



PROGRAM

**The Sixth Annual Society for Behavioral
Neuroendocrinology Meeting**

**Hosted by
The Center for Neuroendocrine Studies
of the University of Massachusetts,
Amherst**

June 26-30, 2002

Selection of abstracts and organization of the program for the 2002 SBN annual meeting was overseen by a Program Committee comprised of Anne Etgen (Chair), Elizabeth Adkins-Regan, Marc Breedlove, Nancy Forger, Nory Geary, Gabriela Gonzalez-Mariscal, Kay Holekamp, Paul Micevych, Michael Moore, Cort Pederson, James Pfaus, Jennifer Swann, Diane Witt, Pauline Yahr, and Larry Young.

DAY 1: JUNE 26 (WEDNESDAY)

All Day: Arrival and Registration

12:00-5:00 WORKSHOP: Contemporary Issues in Aggressive Behavior

Organizers: Emilie Rissmann (University of Virginia)
Yvon Delville (University of Texas)
Israel Lederhendler (NIMH)

Featured Participants: Stephen Maxson (University of Connecticut)
Bob & Caroline Blanchard (University of Hawaii)
Art Arnold (UCLA)
Kim Huhman (Georgia State University)
Randy Nelson (Ohio State University)

Key Topics: Social hierarchy and aggression
Genetics of aggression
Neurotransmitter/peptide control of aggression

5:00-7:00 Opening Reception

7:00-9:00 Workshop for Students and Postdocs: "Alternative Careers for Behavioral Neuroendocrinologists: Live by the Pen" *Dinner (pizza) will be served.*

Workshop Organizer: Ms. Barbara Goldoftas (Wellesley College)

DAY 2: JUNE 27 (THURSDAY)

Day 2 Morning

8:15 Brief Welcome

PRESIDENTIAL SYMPOSIUM: The Neurobiology of Olfactory Function

Chair: Michael Baum (Boston University), President of SBN

8:30 Keynote Speaker: John Hildebrand (University of Arizona): Sex differences in moth olfaction: behavior, functional organization, and development.

9:20 Trese Leinders-Zufall (University of Maryland School of Medicine): Pheromone sensing in mice

9:50 Coffee Break

10:15 James Cherry (Boston University): Sex difference in and sex steroid modulation of vomeronasal responses to pheromones

10:45 Tim Holy (Washington University Medical School): Sex recognition using vomeronasal cues

11:15 Hideto Kaba (Kochi Medical School): Synaptic changes associated with pheromonal learning in the mouse accessory olfactory bulb

Contributed Paper

11:45 Martha K. McClintock, Suma Jacob, Bethanne Zelano, and Carole Ober (University of Chicago): Preferences for human odors are associated with paternally inherited HLA alleles

12:00-1:15 **Lunch**
Meet the Professors Luncheons (Valentine Dining Hall)

Day 2 Afternoon

SYMPOSIUM 1: Neuroendocrinology of Motivation and Reward

Chairs: Lique Coolen (University of Cincinnati College of Medicine)
Elaine Hull (State University of New York, Buffalo)

1:15 Keynote Speaker: Barry Everitt (University of Cambridge): From sexual behavior to drug addiction via associative and motivational systems in the brain

2:05 Lique Coolen (University of Cincinnati College of Medicine): Motivating circuits: Common substrates for sex and drugs

2:35 Coffee Break

3:00 Jill Becker (University of Michigan): Rapid effects of estrogen on dopamine systems: Effects on motivated behaviors

3:30 Elaine Hull (State University of New York, Buffalo): Sex and the single rat: Tales of dopamine and serotonin

4:00 Thomas Insel (Emory University): Is love an addictive disorder?

