

14:30. 438. SPATIAL AND TEMPORAL DIRECTED-DIFFERENTIATION OF HUMAN EMBRYONIC STEM CELLS WITH MICROFLUIDICS. Gary Smith, Luis Villa-Diaz, Tomoyuki Uchida, Sue O'Shea, Shuichi Takayama. University of Michigan, Ann Arbor, MI.

14:45. 439. ESTABLISHMENT OF EMBRYONIC STEM CELL LINES DERIVED FROM IN VITRO-PRODUCED BUFFALO (*Bubalus bubalis*) EMBRYOS. Vinod Verma, Sanjeev Gautam, Manmohansingh Chauhan, Radheyshyam Manik, Prabhat Palta, Sureshkumar Singla. National Dairy Research Institute, Karnal, Haryana, India.

15:00. 440. HIGH-THROUGHPUT GENETIC CHARACTERIZATION OF BOVINE IN VIVO PRODUCED EMBRYOS. Erin Curry, Scott Pratt, Daniel Lapin, John Gibbons. Clemson University, Clemson, SC; OvaMax, Inc., Watertown, WI.

15:15. 441. TRANSGENERATIONAL EPIGENETIC ALTERATIONS IN MICE PRODUCED BY IN VITRO CULTURE. Raúl Fernández-González, Miguel Angel Ramirez, Miriam Perez-Crespo, Eva Pericuesta, Pablo Bermejo-Alvarez, Juan de Dios Hourcade, Belen Pintado, Alfonso Gutierrez-Adan. INIA, Madrid, Spain.

15:30. 442. TESTIS TISSUE ALLOGRAFTING REVEALS A PHENOTYPE OF MEIOTIC ARREST IN NEONATALLY LETHAL LSH KNOCK-OUT MICE. Wenxian Zeng, Ali Honaramooz, Tao Fan, Anja Schmidtman, Claudia Baumann, Rabindranath De La Fuente, Kathrin Muegge, Ina Dobrinski. University of Pennsylvania, Kennett Square, PA; National Cancer Institute, Fredrick, MD.

15:45. 443. IDENTIFICATION OF INDICATOR TRAITS OF FERTILITY IN THE POSTPARTUM BEEF COW. Robert Cushman, Sherrill Echternkamp, Mark Allan, Harvey Freetly. ARS, U.S. Meat Animal Research Center, Clay Center, NE.

Platform Session 15. Gene Expression in Endocrine Tissues 3: Functional Effects in the Ovary

Chairs: John E. Gadsby, Ph.D., and Eran Gershon, Ph.D.
Tuesday, July 24, 2007

14:00 - 16:00
Location: Salon E

14:00. 444. THE PLASMINOGEN ACTIVATOR SYSTEM IS REGULATED BY PROSTAGLANDINS IN THE PRIMATE PERIOVULATORY FOLLICLE. Nune Markosyan, Diane Duffy. Eastern Virginia Medical School, Norfolk, VA.

14:15. 445. EXPRESSION OF APOPTOSIS-ASSOCIATED GENES IN THE PORCINE CORPUS LUTEUM. Leah Zorrilla, John Gadsby. North Carolina State University, College of Veterinary Medicine, Raleigh, NC.

14:30. 446. ACTIVIN REDUCES LUTEINIZATION OF HUMAN GRANULOSA CELLS. Michelle Myers, Alan McNeilly, W. Colin Duncan. Centre for Reproductive Biology, Edinburgh, United Kingdom.

14:45. 447. EXPRESSION OF B-CELL TRANSLOCATION GENE 2 AND ITS MODULATING ROLE IN THE FUNCTION OF ADENINE NUCLEOTIDE TRANSLOCATOR 2 DURING THE OVULATORY PROCESS IN THE RAT. Sun Gyun Kim. Chonnam National University, Yongbong-dong, Kwangju, South Korea.

15:00. 448. GATA4 AND GATA6 KNOCKDOWN IN GRANULOSA CELLS PROVIDE INSIGHT INTO REGULATION OF THE STAR GENE. Holly LaVoie, Yvonne Hui. University of South Carolina School of Medicine, Columbia, SC.

15:15. 449. IS CLAUDIN 5 INVOLVED IN REGULATION OF ANGIOGENESIS AND PERMEABILITY IN THE PRIMATE OVARY? Miriam Rodewald, Daniel Herr, Hamish Fraser, Gerda Hack, Rolf Kreienberg, Christine Wulff. University of Ulm, Ulm, Germany; The Queen's Medical Research Institute, Edinburgh, United Kingdom.

15:30. 450. MOUSE OOCYTES PROMOTE STEROL BIOSYNTHESIS IN CUMULUS CELLS: MORE EVIDENCE

FOR OOCYTE-REGULATION OF METABOLIC COOPERATIVITY BETWEEN GRANULOSA CELLS AND OOCYTES. You-Qiang Su, Koji Sugiura, Karen Wigglesworth, Stephanie Pangas, Martin Matzuk, John Eppig. The Jackson Laboratory, Bar Harbor, ME; Baylor College of Medicine, Houston, TX.

15:45. 451. CHARACTERIZATION OF THE EXPRESSION OF ESTROGEN SULFOTRANSFERASE DURING OVULATION AND PREGNANCY. Eran Gershon, Ariel Hourvitz, Sharon Reikhav, Vicki Plaks, Ettie Maman, Nava Dekel. Weizmann Institute of Science, Rehovot, Israel; Sheba Medical Center, Ramat Gan, Israel.

Platform Session 16. Implantation, Pregnancy, & Parturition 2

Chair: Bruce D. Murphy, Ph.D.
Tuesday, July 24, 2007

14:00 - 16:00
Location: Salon F

14:00. 452. BLASTOCYST-MEDIATED GENE REGULATION IN THE RECEPTIVE ENDOMETRIUM. Elke Winterhager, Ruth Grummer, Stephanie Hardt. University of Duisburg-Essen, Essen, Germany.

14:15. 453. INTRAUTERINE INFUSION OF RECOMBINANT TRANSFORMING GROWTH FACTOR BETA LATENCY-ASSOCIATED PEPTIDE DISRUPTS PORCINE CONCEPTUS DEVELOPMENT. Dana Massuto, R. Neil Hooper, Eric Kneese, Greg Johnson, Robert Burghardt, Laurie Jaeger. Texas A & M University, College Station, TX.

14:30. 454. COUP-TF II IS ESSENTIAL FOR HUMAN ENDOMETRIAL STROMAL CELL DIFFERENTIATION. Jinrong Wang, Paula Amato, Sandra Carson, JaeWook Jeong, John Lydon, Ming-Jer Tsai, Sophia Tsai, Francesco DeMayo. Baylor College of Medicine, Houston, TX.

14:45. 455. LOCALIZATION AND QUANTIFICATION OF CELLULAR PRION PROTEIN (PrPC) EXPRESSION IN THE NON-PREGNANT UTERUS, AND IN EMBRYOS AND PLACENTAL TISSUES FROM EARLY PREGNANCY IN SHEEP. Mary Lynn Johnson, Mathilde Rupin, Megan Minten, Anna Grazul-Bilska, Lawrence Reynolds, Charles Stoltenow, Katherine O'Rourke, Dale Redmer. North Dakota State University, Fargo, ND; USDA, ARS, ADRU, Pullman, WA.

15:00. 456. MATERNAL VIRAL INFECTION DURING PREGNANCY PROGRAMS FETAL DEVELOPMENT AND INDUCES A DIFFERENTIAL TYPE 1 INTERFERON RESPONSE. Megan Shoemaker, Natalia Smirnova, Hana Van Campen, Helle Bielefeldt-Ohmann, Kathy Austin, Hyunghul Han, Donald Montgomery, Alberto Van Olphen, Thomas Hansen. Colorado State University, Fort Collins, CO; University of Wyoming, Laramie, WY.

15:15. 457. ENDOMETRIAL CELLS PROMOTE AN INVASION-PERMISSIVE MICROENVIRONMENT BY RELEASING TGF-beta3. Céline Van Themsche, Sophie Parent, Eric Asselin. University of Quebec at Trois-Rivieres, Trois-Rivieres, QC, Canada.

15:30. 458. REGULATION OF MEMBERS OF THE INSULIN-LIKE GROWTH FACTOR FAMILY BY PROGESTERONE IN AN OVINE MODEL OF ACCELERATED CONCEPTUS DEVELOPMENT. Michael Satterfield, Kanako Hayashi, Fuller Bazer, Thomas Spencer. Texas A&M University, College Station, TX.

15:45. 459. AROMATASE INHIBITION OF ENDOGENOUS ESTROGEN USING LETROZOLE IN OVINE PREGNANCY DECREASES UTERINE ARTERY ENDOTHELIAL NITRIC OXIDE PRODUCTION. Ronald Magness, FuXian Yi, Steven Vang, Terrance Phernetton, Jason Austin. UW-Madison, Madison, WI.

Platform Session 17. Genomics & Proteomics 2

Chair: Marco Conti, M.D.
Tuesday, July 24, 2007

14:00 - 16:00
Location: Salons J-K

14:00. 460. INVESTIGATING THE ROLE OF HSF2 DURING SPERMATOGENESIS. Chad Wilkerson, Lynea Murphy, Kevin Sarge. University of Kentucky, Lexington, KY.

14:15. 461. LH/hCG INDUCED EXPRESSION OF MICRO-RNAs IN MURINE GRANULOSA CELLS DURING THE PERIOVULATORY PERIOD. Stephanie Fiedler, Lane Christenson. University of Kansas Medical Center, Kansas City, KS.

14:30. 462. CHARACTERIZATION OF THE BIOACTIVITY OF 293H CELL-EXPRESSED mBMP15 AND ITS COOPERATIVE INTERACTIONS WITH mGDF9. C. Joy McIntosh, Stan Lun, Andrea Western, Steve Lawrence, Kenneth McNatty, Jennifer Juengel. AgResearch, Wallaceville Animal Research Centre, Upper Hutt, New Zealand.