4:30-7:30: Poster Session I (Numbers 1 through 64; see list at end of program)

7:30-9:00: Workshop for Students and Postdocs: "Making the Most of Your

Workshop Organizer: Irving Zucker (University of California, Berkeley)

DAY 3 JUNE 28 (FRIDAY)

Day 3 Morning

SYMPOSIUM 2: Gonadal Steroids in Adulthood: Beyond the Hypothalamus

Chairs: Nancy L. Desmond and Emilie F. Rissman (University of Virginia)

8:30 Keynote Speaker: Phyllis Wise (University of California, Davis): Estradiol: an important neuroprotective factor in the adult and aging brain

9:20 Nancy L. Desmond (University of Virginia): Estradiol-dependent modulation of hippocampal function: Clues from electrophysiological and molecular studies

9:50 Coffee Break

10:15 Tracey J. Shors (Rutgers University): Neurogenesis, spines and hippocampal-dependent memories: males and females are not the same

10:45 Janice M. Juraska (University of Illinois): The changing influence of estrogen on cortical brain regions across the life span: morphological evidence from peripuberty through old age

11:15 Jeri S. Janowsky (Oregon Health & Science University): Cognitive and neuroimaging analyses of the effects of gonadal steroids on humans

Contributed Paper

11:45 Agnes Lacreuse and James G. Herndon (Emory University): Estrogens and cognition in female rhesus monkeys

12:00-1:30 Lunch

Meet the Professors Luncheons (Valentine Dining Hall)

Day 3 Afternoon

SYMPOSIUM 3: The Essence of Time: Communication Between the Central Clock and the Periphery

Chair: Eric Bittman (University of Massachusetts)

1:30 Ueli Schibler (University of Geneva): Peripheral circadian oscillators: Inputs and outputs

2:00 Shin Yamazaki (University of Virginia): Ontogeny of circadian organization in the rat

2:30 Timothy J. Bartness (Georgia State University): SCN efferent connections in the control of body fat

3:00 Coffee Break

3:30 Ruud M. Buijs (Netherlands Institute for Brain Research): Communication between the biological clock and peripheral organs

Contributed Papers

4:00 Theresa M. Lee, Tiffany A. Buckley, Jennifer A. Mohawk, Jennifer A. Gallinat and Amy T. Young (University of Michigan): Daily bouts of exercise and conspecific odor exposure are equivalent non-photic zeitgebers for diurnal *Octodon degus*

4:15 Virginie Canoine and Eberhard Gwinner (Max-Planck Research Centre for Ornithology): Seasonality in androgenic control of aggressive behavior in captive European stonechats (*Saxicola torquata*)

4:30-7:30: Poster Session II (Numbers 65 through 125; see list at end of program)

DAY 4 JUNE 29 (SATURDAY)

Day 4 Morning

SYMPOSIUM 4: Hormonal and Social Influences on Parental Care: Comparative Approaches

Chairs: Joseph Lonstein and Christine Wagner (University of Massachusetts)

8:30 Keynote Speaker: Carmen Clapp (National University of Mexico, Queretaro): Prolactin in the hypothalamo-neurohypophyseal system

9:20 Robert S. Bridges (Tufts University School of Veterinary Medicine): A central role for lactogenic hormones in the regulation of maternal behavior in rats

9:45 Coffee Break

10:15 Stephen C. Gammie (University of Wisconsin): Comparative analysis of maternal aggression in rodents

10:40 Joseph S. Lonstein (University of Massachusetts): Hormonal and social influences on the development of sex differences in parental behavior in prairie voles

11:05 Toni E. Ziegler (University of Wisconsin): Neuroendocrine influences on parental care in cooperative breeding marmoset and tamarin monkeys.

11:30 Carol M. Vleck (Iowa State University): Control of parental care in an extreme environment: Antarctic penguins

12:00-1:30 Lunch
Meet the Professors Luncheons (Valentine Dining Hall)

Day 4 Afternoon

SYMPOSIUM 5: Steroid Modulation of Glia

Chair: Margaret McCarthy (University of Maryland School of Medicine)

1:30 Cynthia Jordan (Michigan State University): Steroids and glia: An overview

1:50 Jessica Mong (Rockefeller University): Steroid modulation of astrocytes during development and in the adult

2:20 Luis-Miguel Garcia Segura (Instituto Cajal): The role of glial cells in the neuroprotective effects of steroids

2:50 Coffee Break

3:20 Kathryn J. Jones (Loyola University): Androgenic effects on the injury response of motor neurons.