14:45. 463. SYSTEMATIC DETERMINATION OF DIFFERENTIAL GENE EXPRESSION IN THE PRIMATE CORPUS LUTEUM DURING THE LUTEAL PHASE OF THE MENSTRUAL CYCLE. Randy Bogan, Melinda Murphy, Richard Stouffer, Jon Hennebold. Oregon National Primate Research Center, Oregon Health & Science University, Beaverton, OR.

15:00. 464. PRION EXPRESSION IN MALE AND FEMALE RUMINANT REPRODUCTIVE SYSTEMS. Oscar Peralta, Will Eyestone. Virginia-Maryland Regional College of Veterinary Medicine, Blacksburg, VA.

15:15. 465. SNARE REDISTRIBUTION DURING CAPACITATION DEPENDS ON ASSOCIATION WITH LIPID RAFTS. Pei-Shiue Tsai, Renske van Gestel, Nuria Garcia-Gil, Mieke de Boer-Brouwer, Theo van Haeften, Bart Gadella. Faculty of Veterinary Medicine, Utrecht University, Utrecht, Netherlands.

15:30. 466. TRANSCRIPTIONAL PROFILING OF PORCINE IN VIVO, IN VITRO-PRODUCED, AND NUCLEAR TRANSFER DERIVED EXTRAEMBRYONIC MEMBRANES AT DAY 30 OF GESTATION. Kristin Whitworth, Lee Spate, Rongfeng Li, August Rieke, David Wax, William Spollen, Gordon Springer, Peter Sutovsky, Jonathan Green, Randall Prather. University of Missouri-Columbia, Columbia, MO.

15:45. 467. DIFFERENTIAL TETHERING TO THE NUCLEAR MATRIX REGULATES TESTIS-SPECIFIC TRANSCRIPTION OF THE MOUSE SP-10 GENE. Mayuresh Abhyankar, Craig Urekar, Prabhakara Reddi. University of Virginia, Charlottesville, VA.

Platform Session 18. Signal Transduction in the Ovary 1: Granulosa Cells

Chairs: Winston E. Thompson, Ph.D., and
Indrajit Chowdhury, Ph.D.
Tuesday, July 24, 2007

14:00 - 16:00
Location: Salons L-M

14:00. 468. DOMINANT ACTIVATION OF THE HEDGEHOG SIGNALING PATHWAY PREVENTS THE FINAL STAGES OF MATURATION IN PREOVULATORY FOLLICLES. Yi Ren, Robert Cowan, Rebecca Harman, Susan Quirk. Cornell University, Ithaca, NY.

14:15. 469. ACTIVATION OF PPAR GAMMA FUNCTION BY ARACHIDONIC ACID METABOLITES CONTROLS OVULATION BY INDUCING THE EXPRESSION OF PRO-INFLAMMATORY AND VASOACTIVE MOLECULES IN THE OVARY. Jaeyeon Kim, Marcey Sato, John P. Lydon, Francesco J. DeMayo, Indrani C. Bagchi, Milan K. Bagchi. University of Illinois at Urbana-Champaign, Urbana, IL; Baylor College of Medicine, Houston, TX.

14:30. 470. EFFECT OF COCAINE AND AMPHETAMINE REGULATED TRANSCRIPT (CART) ON EXTRACELLULAR REGULATED KINASE (ERK) AND AKT ACTIVATION AND ITS ROLE IN REGULATION OF FSH SIGNALING IN BOVINE GRANULOSA CELLS. Aritro Sen, James J Ireland, George W Smith. Michigan State University, East Lansing, MI.

14:45. 471. PROSTAGLANDIN E2 (PGE2) STIMULATES CELL PROLIFERATION IN THE HUMAN OVARIAN GRANULOSA-LIKE TUMOR CELL LINE KGN. Chao Jiang, Lynn Roy, Steven Remmenga, John Davis. University of Nebraska Medical Center, Omaha, NE.

15:00. 472. STRUCTURE FUNCTION ANALYSIS OF FSH RECEPTOR INTRACELLULAR LOOP1 INTERACTION WITH APPL1. James Dias, Cheryl Nechamen, Richard Thomas. New York State Department of Health, Albany, NY.

15:15. 473. THE EFFECTS OF BMP15 ON CUMULUS CELL APOPTOSIS. Zhilin Liu, Hengyu Fan, Shunichi Shimisaki, JoAnne Richards. Baylor College of Medicine, Houston, TX; University of California, San Diego, CA.

15:30. 474. MITOGENACTIVATED PROTEIN KINASE REGULATE FSH-INDUCED TISSUE-TYPE PLASMINOGEN ACTIVATOR THROUGH AN AP-1 RESPONSE ELEMENT. Wei Yang, Yi-Xun Liu. Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

15:45. 475. INHIBIN A INHIBITS FOLLICLE-STIMULATING HORMONE (FSH) ACTION BY SUPPRESSING FSH RECEPTOR EXPRESSION IN CULTURED RAT GRANU-

LOSA CELLS. Cuiling Lu. Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Platform Session 19. Fertilization & Early Embryogenesis 3: Germ Cells & Stem Cells

Chair: Peter Sutovsky, Ph.D.
Tuesday, July 24, 2007

16:30 - 18:30
Location: Salons A-B

16:30. 476. DISRUPTION OF GERM CELL DEVELOPMENT IN TRANSCRIPTION FACTOR AP-2GAMMA MUTANT MICE. Jillian Guttormsen, Christopher de la Houssaye, Anne Howlett, Frances Bhushan, Trevor Williams, Quinton Winger. Utah State University, Logan, UT; University of Colorado Health Sciences, Aurora, CO.

16:45. 477. FUNCTIONAL DECIPHERING OF THE CORE SIGNALING MECHANISM FOR SPERMATOGONIAL STEM CELL SELF-RENEWAL AND SURVIVAL. Jon Oatley, Mary Avarbock, Ralph Brinster. University of Pennsylvania, Philadelphia, PA.

17:00. 478. TESTOSTERONE REGULATION OF SPERMATOGONIAL STEM CELL HOMEOSTASIS IN ADULT MICE. Liang-Yu Chen, Jon Oatley, Jeanene de Avila, Jerry Reeves, Derek McLean. Washington State University, Pullman, WA; Pennsylvania State University, University Park, PA.

17:15. 479. SERTOLI CELLS ARE NOT THE TARGET FOR THE ANDROGEN RECEPTOR-MEDIATED TESTOSTERONE EFFECT ON SPERMATOGONIAL DIFFERENTIATION BLOCK IN JUVENILE SPERMATOGONIAL DEPLETION MICE. Gensheng Wang, Connie Weng, Shan Hong Shao, Karel De Gendt, Robert Braun, Marvin Meistrich. U.T.M.D. Anderson Cancer Center, Houston, TX.

17:30. 480. VASCULAR ENDOTHELIAL GROWTH FACTOR-A STIMULATES GERM CELL DIFFERENTIATION IN BOVINE TESTIS XENOGRAFTS. Kyle Caires, Jeanene de Avila, Derek McLean. Washington State University, Pullman, WA.

17:45. 481. THE FATE OF UNPAIRED CHROMATIN DURING MALE MEIOSIS IN MICE. Laura Reinholdt, Ellen Akeson, Cecilia Schmidt, Muriel Davison, Mary Ann Handel. The Jackson Laboratory, Bar Harbor, ME.

18:00. 482. ORPHAN NUCLEAR RECEPTOR GCNF RECRUITS DNA METHYLTRANSFERASE DNMT3A TO OCT4 PROMOTER TO SILENCE OCT4 EXPRESSION IN DIFFERENTIATED MOUSE ES CELL. Peili Gu, Austin Cooney. Baylor College of Medicine, Houston, TX.

18:15. 483. RAT EMBRYONIC STEM-LIKE (ES-LIKE) CELLS CAN CONTRIBUTE TO MULTIPLE EARLY EMBRYO LINEAGES IN VIVO. Simon-Pierre Demers, Jae Gyu Yoo, Joelle Desmarais, Li Lian, Jacinthe Therrien, Bruce Murphy, Lawrence Smith. Université de Montréal, St-Hyacinthe, QC, Canada; Clonagen Inc., St-Hyacinthe, QC, Canada.

Platform Session 20. Reproductive Technologies 3: Gamete Technology

Chair: TBA
Tuesday, July 24, 2007

16:30 - 18:30
Location: Salons C-D

16:30. 484. ALTERED CUMULUS OOCYTE MATRIX FOLLOWING IN VITRO MATURATION OF OOCYTES. Kylie Dunning, Michelle Lane, Hannah Brown, Christine Yeo, Jeremy Thompson, Rebecca Robker, Darryl Russell. University of Adelaide, Adelaide, SA, Australia.

16:45. 485. CHANGES IN MULLERIAN-INHIBITING SUBSTANCE LEVELS DURING CONTROLLED OVARIAN HYPERSTIMULATION. Dara Mitchel, Rebecca Chilvers, Amjad Hossain, Manubai Nagamani. University of Texas Medical Branch, Galveston, TX.

17:00. 486. IMPACT OF RECONSTRUCTION BY GERMINAL VESICLE TRANSFER ON NUCLEAR MATURATION OF DOMESTIC CAT OOCYTES. Pierre Comizzoli, Natasha Godard-Glasnapp, Carol Keefer, David Wildt, Budhan Pukazhenth. Smithsonian's National Zoological Park, Washington, DC; University of Maryland, College Park, MD; American University, Washington, DC.

17:15. 487. A COMPARISON OF DNA DAMAGE BETWEEN VITRIFIED AND SLOW-COOLED MOUSE EMBRYOS. Jennifer Graves-Herring, William Boone. Greenville Hospital System, University Medical Group, Greenville, SC.

17:30. 488. EXTENDED CULTURE OF EJACULATED HUMAN SPERMATOZOA FOR POTENTIAL USE IN ASSISTED REPRODUCTION. Amjad Hossain, Collin Osuamkpe, Manubai Nagamani. University of Texas Medical Branch, Galveston, TX.

17:45. 489. EJACULATED AND EPIDIDYMAL MOUSE SPERMATOZOA ARE DIFFERENT IN THEIR SUSCEPTIBILITY TO NUCLEASE-DEPENDENT DNA DAMAGE AND NUCLEASE ACTIVITY. Anna Ajduk, Yasuhiro Yamauchi, Jonathan Riel, Monika Ward. JABSOM, University of Hawaii, Honolulu, HI.

18:00. 490. DIFFERENTIAL PROPORTION OF DNA-DAMAGED SPERMATOZOA COLLECTED FROM EPIDIDYMAL CAUDAE IN MALES OR UTERINE HORNS AND OVIDUCTS OF NATURALLY MATED MICE. Juan de Dios Hourcade, Miriam Perez-Crespo, Alfonso Gutierrez-Adán, Belen Pintado. Instituto Nacional de Investigacion y Tecnologia Agraria (INIA), Madrid, Spain.

18:15. 491. PRESERVATION OF EJACULATED MOUSE SPERMATOZOA FROM FERTILE C57BL/6 AND INFERTILE *HOOK1/HOOK1* MICE COLLECTED FROM THE UTERI OF MATED FEMALES. Yasuhiro Yamauchi, Monika Ward. Institute for Biogenesis Research, John A. Burns School of Medicine, Honolulu, HI; University of Hawaii, Honolulu, HI.

**Platform Session 21. Signal Transduction in the Ovary 2:
Corpora Lutea & Oocytes**

Chairs: Paul D. Carrière, Ph.D., D.V.M., and Xiaofeng Zheng
Tuesday, July 24, 2007

16:30 - 18:30
Location: Salon E

16:30. 492. GPR3 IS A CONSTITUTIVELY ACTIVE CELL SURFACE G PROTEIN-COUPLED RECEPTOR THAT MAINTAINS MEIOTIC ARREST OF *Xenopus laevis* OOCYTES. James Deng, Stephen Hammes. UT Southwestern Medical Ctr at Dallas, Dallas, TX.

16:45. 493. LUTEINIZING HORMONE (LH) STIMULATES MTOR/S6K SIGNALING PATHWAY BY DEACTIVATING GSK3 AND AMPK IN CULTURED BOVINE CORPORA LUTEAL CELLS. Xiaoying (Sharon) Hou, Edward Arvisais, John Davis. University of Nebraska Medical Center, Omaha, NE.

17:00. 494. A NOVEL SIGNALING PATHWAY IN THE CONTROL OF PROGESTERONE PRODUCTION IN BOVINE CORPUS LUTEUM. Lynn Roy, Xiaoying Hou, Chao Jiang, Edward Arvisais, John Davis. University of Nebraska Medical Center, Omaha, NE.

17:15. 495. A ROLE FOR THE CELL CYCLE IN LUTEAL REGRESSION. Susan Quirk, Rebecca Harman, Robert Cowan. Cornell University, Ithaca, NY.

17:30. 496. ENDOTHELIN-INDEPENDENT AND -DEPENDENT LUTEOLYTIC EFFECTS OF PROSTAGLANDIN F2alpha IN EWES. Jorge Flores, Matthew Doerr, Madhusudan Goravanahally, Justin Rhinehart, E. Keith Inskeep. West Virginia University, Morgantown, WV.

17:45. 497. PROGESTERONE ALTERS MEMBRANE CHOLESTEROL CONTENT AND OXYTOCIN SIGNALING IN OVINE SMALL LUTEAL CELLS. Tracy Davis, Rebecca Bott, Jason Bruemmer, Gordon Niswender. Colorado State University, Fort Collins, CO.

18:00. 498. PROSTAGLANDIN F2alpha (PGF) STIMULATES REPRESSION OF PHOSPHOINOSITIDE 3 KINASE (PIK3)/AKT SIGNALING THROUGH PHOSPHORYLATION OF MULTIPLE SERINE RESIDUES ON INSULIN RECEPTOR SUBSTRATE (IRS) IN BOVINE LUTEAL CELLS. Edward Arvisais, Xiaoying Hou, Lynn Roy, Chao Jiang, John Davis. University of Nebraska Medical Center, Omaha, NE.

18:15. 499. WITHDRAWN.

**Platform Session 22. Implantation, Pregnancy, &
Parturition 3**

Chairs: Bibhash C. Paria, Ph.D., and Xiaoqin Ye, M.D., Ph.D.
Tuesday, July 24, 2007

16:30 - 18:30
Location: Salon F

16:30. 500. GLUCOSE TRANSPORTERS IN THE OVINE UTERUS AND CONCEPTUS DURING PREGNANCY. Haijun Gao, Thomas Spencer, Guoyao Wu, Gregory Johnson, Fuller Bazer. Texas A&M University, College Station, TX.

16:45. 501. DELETION OF ISG15 GENE RESULTS IN DIFFERENTIAL DECIDUAL GENE EXPRESSION AND PREGNANCY LOSS BETWEEN 7.5 AND 12.5 DPC. Ryan Ashley, Luiz Henkes, James Pru, Thomas Hansen. Colorado State University, Fort Collins, CO; Vincent Center for Reproductive Biology, Boston, MA.

17:00. 502. Akt/PTEN/Erk SIGNALING AND GLUT1/8/9 ARE DIFFERENTIALLY EXPRESSED DURING IMPLANTATION AND EARLY PREGNANCY IN THE MOUSE. Sung Tae Kim, Kelle Moley. Washington University in St. Louis School of Medicine, St. Louis, MO.

17:15. 503. GALECTIN 15 (LGALS15) IS A MEDIATOR OF TROPHOBLAST ATTACHMENT IN THE OVINE UTERUS. Jennifer Farmer, Robert Burghardt, Dean Jousan, Peter Hansen, Fuller Bazer, Thomas Spencer. Texas A&M University, College Station, TX; University of Florida, Gainesville, FL.

17:30. 504. CONDITIONAL KNOCKOUT OF CONNEXIN 43 IN MOUSE UTERUS UNCOVERS AN ESSENTIAL ROLE OF GAP JUNCTIONS DURING PREGNANCY. Mary Laws, Francesco DeMayo, John Lydon, Milan Bagchi, Indrani Bagchi. University of Illinois-College of Veterinary Medicine, Urbana, IL; Baylor College of Medicine, Houston, TX.

17:45. 505. MATERNAL PLACENTAL VASCULARITY AND CAPILLARY ENDOTHELIAL CELL PROLIFERATION DURING EARLY PREGNANCY AFTER TRANSFER OF EMBRYOS GENERATED THROUGH ASSISTED REPRODUCTIVE TECHNOLOGY IN SHEEP. Pawel Borowicz, Megan Minten, Grazyna Ptak, Pasqualino Loi, Leonardo Della Salda, Chiara Palmieri, Pier Scapolo, Amedeo Cuomo, Zofia Jablonska, Dale Redmer, Anna Grazul-Bilska, Lawrence Reynolds. North Dakota State University, Fargo, ND; Teramo University, Teramo, Italy.

18:00. 506. EXPRESSION OF RETINALDEHYDE DEHYDROGENASE TYPE 2 (Aldh1a2) GENE IN THE HAMSTER UTERUS: ANALYSIS OF THE PERIIMPLANTATION PERIOD AND REGULATION BY STEROIDS. Tianbing Ding, Bibhash C Paria. Vanderbilt University Medical Center, Nashville, TN.

18:15. 507. THE BONE MORPHOGENETIC PROTEIN 2 (BMP2) SIGNALING PATHWAY PLAYS A CRITICAL ROLE IN UTERINE STROMAL DIFFERENTIATION IN THE MOUSE AND THE HUMAN. Quanxi Li, Athilakshmi Kannan, Wei Wang, Robert Taylor, Milan Bagchi, Indrani Bagchi. University of Illinois at Urbana-Champaign, Urbana, IL; Emory University School of Medicine, Atlanta, GA.

**Platform Session 23. Sex Determination &
Development**

Chairs: Joan S. Jorgensen, Ph.D., D.V.M., and
Vanessa Moisan
Tuesday, July 24, 2007

16:30 - 18:30
Location: Salons J-K

16:30. 508. INHIBIN BETA A AND HEDGEHOG: A NOVEL REGULATORY LOOP IN FETAL TESTIS CORD DEVELOPMENT. Denise Archambeault, Jessica Tomaszewski, Iv-

raym Barsoum, Humphrey Yao. University of Illinois at Urbana-Champaign, Urbana, IL.

16:45. 509. THE MURINE BETAGLYCAN GENE IS ESSENTIAL FOR NORMAL SEMINIFEROUS CORD FORMATION. Kaye Stenvers, Mai Sarraj, Alexandra Umbers, Hui Kheng Chua, Kate Loveland, Jock Findlay. Prince Henry's Institute of Medical Research, Clayton, Victoria, Australia; Monash University, Clayton, Victoria, Australia.

17:00. 510. THE ROLE OF BETA-CATENIN IN DEVELOPMENT OF THE FETAL OVARY. Chia-Feng Liu, Humphrey Yao. University of Illinois at Urbana-Champaign, Urbana, IL.

17:15. 511. PRODUCTION OF Sox9-EGFP KNOCK-IN MICE FOR VISUALIZATION OF SEX CORD FORMATION IN CULTURED UROGENITAL RIDGES. Liesl Nel-Themaat, Haruhiko Akyama, Jian Min Deng, Zhaoping Zhang, Benoit de Crombrughe, Richard Behringer. U.T. M.D. Anderson Cancer Center, Houston, TX.