Contributed Papers

3:50 Christie D. Fowler, Yan Liu and Zuoxin Wang (Florida State University): Newly proliferated cells in the adult amygdala are affected by gonadal steroid hormones in male meadow voles

4:05 Natalina Salmaso, Naomi Popeski and Barbara Woodside (Concordia University): Differential effects of hormonal state on bFGF immunoreactivity in the supraoptic nucleus and the cingulate cortex of female rats

4:20-7:20: Poster Session III (Numbers 126 through 191; see list at end of program)

8:00-12:00 BANQUET and announcement of student poster awards

June 30 (Sunday): Departure

POSTER SESSION I: THURSDAY, JUNE 27, 4:30-7:30 PM

1. CHEMICAL AND BIOLOGICAL VALIDATION OF AN ENZYME IMMUNOASSAY FOR PLASMA OXYTOCIN

Kristin. M. Kramer, Bruce. S. Cushing, C. Sue Carter, Julie Wu, and Mary Ann Ottinger

2. CHRONIC NONINVASIVE MEASUREMENT OF 17 β -ESTRADIOL, TESTOSTERONE, AND PROGESTERONE IN EXCRETIONS OF MICE

Denys deCatanzaro, Michelle Jetha, and Elliott Beaton

3. DO HERBIVORES HAVE HIGHER ABSOLUTE SEX STEROID CONCENTRATIONS THAN CARNIVORES? ARTIODACTYLA VS. CARNIVORA

Wendell O. Challenger and Katherine E. Wynne-Edwards

4. PLASMA LH CONCENTRATIONS IN MALE AND FEMALE OPOSSUMS (*MONODELPHIS DOMESTICA*) FOLLOWING GONADECTOMY AND EXOGENOUS GNRH

Yimei He, Jennifer R. Mattern, Leah M. Pyter, Barbara H. Fadem, and John D. Harder

5. YOLK ANDROGENS AND BEHAVIOUR IN BLACK-HEADED GULL CHICKS: AN EXPERIMENTAL FIELD STUDY

Corine Eising and Ton Groothuis

6. CHANGES IN OREXIGENIC NEUROPEPTIDES IN BREEDING RING DOVES IN RELATION TO PARENTAL HYPERPHAGIA

April D. Strader and John D. Buntin

7. FOOD CUES ENHANCE GONADAL DEVELOPMENT IN NOMADIC FINCHES.

M.E. Pereyra, S.M. Sharbaugh, M.L. Morton and T.P. Hahn

8. FOOD RESTRICTION-INDUCED HYPERPHAGIA IS MODULATED BY THE ESTROUS CYCLE.

D.P. Dixon and L.A. Eckel

9. CORTICOSTERONE INFLUENCES ENERGY STATE AND OREXIGENIC NEUROPEPTIDES IN FEMALE RING DOVES

Allison M. McNeil, April D. Strader, and John D. Buntin

10. MELATONIN REGULATES ENERGY BALANCE AND ATTENUATES FEVER IN SIBERIAN HAMSTERS

Staci D. Bilbo and Randy J. Nelson

11. CHRONIC EXPOSURE TO A PALATABLE DIET ABOLISHES ESTROUS-RELATED DECREASES IN CALORIC INTAKE.

J.M. Barranco, H.M. Rivera, and L.A. Eckel

12. SUPERIOR CERVICAL GANGLIONECTOMY MODULATES THE ABILITY OF GONADECTOMIZED MALE AND FEMALE MICE TREATED WITH ANDROGENS TO DETECT DECREASING CONCENTRATIONS OF VOLATILE URINARY ODORANTS

D.E. Pankevich, E.D. Deedy, J.A. Cherry, and M.J. Baum

**13. RESPONSES TO ODORS DETECTED BY GOLDEN HAMSTERS
(*MESOCRICETUS AURATUS*) PRIOR TO TWO DAYS OF AGE CHANGE
THROUGHOUT DEVELOPMENT**

S.C. Larimer and R.E. Johnston

**14. EVIDENCE FOR A FUNCTIONAL SEGREGATION WITHIN THE HAMSTER AOB:
NADPH AND c-FOS DATA.**

K.G. Bath and R.E. Johnston

15. ALARM PHEROMONES IN MALE RATS

Takefumi Kikusui, Shu Takigami, Yasushi Kiyokawa, Yukari Takeuchi and Yuji Mori

**16. THE OLFACTORY TOXICANT DICHLOBENIL ELIMINATES FEMALE INDUCED
LUTEINIZING HORMONE (LH) RELEASE IN MALE SIBERIAN HAMSTERS**