17:30. 512. TRANSCRIPTION FACTOR DOSAGE AND GENETIC BACKGROUND IN MOUSE GONADAL SEX DETERMINATION: A CRITICAL ROLE FOR *Fog2* AND *Gata4* IN FETAL TESTIS DEVELOPMENT. Gerrit Bouma, Linda Washburn, Kenneth Albrecht, Eva Eicher. Colorado State University, Fort Collins, CO; The Jackson Laboratory, Bar Harbor, ME; Boston University School of Medicine, Boston, MA.

17:45. 513. EFFECT OF RETINOIC ACID ON SEX DIFFERENTIATION IN XX AND XY PRIMORDIAL GERM CELLS. Yukiko Yamazaki, Hirotaka Yoshioka, Eleanor Low, Ryuzo Yanagimachi, Kazuhiro Iwahashi. Institute for Biogenesis Research, University of Hawaii, Honolulu, HI.

18:00. 514. EXPRESSION OF THE LADYBIRD-LIKE HOMEBOX 2 (LBX2) FACTOR DURING OVARIAN DEVELOPMENT IN THE MOUSE. Vanessa Moisan, Daniela Bomgardner, Jacques J. Tremblay. Université Laval, Sainte-Foy, Québec, Canada; University of Virginia, Charlottesville, VA.

18:15. 515. IMPORTANCE OF SPECIFIC GENES AND SIGNALING PATHWAYS IN PERINATAL OVIDUCT AND UTERINE DIFFERENTIATION. C. Allison Stewart, Richard Behringer. M.D. Anderson Cancer Center, Houston, TX.

Platform Session 24. Environment, Nutrition, & Toxicology 3: Nutritional and Environmental Effects on the Reproductive Tract

Chairs: Sally D. Perreault, Ph.D., and Joseph G. Cloud, Ph.D.
Tuesday, July 24, 2007

16:30 - 18:30
Location: Salons L-M

16:30. 516. MATERNAL LOW PROTEIN DIET DURING OOCYTE MATURATION CAUSES INCREASED SYSTOLIC

BLOOD PRESSURE AND ABNORMAL BEHAVIOR IN THE MOUSE. Adam Watkins, Christopher Torrens, Colm Cunningham, Adrian Wilkins, Liam Gray, Hugh Perry, Mark Hanson, Tom Fleming. University of Southampton, Southampton, Hampshire, United Kingdom.

16:45. 517. METHYLATION OF HISTONE H3 AT LYSINE 4 AND LSD1 ARE CRITICAL REGULATORS OF SPERMATOGENESIS IN *Mus musculus* AND *Callithrix jacchus* AND ARE ASSOCIATED WITH SPECIALIZED TRANSCRIPTIONAL REGULATORY COMPLEXES. Maren Godmann, Veronik Auger, Ruediger Behr, Sarah Kimmins. McGill University, MacDonald Campus, Ste-Anne-de-Bellevue, QC, Canada; German Primate Center, Goettingen, Niedersachsen, Germany.

17:00. 518. DEVELOPMENT OF AN ANIMAL MODEL FOR HUMAN OBESITY AND GLUCOSE INTOLLERANCE. Benjamin Coe, James Kirkpatrick, Jiude Mao, Julia Taylor, Frederick vom Saal, Maren Bell Jones. University of Missouri-Columbia, Columbia, MO.

17:15. 519. ANALYSIS OF MID-GESTATION BABOON FRONTAL CORTEX TRANSCRIPTOMES IN FETUSES OF AD LIBITUM FED (CON) COMPARED TO 70% OF AD LIBITUM FED (NR) MOTHERS. Laura Cox, Natalia Schlabritz-Loutsevitch, Thomas McDonald, Matthias Schwab, Peter Nathanielsz. Southwest Foundation for Biomedical Research, San Antonio, TX; The University of Texas Health Science Center at San Antonio, San Antonio, TX; Friedrich Schiller University, Jena, Germany.

17:30. 520. EFFECTS OF INSULIN ON TESTOSTERONE SECRETION IN MALE RATS WITH MILD STREPTOZOTOCIN-INDUCED DIABETES MELLITUS. Yen-Jui Chang, Cai-Yun Jian, Paulus S. Wang. Department of Physiology, National Yang-Ming University, Taipei, Taiwan.

17:45. 521. MICE LACKING THE GENE FOR PEPSINOGEN F, A MARKER OF YOLK SAC AND GASTRIC ENDODERM, EXHIBIT LOW BIRTH WEIGHTS AND REMAIN SMALL AS NEONATES. Bhanu Prakash Telugu, Jonathan Green. University of Missouri-Columbia, Columbia, MO.

18:00. 522. REPRODUCTIVE ENDOCRINE EFFECTS OF RECOMBINANT α LEPTIN IN POSTPARTUM BEEF COWS CALVING IN THIN OR EXCELLENT BODY CONDITION. Gary Williams, Joshua Cartmill, Juan Zuluaga, Dee Cooper, Duane Keisler. Texas A&M University Agricultural Research Station, Beeville, TX; University of Missouri, Columbia, MO.

18:15. 523. THE PHYTOESTROGEN GENISTEIN DISRUPTS LH SIGNALING AND CHOLESTEROL UTILIZATION IN RAT LEYDIG CELLS. Benson Akingbemi, Elaine Coleman, Tim Braden, Barbara Kempainen, Frank Bartol. Auburn University, Auburn, AL.

POSTER SESSION D
Wednesday, July 25, 2007

07:30 – 10:00

Salons G, H, and I

Diseases of the Reproduction System

524. CHARACTERIZING THE OSSABAW MINI-PIG AS AN ANIMAL MODEL FOR POLYCYSTIC OVARY SYNDROME.

Jennifer Lowe, Rebecca Krisher, Michael Sturek. Purdue University, West Lafayette, IN; Indiana University School of Medicine, Indianapolis, IN.

525. DEVELOPMENTAL PROGRAMMING: INCREASED FETAL OVARIAN ANDROGEN RECEPTOR EXPRESSION IN PRENATAL TESTOSTERONE-TREATED SHEEP.

Mohan Manikkam, Vasantha Padmanabhan. University of Michigan, Ann Arbor, MI.

526. THE NADPH OXIDASE COMPLEX IS IMPORTANT FOR THE EGF AND PDGF SIGNALING PATHWAYS IN HUMAN LEIOMYOMA SMOOTH MUSCLE CELLS.

Fernando Mesquita, Robert Belton, Jr., Erica Marsh, Serdar Bulun, Romana Nowak. University of Illinois, Urbana, IL; University of Illinois - Urbana/Champaign, Champaign, IL; Northwestern University Feinberg School of Medicine, Chicago, IL.

527. SENSITIVITY AND SPECIFICITY OF POTENTIAL BLOOD BIOMARKERS FOR ENDOMETRIOSIS.

Lynnette Ruiz, Abigail Ruiz, Sonia Abac, Diego Zavala, Joaquin Laboy, David Caiseda, Idhaliz Flores. Ponce School of Medicine, Ponce, Puerto Rico; San Juan Municipal Hospital, San Juan, Puerto Rico.

528. A MOUSE MODEL OF MATERNAL THROMBOPHILIA-ASSOCIATED FETAL LOSS: EFFICACY OF ANTICOAGULATION THERAPY.

Rashmi Sood, Mark Zogg, Hartmut Weiler. Blood Center of Wisconsin, Milwaukee, WI.

529. DEVELOPMENTAL PROGRAMMING: DO EXOGENOUS GONADOTROPINS NORMALIZE OVARIAN FUNCTION IN PRENATAL TESTOSTERONE-TREATED FEMALES?

Teresa Steckler, James Lee, E. Keith Inskeep, Vasantha Padmanabhan. University of Michigan, Ann Arbor, MI; West Virginia University, Morgantown, WV.

530. NON-NUCLEAR LOCALIZATION OF ER-ALPHA IN OVARIAN CANCER OF THE HEN.

Lindsey Trevino, Patricia Johnson. Cornell University, Ithaca, NY.

531. THE EFFECT OF ASPIRIN ON PROLIFERATION OF ASCITES CELLS FROM HENS WITH OVARIAN CANCER.

Mary Ellen Urick, James Giles, Patricia Johnson. Cornell University, Ithaca, NY.

532. DEVELOPMENTAL PROGRAMMING: PRENATAL TESTOSTERONE EXCESS DISRUPTS PERIOVULATORY SEQUENCE OF EVENTS IN SHEEP.

Almudena Veiga-

Lopez, Wen Ye, David Phillips, Carol Herkimer, Vasantha Padmanabhan. University of Michigan, Ann Arbor, MI; Monash University, Melbourne, Australia.

533. SENSITIZATION OF HUMAN GRANULOSA TUMOR CELL LINES TO TUMOR NECROSIS FACTOR-RELATED APOPTOSIS-INDUCING LIGAND (TRAIL)- INDUCED APOPTOSIS.

Dori Woods, Alan Johnson. The University of Notre Dame, Notre Dame, IN.

534. INDUCTION OF PROLIFERATION IN THE PRIMATE OVARIAN SURFACE EPITHELIUM.

Jay Wright, John Fanton, Richard Stouffer. Oregon National Primate Research Center, Beaverton, OR.

535. INVOLVEMENT OF REACTIVE OXYGEN SPECIES IN GOSSYPOL-INDUCED INHIBITORY EFFECTS ON HUMAN PROSTATE CANCER CELLS.

Ching-Han Yu, Pei-Chi Chen, Paulus Wang. Institute of Physiology, National Yang-Ming University, Taipei, Taiwan.

Environment, Nutrition, and/or Toxicology

536. DO ESTRADIOL AND PROGESTERONE REGULATE THEIR OWN METABOLISM?

Carla Piccinato, Pauline da Cunha, Patricia Miguez, Milo Wiltbank. University of Wisconsin, Madison, WI.

537. TRANSGENERATIONAL EFFECTS FOLLOWING IN UTERO EXPOSURE TO ANTI-ANDROGENS VINCLOZOLIN AND FLUTAMIDE ON MALE SPERMATOGENESIS.

Stephen Rekow. Washington State University, Pullman, WA.

538. THE EFFECT OF ETHANOL ON RHESUS MONKEY EMBRYONIC STEM CELLS.

Megan Roberts, Catherine VandeVoort. University of California, Davis, Davis, CA.

539. CHROMIUM TOXICITY INDUCES OVARIAN FOLLICULAR DEVELOPMENTAL ARREST, APOPTOSIS, AND DEREGULATED STEROIDOGENESIS: VITAMIN C RESTORES FOLLICULAR SURVIVAL AND FUNCTION.

Royce Rodriguez, Jawahar Samuel, Joe Arosh, JeHoon Lee, Michael Aruldas, Sakhila Banu. Texas A&M University, College Station, TX; Institute of Basic Medical Sciences, University of Madras, Madras, Tamil Nadu, India.

540. EFFECTS OF PRENATAL EXPOSURE TO A LOW DOSE ATRAZINE METABOLITE MIXTURE ON THE REPRODUCTIVE DEVELOPMENT OF MALE LONG EVANS RATS.

Jason Stanko, Rolondo Enoch, Jennifer Rayner, Christine Davis, Doug Wolf, Suzanne Fenton. USEPA, Research Triangle Park, NC; North Carolina Central

University, Durham, NC; University of North Carolina, Chapel Hill, NC.

541. ROLE OF TESTOSTERONE IN GENDER-RELATED ENHANCED TUMOR SUSCEPTIBILITY OF MICE PRE-NATALLY EXPOSED TO CIGARETTE SMOKE. Bernard Steinetz, Sheung Pui Ng, Judith Zelikoff. NYU School of Medicine, Tuxedo, NY.

542. USE OF A SYNGENEIC ORTHOTOPIC OVARY TRANSPLANTATION MODEL TO ASSESS THE RELATIVE IMPACT OF OVARIAN VS. EXTRAOVARIAN AND DEVELOPMENTAL VS. ADULT ACTIVATION OF THE ARYL HYDROCARBON RECEPTOR PATHWAY. Alison Ting, Zhanquan Shi, Kelli Valdez, Brian Petroff. University of Kansas Medical Center, Kansas City, KS.

543. EFFECT OF CHRONIC EXPOSURE TO THE ARYL HYDROCARBON RECEPTOR AGONIST 2,3,7,8-TETRACHLORODIBENZO-*p*-DIOXIN IN FEMALE RATS ON OVARIAN GENE EXPRESSION. Kelli Valdez, Zhanquan Shi, Alison Ting, Brian Petroff. University of Kansas Medical Center, Kansas City, KS.

544. EFFECTS OF NONYLPHENOL EXPOSURE ON THE RELEASE OF CORTICOSTERONE FROM RAT ADRENAL CORTEX IN VITRO AND IN VIVO. Paulus Wang, Wei-Ju Huang. Department of Physiology, National Yang-Ming University, Taipei, Taiwan.

545. SOCIAL, BEHAVIORAL, AND ENVIRONMENTAL FACTORS EFFECT ON SPERM CONCENTRATION IN A CLINIC-BASED SAMPLE OF MALES IN SHANGHAI, CHINA. Yan Wang, Cui-ling Liang, Jun-qing Wu, Chen Xu, Er-sheng Gao. Fudan University, Shanghai, China; Shanghai Institute of Planned Parenthood Research, Shanghai, China; Shanghai Communication University, Shanghai, China; East China Normal University, Shanghai, China.

546. OVARIAN GENE EXPRESSION IS CONSISTENT AFTER EXPOSURE TO TRICHLOROETHYLENE: EVIDENCE FOR POST-TRANSLATIONAL MODIFICATION OF PROTEINS MEDIATING THE REDUCTION IN OOCYTE FERTILIZABILITY. Katherine Wu, Trish Berger. University of California, Davis, CA.

547. EFFECTS OF DOXYCYCLINE ON DOXORUBICIN-INDUCED OXIDATIVE DAMAGE AND APOPTOSIS IN MOUSE TESTES. Yueh-Chiao Yeh, Hui-Chin Lai, Chih-Tai Ting, Wen-Lieng Lee, Li-Chuan Wang, Tsun-Jui Liu. Taichung Veteran General Hospital, Taichung, Taiwan.

Fertilization and Early Embryogenesis

548. THE IMPORTANCE OF THE SPERM NUCLEAR MATRIX IN FERTILIZATION. Jeffrey Shaman, Yasuhiro Yamauchi, Segal Boaz, Kenneth Dominguez, W. Steven Ward. Institute for Biogenesis Research, University of Hawaii, Honolulu, HI.

549. GLOBAL GENE EXPRESSION PROFILING OF SINGLE, CLONED BOVINE EMBRYOS WITH DIFFERENT DEVELOPMENTAL COMPETENCIES: THE GOOD, THE BAD, AND THE UGLY. Sadie Smith, Daniel Le Bourhis, Xavier Vignon, Yvan Heyman, Harris Lewin, X. Cindy Tian,

Jean-Paul Renard, Xiangzhong Yang. University of Connecticut, Storrs, CT; Institut National de la Recherche Agronomique, Jouy en Josas, Cedex, France; Univ of Illinois at Urbana-Champaign, Urbana, IL.

550. CASPASE-9 AND CASPASE-3/7 ACTIVATION ARE INVOLVED IN EVENTS OF HEAT SHOCK- AND CARBONYL CYANIDE P-(TRIFLUOROMETHOXY) PHENYLHYDRAZONE (FCCP)-INDUCED APOPTOSIS ON BOVINE OOCYTES. Paolete Soto, Lawrence Smith. Faculté de médecine vétérinaire, Université de Montréal, St-Hyacinthe, QC, Canada.

551. INFLUENCE OF OXIDATIVE STRESS ON OOCYTE QUALITY AND PROTECTIVE ROLE OF MELATONIN AS AN ANTIOXIDANT. Toshiaki Taketani, Hiroshi Tamura, Ken Taniguchi, Ryou Maekawa, Norihiro Sugino. Yamaguchi Univ, Ube, Yamaguchi, Japan.

552. IDENTIFICATION OF A NOVEL IMPORTIN ALPHA PREDOMINANTLY EXPRESSED IN BOVINE OOCYTES AND EARLY EMBRYOS. Jyothsna Tejomurtula, Jianbo Yao. West Virginia University, Morgantown, WV.

553. EFFECTIVE SUPPRESSION OF Oog1, AN OOCYTE-SPECIFIC GENE, BY RNAi. Satoshi Tsukamoto, Hisashi Imaichi, Yuki Ohta, Seiji Kito, Akira Aizawa, Hiroshi Imai, Naojiro Minami. Kyoto University, Kyoto, Japan; Lab of Reproductive Biology, Kyoto, Japan; Science Services, Chiba, Japan; National Institute of Radiological Sciences, Chiba, Japan; Transposase JAPAN Inc, Gunma, Japan.

554. GERM CELL NUCLEAR FACTOR (GCNF) REPRESSSES THE Oct4 GENE DURING RETINOIC ACID-INDUCED HUMAN EMBRYONIC STEM CELL DIFFERENTIATION. Hongran Wang, Xueping Xu, Austin Cooney. Baylor College of Medicine, Houston, TX.

555. DEVELOPMENTAL BIOLOGY OF PORCINE PREIMPLANTATION EMBRYOS IN VITRO. Hongfeng Wang, Jean Feugang, Nelida Rodriguez-Osorio, Song-yi Jung, Kriston Garrison, Christi Wolgemuth, Laura Greer, Erdogan Memili. Mississippi State University, Mississippi State, MS.

556. STUDY OF ZONULA OCCLUDENS-1 (ZO-1) FUNCTION BY RNA INTERFERENCE IN THE MORULA TO BLASTOCYST TRANSFORMATION IN THE MOUSE. Hehai Wang, Bibhash Paria. Vanderbilt University Medical Center, Nashville, TN.

557. EXPRESSION AND NUCLEAR LOCALIZATION OF PHOSPHORYLATED Cdx2 IN PREIMPLANTATION EMBRYOS SUGGEST DIFFERENT FUNCTIONS AT THE 2-CELL AND BLASTOCYST STAGES. Yufen Xie, Daniel Rappolee, EHHM Rings, Elizabe Puscheck, Jian Liu. Wayne State University, Detroit, MI; University of Groningen, Groningen, Netherlands.

558. IMPAIRMENT OF SPERM FERTILIZING ABILITY OF ARYLSULFATASE A (ASA) KNOCKOUT MICE. Hongbin Xu, Sitthichai Iamsaard, Kessiri Kongmanas, Tony Rupar, Nongnuj Tanphaichitr. University of Ottawa/Ottawa Health Research Institute, Ottawa, ON, Canada; University of Western Ontario, London, ON, Canada; Ottawa Health Research Institute, Ottawa, ON, Canada.

559. UBIQUITIN C-TERMINAL HYDROLASE ACTIVITY PARTICIPATES IN SPERM ACROSOMAL FUNCTION DURING FERTILIZATION OF PORCINE OOCYTES.

Young-Joo Yi, Gaurishankar Manandhar, Miriam Sutovsky, Rongfeng Li, Vera Jonakova, Richard Oko, Randall S. Prather, Chang-Sik Park, Peter Sutovsky. Chungnam National University, Daejeon, South Korea; University of Missouri-Columbia, Columbia, MO; Queen's University, Kingston, ON, Canada; Institute of Molecular Genetics, Academy of Sciences of the Czech Republic, Praha, Czech Republic.