Sonali Anand, Virginia M. Carr, Fred W. Turek, and Teresa H. Horton

**17. EXCITOTOXIC LESIONS OF THE TEGMENTAL PEDUNCULOPONTINE
NUCLEUS BLOCK SEXUAL REWARD, BUT ENHANCE SEXUAL MOTIVATION.**

Tod E. Kippin and Derek van der Kooy

**18. A CRITICAL ROLE FOR DOPAMINE IN PAIR BONDING IN MALE PRAIRIE
VOLES**

Brandon J. Aragona, Yan Liu, J.Thomas Curtis, Friedrich K. Stephan, and Zuoxin Wang

**19. EFFECTS OF TESTOSTERONE AND SEXUAL BEHAVIOR ON INCORPORATION
OF NEWBORN CELLS IN ADULT RODENT OLFACTORY BULBS.**

Eric L. Bittman and Jonathan Lawrence

**20. RECENT EXPERIENCE MODULATES AUDITORY FOREBRAIN RESPONSES TO
MATE-CHOICE CUES IN EUROPEAN STARLINGS**

Keith W. Sockman, Timothy Q. Gentner, and Gregory F. Ball

**21. EJACULATION INDUCED ACTIVATION OF SPINOTHALAMIC NEURONS IS
INDEPENDENT OF EMISSION.**

William A. Truitt, Adam B. Wells, and Lique M. Coolen

22. MOTIVATIONAL ASPECTS OF SEXUAL SATIETY IN MALE RATS

D.J. Smith and E.M. Hull

**23. DOES CYCLIC GMP MEDIATE THE NO-INDUCED DA RELEASE IN THE MALE
RAT MPOA?**

Satoru Sato, Jon V. Riolo, Juan M. Dominguez, and Elaine M. Hull

**24. IMMUNOTOXIC LESION OF HINDBRAIN CATECHOLAMINERGIC AFFERENTS
TO MEDIAL HYPOTHALAMUS ATTENUATES PENILE REFLEXIVE ERECTIONS
AND ALTERS SEXUALLY DIMORPHIC SPINAL MOTOR POOLS AND
HYPOTHALAMIC mRNA.**

Gregory S. Fraley

25. ANDROGEN, ESTROGEN RECEPTORS AND HORMONE LEVELS, IN NONCOPULATING MALE RATS.

Wendy Portillo, Francisco J Camacho, and Raúl G. Paredes

26. CHRONIC FLUOXETINE INHIBITS SEXUAL BEHAVIOR IN THE MALE RAT: REVERSAL WITH 8-OH-DPAT AND PARTIAL REVERSAL WITH LY-53,857

Candice S. Faulring, Rosangel Cruz, Juan M. Dominguez and Elaine M. Hull

27. GLUTAMATE-EVOKED DOPAMINE RELEASE IN THE MEDIAL PREOPTIC AREA IS MEDIATED BY NITRIC OXIDE: IMPLICATIONS FOR MALE RAT SEXUAL BEHAVIOR

Juan M. Dominguez, John W. Muschamp, Carlos D. Cedeno, Jenny M. Schmich, and Elaine M. Hull

28. ANTIDEPRESSANT ADMINISTRATION PREVENTS THE EFFECT OF UNCONTROLLABLE STRESS ON MALE REPRODUCTIVE BEHAVIOR IN THE SYRIAN HAMSTER (*MESOCRICETUS AURATUS*).

Amy P. Cordner, Dana L. Helmreich, and David B. Parfitt

29. NONGENOMIC COMPETITION BETWEEN GLUCOCORTICOID STEROIDS: EFFECTS ON THE SPINAL CORD CONTROL OF A REPRODUCTIVE BEHAVIOR.