Gametogenesis

560. MICROARRAY ANALYSIS OF DIFFERENTIAL CELL CYCLE GENE EXPRESSION DURING THE SPERMATOGONIUM-SPERMATOCYTE TRANSITION IN THE MOUSE. Dipanwita Roy Choudhury, James Shima, Yufeng Wang, Vivienne Rebel, Michael Griswold, John McCarrey. University of Texas at San Antonio, San Antonio, TX; Washington State University, Pullman, WA; University of Texas Health Science Center at San Antonio, San Antonio, TX.

561. EFFECTS OF SUPRA-PHYSIOLOGICAL CONCENTRATIONS OF PROGESTERONE ON THE PATTERNS OF LH SECRETION AND OVARIAN ANTRAL FOLLICULAR WAVE DYNAMICS IN CYCLIC EWES. Srinivas Seekallu, Behzad Toosi, Norman Rawlings. Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, SK, Canada.

562. DEVELOPMENT OF THE IN VITRO MATURATION SYSTEM FOR ZEBRAFISH OOCYTES. Shinsuke Seki, Toshimitsu Kouya, Ryoma Tsuchiya, Delgado M. Valdez, Jr., Bo Jin, Takao Hara, Naoya Saida, Magosaburo Kasai, Keisuke Edashige. Kochi University, Nankoku, Kochi, Japan.

563. MOUSE EMBRYONIC STEM CELLS CAN BE INDUCED TO DIFFERENTIATE INTO OOCYTE-LIKE CELLS IN VITRO. Wei Shen, Lan Li, Qingjie Pan, Lilan Sun, Xiangwei Zhai. Institute of Animal Reproduction Development and Genetic Engineering, Qingdao, Shandong, China.

564. DEVELOPMENT AND APOPTOSIS OF PORCINE NUCLEAR TRANSFER EMBRYOS FUSED/ACTIVATED IN THE PRESENCE OF SPERM CYTOSOLIC FACTOR (SCF). Joo Hyun Shim, In-Sun Hwang, Mi-Rung Park, Boh-Suk Yang, Dong-Il Jin, Gi-Sun Im. National Livestock Research Institute, RDA, Suwon, Kyunggi, South Korea.

565. GLIAL DERIVED NEUROTROPHIC FACTOR (GDNF) AND NEUROTROPHIN-3 (NT-3) PROMOTE EARLY FOLLICLE DEVELOPMENT AND NT-3 IS NECESSARY FOR OOCYTE SURVIVAL. Gretchen Dole, Eric Nilsson, Michael Skinner. Washington State University, Pullman, WA.

566. HUMAN DAZL BINDS TO SPECIFIC RNAs CODING FOR PROTEINS INVOLVED IN SPERMATOGENESIS.

David Sprague, Allison Rice-Ficht, Usha Chowdury, Robert Jamroz, Thomas Kuehl, Scott & White Memorial Hospital, Temple, TX; The Texas A&M University System Health Science Center, College Station, TX; The Texas A&M University System Health Science Center, Temple, TX.

567. POSTTRANSLATIONAL EVENTS CONTROL THE INITIATION OF CELL VOLUME-REGULATORY GLYCINE TRANSPORT IN OOCYTES. Alina Tartia, Jay Baltz. Ottawa Health Research Institute, Ottawa, ON, Canada.

568. DIFFERENTIAL AND TEMPORAL EFFECTS OF NATIVE AND RECOMBINANT OOCYTE-SECRETED FACTORS ON OOCYTE DEVELOPMENTAL CAPACITY. Jeremy Thompson, Tamer Hussein, Robert Gilchrist. The University of Adelaide, Adelaide, SA, Australia.

569. INVOLVEMENT OF UNDOCKED CONNEXIN43 CONNEXONS IN MOUSE FOLLICULOGENESIS: ANALYSIS IN AN IN VIVO MODEL. Dan Tong, Yonghai Li, Donglin Bai, Gerald Kidder. University of Western Ontario, London, ON, Canada.

570. THE EFFECTS OF DAILY INJECTIONS OF α FSH BETWEEN TWO ENDOGENOUS FSH PEAKS ON FOLLICULAR WAVE DYNAMICS IN ANESTROUS EWES. Behzad Toosi, Ashley Ziegler, Srinivas Seekallu, David Barrett, Norman Rawlings. University of Saskatchewan, Saskatoon, SK, Canada.

571. DIFFERENTIATION OF PRIMORDIAL GERM-LIKE CELLS FROM HUMAN EMBRYONIC STEM CELLS. Franklin West, Kurinji Pandiyan, Kelly Robbins, Steven Stice. University of Georgia, Athens, GA.

572. ACTIVE IMMUNIZATION AGAINST TWO INHIBIN ANTIGENS ON DAILY SPERM PRODUCTION (DSP) AND HORMONE CONCENTRATIONS IN RAM LAMBS. Jonathan Wheaton, Jared Voge. University of Minnesota, St. Paul, MN.

573. MOLECULAR DIVERSITY OF TEX101, A GERM CELL-SPECIFIC GLYCOPROTEIN IN THE PROCESS OF SPERMATOGENESIS ANALYZED BY MONOCLONAL ANTIBODIES. Hiroshi Yoshitake, Yohei Shirai, Hong Jin, Hiroko Iwanari, Kenji Takamori, Hideoki Ogawa, Takao Hamakubo, Yoshihiko Araki. Juntendo University Graduate School of Medicine, Urayasu, Japan; University of Tokyo, Tokyo, Japan; Perseus Proteomics Inc., Tokyo, Japan.

574. REPLACING GLUTAMINE WITH ALANYL-GLUTAMINE IN CHEMICALLY DEFINED MATURATION MEDIUM CAN INCREASE PORCINE OOCYTE NUCLEAR MATURATION IN VITRO. Ye Yuan, Rebecca Krisher. Purdue University, West Lafayette, IN.

575. DECREASED EXPRESSION OF Rbm3 mRNA IN ANDROGEN-SUPPRESSED JUVENILE SPERMATOGENIAL DEPLETION (jsd) MICE INDICATES TESTICULAR TEMPERATURE ELEVATION. Wei Zhou, Gunapala Shetty, Shan Shao, Connie Weng, Marvin Meistrich. Univ. of Texas M.D. Anderson Cancer Center, Houston, TX.

Gene Expression in Endocrine Tissues

576. THE TRANSCRIPTION FACTOR KLF6 IS EXPRESSED IN SOMATIC CELLS AND IN A SUBPOPULATION OF GERM CELLS DURING MOUSE TESTICULAR DEVELOPMENT. Nicholas Robert, Maxime Tremblay, Jacques Tremblay. CHUL Research Centre, Quebec City, QC, Canada.

- 577. DIFFERENTIAL EXPRESSION OF SUPEROXIDE DISMUTASES (SOD) IN THE BOVINE OVIDUCT DURING THE ESTROUS CYCLE.** Monica Roy, Jean-François Bilo-deau. Centre de Recherche en Biologie de la Reproduction (CRBR), CHUL, Université Laval, Ste-Foy, Québec, Canada.
- 578. NITRIC OXIDE STIMULATED BY PGF₂α INDUCES THE DRASTIC INCREASE OF LUTEAL BLOOD FLOW AND HAS A ROLE IN THE FUNCTIONAL AND STRUCTURAL LUTEOLYSIS.** Kiemi Sasahara, Koumei Shirasuna, Sho Watanabe, Takayuki Asahi, Kaya Nagai, Akio Miyamoto. Obihiro University, Obihiro, Japan.
- 579. CHARACTERIZATION OF THE EQUINE PROSTAGLANDIN E₂ RECEPTOR AND ITS REGULATION DURING THE OVULATORY PROCESS IN MARES.** Khamphone Sayasith, Nadine Bouchard, Monique Doré, Jean Sirois. University of Montreal, Saint-Hyacinthe, Québec, Canada.
- 580. EXPRESSIONS OF ESTROGEN RECEPTORS α AND β ARE REGULATED BY PROSTAGLANDIN F₂α, TUMOR NECROSIS FACTOR α AND INTERFERON γ IN BOVINE LUTEAL CELLS.** Masami Shibaya, Ayumi Matsuda, Tomas J. Acosta, Kiyoshi Okuda. Okayama University, Tsushima-Naka, Okayama City, Japan.
- 581. PROGESTERONE PRODUCTION DURING DIFFERENTIATION IN BOVINE GRANULOSA CELL IN VITRO CULTURE.** Takashi Shimizu, Natsuko Sudo, Hiromichi Yamashita, Hitoshi Miyazaki, Akio Miyamoto. Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Hokkaido, Japan; University of Tsukuba, Tsukuba, Ibaraki, Japan.
- 582. THE EXPRESSION OF EphB/ephrinB SYSTEM IN THE BOVINE CORPUS LUTEUM.** Koumei Shirasuna, Hiromichi Yamashita, Albert Ricken, Katharina Spanel-Borowski, Bajram Berisha, Dieter Schams, Takashi Shimizu, Akio Miyamoto. Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Japan; TUM-Weihenstephan, Munich, Germany; University of Leipzig, Leipzig, Germany.
- 583. IMPACT OF MODERATE CALORIE RESTRICTION ON PITUITARY GENE EXPRESSION IN ADULT MALE RHESUS MACAQUES (*Macaca mulatta*).** Brandon Sitzmann, Julie Mattison, Donald Ingram, George Roth, Mary Ann Ottinger, Henryk Urbanski. University of Maryland, College Park, MD; Oregon Health and Sciences University, Beaverton, OR; National Institutes of Health, Baltimore, MD.
- 584. EXPRESSIONS OF HYPOXIA-INDUCIBLE FACTOR-1 α, VASCULAR ENDOTHELIAL GROWTH FACTOR AND ITS RECEPTORS IN BOVINE ENDOMETRIUM THROUGHOUT THE ESTROUS CYCLE.** Yukari Tasaki, Ryo Nishimura, Masami Shibaya, Hwa-Yong Lee, Tomas Acosta, Kiyoshi Okuda. Okayama University, Okayama, Japan.
- 585. INHIBITORY ACTION OF FSH IN APOPTOSIS OF SWINE GRANULOSA CELLS IN COCG CULTURE INVOLVES HYALURONAN SYNTHESIS IN AN INTRINSIC PATHWAY.** Woro Anindito Sri Tunjung, Masaki Yokoo, Yuko Miyake, Eimei Sato. Tohoku University, Sendai, Miyagi, Japan.
- 586. CANONICAL WNT SIGNALING POTENTIATES ES CELL PLURIPOTENCY IN A MANNER DEPENDENT ON THE ORPHAN NUCLEAR RECEPTOR LRH-1.** Ryan Wagner. Baylor College of Medicine, Houston, TX.
- 587. FUNCTIONAL ACTIVITY OF THE PORCINE TYPE II GnRH RECEPTOR GENE PROMOTER.** Jocelyn Wiarda, Rebecca Cederberg, Brett White. University of Nebraska, Lincoln, NE.
- 588. OCCLUDIN EXPRESSION IN THE PRIMATE OVARY DURING NORMAL CYCLE AND AFTER INHIBITION OF VASCULAR ENDOTHELIAL GROWTH FACTOR.** Christine Wulff, Miriam Rodewald, Daniel Herr, Regina Konrad, Rolf Kreienberg, Hamish Fraser. University of Ulm, Ulm, Germany; Medical Research Council Human Reproductive Sciences Unit, Edinburgh, United Kingdom.
- 589. THE EFFECT OF FADROZOLE-INDUCED ESTROGEN WITHDRAWAL ON GENE EXPRESSION PROFILES IN NEUROENDOCRINE BRAIN IN GOLDFISH (*Carassius auratus*).** Dapeng Zhang, Christopher Martyniuk, Hailing Xiong, Jason Popesku, Paula Duarte, Xuhua Xia, Vance Trudeau. University of Ottawa, Ottawa, ON, Canada.
- 590. EVIDENCE THAT TGF-β1 IS A PHYSIOLOGICAL INHIBITOR OF FSH-STIMULATED ESTRADIOL AND PROGESTERONE SYNTHESIS IN BOVINE GRANULOSA CELLS OF SMALL ANTRAL FOLLICLES.** Xiaofeng Zheng, Christopher Price, Yves Tremblay, Jacques Lussier, Paul Carrière. Université de Montréal, Saint-Hyacinthe, QC, Canada; Université Laval, Québec, QC, Canada.

Genomics and Proteomics of the Reproductive System

- 591. CHARACTERIZATION OF SWINE ADIPONECTIN AND ADIPONECTIN RECEPTORS POLYMORPHISMS AND THEIR ASSOCIATION WITH REPRODUCTIVE TRAITS.** Andrée-Anne Houde, Bruce Murphy, Danièle Beaudry, Marian Mayhue, Olivier Mathieu, Marie-France Palin. Université de Montréal, Saint-Hyacinthe, QC, Canada; Agriculture and Agri-Food Canada, Sherbrooke, QC, Canada.
- 592. A COMPARISON OF GLOBAL DNA METHYLATION PATTERNS IN DEVELOPMENTALLY-COMPETENT VS -INCOMPETENT NUCLEAR TRANSFER DONOR CELLS.** S. Clay Isom, Kristin Whitworth, Aaron Bonk, Randall Prather. University of Missouri-Columbia, Columbia, MO.
- 593. CYSTEINE-RICH SECRETORY PROTEIN-3 (CRISP-3) IS EXPRESSED IN THE RHESUS MACAQUE ENDOMETRIUM AND REGULATED IN A PROGESTERONE-DEPENDENT MANNER.** Andrea Lawson, Rebecca Carroll, Kunie Mah, Christopher Keator, Ov Slayden. Oregon National Primate Research Center, Beaverton, OR.
- 594. IDENTIFICATION OF FERTILITY MARKERS IN EQUINE SEMEN USING PROTEOMICS TECHNIQUES.** Susan Novak, Taylor Smith, Les Burwash, Francois Paradis, Michael Vinsky, Walter Dixon. Alberta Agriculture, Edmonton, AB, Canada.
- 595. EFFECT OF PUBERTY AND FOLLICLE SIZE ON GENE EXPRESSION IN PORCINE OOCYTES.** Melissa

Paczkowski, Chris Bidwell, Bruce Craig, Alex Lipka, Jolena Waddell, Rebecca Krisher. Purdue University, West Lafayette, IN.

596. ISOLATION AND AMPLIFICATION OF BIOMARKER RNA FROM SMALL NUMBERS OF ARCHIVED FORMALIN-FIXED HUMAN BREAST EPITHELIAL CELLS HARVESTED BY RANDOM PERIAREOLAR FINE NEEDLE ASPIRATION OR DUCTAL LAVAGE FOLLOWED BY LASER CAPTURE MICRODISSECTION. Brian Petroff, Carol Fabian, Teresa Phillips. University of Kansas Medical Center, Kansas City, KS.

597. PROTEOMIC ANALYSIS OF CONCEPTUS FLUID FROM BOVINE PREGNANCIES: A COMPARISON OF NATURALLY CONCEIVED, SCNT, AND IVF SAMPLES COLLECTED AT DAY 45 OF GESTATION. George Riding, Alun Jones, Jonathan Hill, Michael Holland, Sigrid Lehnert. CSIRO Livestock Industries, Brisbane, Queensland, Australia; University of Queensland, Brisbane, Queensland, Australia; Monash University, Melbourne, Victoria, Australia.

598. MICROARRAY ANALYSES OF BOVINE GRANULOSA CELLS FROM SMALL AND LARGE HEALTHY ANTRAL FOLLICLES. Raymond Rodgers, Helen Irving-Rodgers, Thomas Ohnesorg, Lyn Harland, Stephanie Morris. University of Adelaide, Adelaide, SA, Australia.

599. DEGRADOMIC ACTIONS OF MMP2 AND MMP9 ON GRANULOSA CELLS. Katherine Rosewell, Carol Beach, Charlotte Randle, Thomas Curry, Jr. University of Kentucky College of Medicine, Lexington, KY.

600. PROTEIN PROFILE OF THE OVIDUCTAL FLUID FROM CYCLIC COWS. Carlos Souza, Arlindo Moura, Elisa Monaco, Gary Killian. Federal University of Ceara, Ceara, Brazil; University of Illinois, Urbana, IL; Pennsylvania State University, Philadelphia, PA.

601. PROTEIN PROFILING OF MOUSE OOCYTES MATURED IN VITRO DURING THE FIRST WAVE OF FOLLICULOGENESIS. Osamu Suzuki, Minako Koura, Yoko Noguchi, Kaoru Takano, Kozue Uchio-Yamada, Junichiro Matsuda. National Institute of Biomedical Innovation, Ibaraki, Osaka, Japan.

602. CHARACTERIZATION OF CRISP PROTEIN FAMILY IN THE BOAR. Melissa Vadnais, Douglas Foster, Kenneth Roberts. University of Minnesota, Minneapolis, MN.

Implantation, Pregnancy, and Parturition

603. ENDOMETRIAL VASCULAR PERFUSION DURING EARLY PREGNANCY IN HEIFERS ASSESSED BY COLOR-DOPPLER ULTRASONOGRAPHY. Luciano Silva, Dan Sharp, Oliver Ginther. University of Florida, Gainesville, FL; Eutheria Foundation, Cross Plains, WI.

604. ALTERED GESTATION LENGTH IN MICE NULL FOR THE KRUPPEL-LIKE FACTOR 9 GENE OR HETEROZYGOUS FOR THE LEPTIN RECEPTOR MUTATION: USEFUL MODELS FOR PARTURITION DEFECTS? Rosalia Simmen, Michael Velarde, Zhaoyang Zeng, Frank Simmen, Caralina de Evsikova. University of Arkansas for Medical

Sciences, Little Rock, AR; The Jackson Laboratory, Bar Harbor, ME.

605. PROGESTERONE AND INTERFERON TAU REGULATE HYPOXIA-INDUCIBLE FACTOR (HIF) ALPHA SUBUNIT IN THE OVINE ENDOMETRIUM DURING THE PERI-IMPLANTATION PERIOD OF PREGNANCY. Gwonhwa Song, Fuller Bazer, Thomas Spencer. Texas A&M University, College Station, TX.

606. TUMOR METASTASIS INHIBITORY GENE CD82/KAI1 REGULATES EMBRYONIC TROPHOBLASTIC CELLS' INVASION INTO UTERINE ENDOMETRIUM IN MICE. Dongmei Tan, Bangxia Zhao, Mingzhong He, Xiaowei Wei, Hongying Peng, Guoqi Lai, Yi Tan. Chongqing Medical University, Chongqing, China.

607. THE EFFECTS OF CATECHOLESTROGENS ON GLYCOGEN PRODUCTION AND CELLULAR DISTRIBUTION IN THE RAT UTERUS. Janie Thomas, Daniel Mecham, Jack Rose. Idaho State University, Pocatello, ID.

608. DEFINING THE TIMING OF MIGRATION AND ACTIVATION OF INFLAMMATORY CELLS IN RELATION TO OTHER EVENTS DURING CERVICAL REMODELING. Brenda Timmons, Anna-Marie Fairhurst, Mala Mahendroo. UT Southwestern Medical Center, Dallas, TX.

609. EXPRESSION OF STEROIDOGENIC ACUTE REGULATORY PROTEIN (STAR) IN CARUNCULAR AND COTYLEDONARY BOVINE TISSUES, DURING THE FIRST HALF OF THE GESTATION. Adriana Verduzco Gómez, Leonor Miranda, Bruce Murphy, Adrian Quero. Université de Montréal, Saint Hyacinthe, QC, Canada.