C.M. Lewis and J.D. Rose

30. A MODEL FOR ANDROGEN-GLUCOCORTICOID INTERACTIONS IN MALE ALTERNATIVE REPRODUCTIVE TACTICS: POTENTIAL ROLES OF STEROIDOGENIC ENZYMES

Rosemary Knapp, Sharon L. Carlisle and Tim S. Jessop

31. SEX-INDUCED ACTIVATION OF MESOLIMBIC PATHWAYS

Margaret E. Balfour, Brooke A. Davis, and Lique M. Coolen

32. NEURAL PATHWAY FOR MALE RAT MATING REVEALED BY TRANS-SYNAPTIC RETROGRADE LABELING AFTER PSEUDORABIES VIRUS INJECTION OF THE PROSTATE GLAND

G.G. Huddleston, C.K. Song, J.C. Paisley, T.J. Bartness, and A.N. Clancy

33. LOCALIZATION OF COPULATORY MOTONEURONS IN LIZARDS

Melissa M. Holmes and Juli Wade

34. SEXUAL CONDITIONING INCREASES FERTILIZATION SUCCESS IN QUAIL.

E. Adkins-Regan and E. Vonnegut

35. THE ROLE OF CORTICOTROPIN-RELEASING HORMONE WITHIN THE AMYGDALA AND BED NUCLEUS OF THE STRIA TERMINALIS IN CONDITIONED DEFEAT

Aaron M. Jasnow and Kim L. Huhman

36. VASOPRESSIN-INDUCED FLANK MARKING PRODUCES CONDITIONED PLACE AVERSION IN SYRIAN HAMSTERS

M. Karom, J.P. Gullledge, and H.E. Albers

37. EFFECTS OF COGNITIVE DEMAND ON STRESS-INDUCED NEUROTRANSMITTER LEVELS.

R.E. Bowman, D. Ferguson, and V.N. Luine

38. HUMAN MALES, BUT NOT FEMALES, ARE SENSITIVE TO VISUOSPATIAL TASK GEOMETRY

M. L. Collaer, C. Lane, and M. Maxwell

39. EFFECTS OF PRENATAL EXPOSURE TO ESTROGENIC ENDOCRINE DISRUPTORS ON CONDITIONED PLACE PREFERENCE PRODUCED BY D-AMPHETAMINE

Laura Gioiosa, Giovanni Laviola, and Paola Palanza

40. THE PRENATAL BLOCKADE OF ANDROGEN RECEPTORS FACILITATE CONDITIONED PLACE PREFERENCE AFTER PACED MATING IN FEMALE RATS

Emilio Domínguez-Salazar, Francisco J. Camacho, and Raúl G. Paredes

41. PICTURE RECALL ABILITIES CORRELATE WITH 2D:4D RATIO IN WOMEN BUT NOT MEN.

Mary Poulin, Rachael O'Connell, and Louise M. Freeman

42. INDOMETHACIN IMPLANTS TO THE HIPPOCAMPUS ATTENUATE ANXIOLYSIS AND COGNITIVE PERFORMANCE OF INTACT AND DIHYDROTESTOSTERONE-ADMINISTERED MALE RATS

Cheryl A. Frye and Angela M. Seliga

43. SOCIAL ISOLATION DURING DEVELOPMENT LEADS TO MEMORY DEFICITS IN ADULTHOOD

Noah J. Sandstrom and Sarah R. Hart

44. SEX DIFFERENCES AND BEHAVIORAL CORRELATES IN MENTAL ROTATION AND VIRTUAL MAZE TASKS

S. Sava, J. Tropp, R.S. Astur, R.T. Constable, and E.J. Markus

45. TESTOSTERONE INCREASES ANALGESIA, ANXIOLYSIS, AND COGNITIVE PERFORMANCE OF MALE RATS

Angela M. Seliga and Cheryl A. Frye

46. COMPARISON OF COGNITIVE PROCESSING IN THE MALE AND FEMALE MUSK SHREW USING THE MORRIS WATER MAZE.

Shadeeya S. Shuler and Louise M. Freeman

47. AGE EFFECTS ON SPATIAL AND ASSOCIATIVE LEARNING IN FEMALE OCTODON DEGUS

A.T. Young and T.M. Lee

48. THE INVOLVEMENT OF PROGESTERONE IN THE REDUCTION OF CRF-ENHANCED STARTLE DURING LACTATION IN THE RAT.

Donna J. Toufexis and Michael Davis

49. SEX DIFFERENCES IN THE EFFECTS OF SOCIAL ISOLATION ON LEARNING, MEMORY, AND SPATIAL NAVIGATION IN AN AGING POPULATION OF SPRAGUE DAWLEY RATS