610. MECHANISM WHEREBY NITRIC OXIDE (NO) INFUSED CHRONICALLY INTRAUTERINE IN EWES IS ANTLUTEOLYTIC RATHER THAN BEING LUTEOLYTIC. Charles Weems, Yoshie Weems, Esther Lennon, Tracie Uchima, Aaron Raney, Kylee Goto, Allison Ong, Drew Johnson, Halina Zaleski. University of Hawaii, Honolulu, HI.

611. EVIDENCE THAT RELAXIN PROMOTES CELL PROLIFERATION AND INHIBITS APOPTOSIS OF BOTH EPITHELIAL CELLS AND STROMAL CELLS IN THE MOUSE LOWER REPRODUCTIVE TRACT. Li-Juan Yao, O. David Sherwood. University of Illinois at Urbana-Champaign, Urbana, IL.

612. MECHANISM OF LYSOPHOSPHOLIPID RECEPTOR-SPECIFIC FUNCTION IN EMBRYO IMPLANTATION. Xiaoqin Ye, Jerold Chun. The Scripps Research Institute, La Jolla, CA.

613. THE DISTRIBUTION OF PEANUT AGGLUTININ RECEPTORS IN RABBIT UTERUS DURING EARLY PREGNANCY AND ITS HORMONAL REGULATION. Zhan-Peng Yue, Xue-Min Han, Hai-Hua Feng, Xue-Ming Zhang, Zi-Yi Li. College of Animal Science and Veterinary Medicine, Jilin University, Changchun, Jilin Province, China.

614. ROLES OF UTERINE POLYAMINES DURING EMBRYO IMPLANTATION: EXPRESSION AND FUNCTIONAL STUDIES OF POLYAMINE-RELATED GENES IN MOUSE UTERUS. Yue-Chao Zhao, Yong-Sheng Yu, Yu-Jing Chi, Xing-Hong Ma, Ji-Long Liu, Zeng-Ming Yang. Xiamen

University, Xiamen, China; Xiamen, Fujian, China; Harbin, Heilongjiang, China.

Maturation, Aging, and Death in Reproductive Tissues

615. KIT LIGAND STIMULATES ACTIVATION OF BOVINE PRIMORDIAL FOLLICLES IN VITRO. Wanzirai Muruvi, Joanne Fortune. Cornell University, Ithaca, NY.

616. IN VITRO MATURATION OF CANINE OOCYTES USING CHICKEN AND OSTRICH EGGS. Mundhir Ridha-Albarzanchi, Michael Kjelland, Jie Liu, Duane Kraemer, Saeeda Alansari. Texas A&M University, College Station, TX.

617. EXPRESSION OF KiSS-1 AND GPR54 IN SIBERIAN HAMSTER (*Phodopus sungorus*) OVARIES DURING THE ESTROUS CYCLE AND PHOTOPERIOD INDUCED RE-CRUESCENCE. Asha Shahed, Kelly Young. California State University, Long Beach, Long Beach, CA.

618. DIFFERENCES IN METABOLIC PATTERNS IN DOG OOCYTES MAY EXPLAIN VARIATIONS IN IN VITRO MATURATION SUCCESS. Nucharin Songsasen, Sonya Wesselowski, James Carpenter, David Wildt. Smithsonian's National Zoological Park, Front Royal, VA; Kansas State University, Manhattan, KS.

619. REGULATION OF FOLLICULOGENESIS AND APOPTOSIS BY INTRABURSA INJECTION OF ANGIOPOIETIN-1 (ANPT-1) Ab TO GONADOTROPIN-TREATED PREPUBERAL RATS. Marta Tesone, Dalhia Abramovich, Alejandra Rodriguez Celin, Fernanda Parborell. Instituto de Biología y Medicina Experimental, Buenos Aires, Argentina.

620. AMH TYPE II RECEPTOR DEFICIENT MICE DISPLAY A MORE SEVERE OVARIAN PHENOTYPE THAN AMH-DEFICIENT MICE. Jenny Visser, Marlies Kevenaar, Piet Kramer, Anke McLuskey, Richard Behringer, Axel Themmen. Erasmus MC, Rotterdam, Netherlands; University of Texas, M.D. Anderson Cancer Center, Houston, TX.

621. DIFFERENTIAL MMP AND TIMP EXPRESSION DURING THE ESTROUS CYCLE AND PHOTOPERIOD-INDUCED OVARIAN REGRESSION IN SIBERIAN HAMSTERS (*Phodopus sungorus*). Lisa Vrooman, Chantelle Moffatt-Blue, Kelly Young. California State University, Long Beach, Long Beach, CA.

622. SEGMENT- AND CELL-SPECIFIC EXPRESSION OF D-TYPE CYCLINS IN THE POSTNATAL MOUSE EPIDIDYMISS. Huizhen Wang. University of Kansas Medical Center, Kansas City, KS.

623. EFFECTS OF CENTRAL INFUSION AND IMMUNONEUTRALIZATION OF GROWTH HORMONE ON THE TIMING OF PUBERTY AND PLASMA LEPTIN LEVELS IN THE FEMALE RAT. Saeed Zeinoaldini, Hans J.M. Swarts, Bert J.M. Van de Heijning. Tehran University, Karaj, Tehran, Iran; Wageningen University, Wageningen, Wageningen, Netherlands.

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624. EXPRESSION PROFILES OF BRAIN, KIDNEY, AND LUNG OF CLONED PIGS. Joonghoon Park, Sadie Smith, Liangxue Lai, Melissa Samuel, Dave Wax, Randall Prather, Xiangzhong Yang, X Cindy Tian. University of Connecticut, Storrs, CT; University of Missouri-Columbia, Columbia, MO.

625. SPERM DNA INTEGRITY AND CYTOSOLIC CALCIUM LEVELS ARE ASSOCIATED WITH THE IN VIVO FERTILITY OF BOVINE SEMEN. Soliman Peris, Maurice Dufour, Janice Bailey. Université Laval, Québec, QC, Canada.

626. IN VITRO DEVELOPMENT OF INTERSPECIES NUCLEAR TRANSFER USING PORCINE OOCYTES WITH GOAT AND MOUSE SOMATIC CELLS. Yanshi Quan, Kenji Naruse, Baek Chul Kim, Su Min Choi, Rong Xun Han, Chang Sik Park, Dong Il Jin. Chungnam National University, Daejeon, South Korea.

627. FACTORS AFFECTING PRODUCTION OF TRANSGENIC MICE BY ICSI-MEDIATED DNA TRANSFER. Xingshen Sun, Xiaoming Liu, Yaling Yi, Meihui Luo, Juan Chen, Gregory Leno, Ziyi Li, John Engelhardt. University of Iowa, Iowa City, IA.

628. CRYOPRESERVATION OF CANINE SPERMATOZOA IN A SIMPLE EXTENDER COMPOSED OF SKIM MILK, GLUCOSE AND GLYCEROL. Hiroshi Suzuki, Dong-Soo Lee, Hikaru Sano, Koji Akiyama, Yoshinori Suwa, Yasuyuki Abe. Obihiro University of Agriculture and Veterinary Medicine, Obihiro, Hokkaido, Japan; Hokkaido Guide Dog Association, Obihiro, Hokkaido, Japan.

629. CULTURE OF ZONA-FREE MOUSE EMBRYOS: A COMPARISON BETWEEN DIFFERENT CULTURE SYSTEMS. Jing-He Tan, Suo-Feng Ma, Xia Zhang, De-Qiang Miao, Xin-Yong Liu, Guo-Cheng Lan. Shandong Agri. University, Tai-an City, China.

630. MOLECULAR RECOGNITION OF FRESH AND FROZEN ALPACA SPERMATOZOAS WITH ZONA PELLUCIDA. Martha Valdivia, Cristian Alvarez, Claudia Rodriguez, Nadia Canorio, Fanny Reyes, Maria del Pilar Suvo, Susan Perez, Luis Guzman, Javier Conislla. Universidad Nacional Mayor de San Marcos, Lima, Peru; Municipalidad de Huancavelica, Lima, Peru.

631. OVARIAN HYPERSTIMULATION SYNDROME (OHSS) RAT MODEL FOR INVESTIGATING THE EFFECTS OF FSH AND LH AGONISTS. Ruud Van de Lagemaat, Bianca Raafs, Sietse Mosselman. Organon Biosciences, Oss, Netherlands.

632. COMPARISON BETWEEN TWO ARTIFICIAL INSEMINATION METHODS USING FROZEN SEMEN IN DOMESTIC CATS (*Felis catus*). Ana Izabel Villaverde, Cely Melo, Ian Martin, Tatiana Ferreira, Frederico Papa, Cesar Taconeli, Maria Denise Lopes. College of Veterinary Medicine and Animal Science/ FMVZ/UNESP, Botucatu, São Paulo, Brazil; Institute of Bioscience, Botucatu, São Paulo, Brazil.

633. ACTIVATION OF DOMESTIC CAT OOCYTES USING THE SULFHYDRYL REAGENT THIMEROSAL. Chunmin

Wang, Sehwon Koh, Kiho Lee, Zoltan Machaty. Purdue University, West Lafayette, IN.

634. INHERITANCE PATTERN OF PORCINE ENDOTHELIAL NITRIC OXIDE SYNTHASE (eNOS) OVER-EX-PRESSING TRANSGENE IN OFFSPRING OF A CLONED TRANSGENIC BOAR BRED TO WILD-TYPE SOWS. Jeffrey Whyte, Yan-Hong Hao, Jennifer Casati, James Turk, Melissa

Samuel, David Wax, Edmund Rucker III, Randall Prather, Harold Laughlin. University of Missouri-Columbia, Columbia, MO; Texas A&M University, College Station, TX.

635. NO DIFFERENCE BETWEEN COLLAGENASE TYPE I AND IV IN ISOLATION OF PORCINE TESTIS CELLS. Yanfei Yang, Ali Honaramooz. University of Saskatchewan, Saskatoon, SK, Canada.