Gretchen L. Hermes, Maxim Kuznetsov, Mariel Kerr, and Martha K. McClintock

50. DEVELOPMENT OF AGONISTIC BEHAVIOR IN GOLDEN HAMSTERS: SEX DIFFERENCES AND THE EFFECTS OF SOCIAL STRESS

Kereshmeh Taravosh-Lahn and Yvon Delville

51. ELECTRIC ORGAN DISCHARGE (EOD) AS AN INDICATOR OF SOCIAL DOMINANCE IN FEMALE BROWN GHOST KNIFEFISH, *APTERONOTUS LEPTORHYNCHUS*.

S.K. Tallarovic, D.T. Lim, F. Triefenbach, and H.H. Zakon

52. INTERACTION EFFECTS OF ADRENAL HORMONE AND EXPERIENCE ON AGGRESSIVE BEHAVIOR IN THE GREEN ANOLE LIZARD

Eun-Jin Yang and Walter Wilczynski

53. THE ROLE OF SEROTONIN IN MODULATING AGGRESSIVE BEHAVIOR IN MALE SONG SPARROWS

Todd S. Sperry, Christopher K. Thompson, and John C. Wingfield

54. DISRUPTION OF THE VASOPRESSIN 1B RECEPTOR GENE REDUCES AGGRESSIVE BEHAVIOR IN BOTH MALE AND FEMALE MICE

S.R. Wersinger, A.-M. O'Carroll, S.J. Lolait, and W.S. Young

55. ARGININE VASOTOCIN EFFECTS ON BEHAVIOR DEPEND ON SEXUAL PHENOTYPE AND SOCIAL STATUS IN A CORAL REEF FISH.

Katharine Semsar and John Godwin

56. GONADAL STEROID HORMONES DURING PUBERTY INFLUENCE THE SOCIAL, SUBMISSIVE, AND AGGRESSIVE BEHAVIORS OF ADULT MALE SYRIAN HAMSTERS.

K.M. Schulz Wilson, T.A. Menard, and C.L. Sisk

57. SEROTONIN NEURAL SIGNALING AND DEVELOPMENT MODULATE OFFENSIVE AGGRESSION IN ADOLESCENT ANABOLIC STEROID-TREATED HAMSTERS.

Jill M. Grimes and Richard H. Melloni, Jr.

58. AGGRESSIVE BEHAVIOR AS A REINFORCER IN MICE: MODULATION BY ALLOPREGNANOLONE.

E.W. Fish, J.F. DeBold, and K.A. Miczek

59. THE PROGESTERONE CHALLENGE: P4 CHANGES FOLLOWING AN AGGRESSIVE ENCOUNTER IN MALE AND FEMALE CALIFORNIA MICE.

Ellen S. Davis, Brian C. Trainor, Temitayo Oyegbile, and Catherine A. Marler

60. TEASING OUT AGGRESSION: USE OF OPERANT CONDITIONING TO IDENTIFY BEHAVIORAL CHARACTERISTICS

J. Tracey David, M. Catalina Cervantes, Juan A. Salinas and Yvon Delville

61. TESTOSTERONE AND TERRITORIALITY IN AN EQUATORIAL BIRD

Ignacio T. Moore, D. Shallin Busch, and John C. Wingfield

62. FEMALE SCHELOPORUS VIRGATUS LIZARDS EXHIBIT A LEFT EYE - RIGHT HEMISPHERE BIAS DURING AGGRESSIVE REJECTION DISPLAYS TO MALES

Michael Castellano, Erina Hara, and Diana K. Hews

63. AGGRESSION AND MEMORY FOR INDIVIDUALS IN GOLDEN HAMSTERS: FUNCTIONAL NEUROANATOMY AND ROLE OF PROTEIN SYNTHESIS

Wen-Sung Lai, Aiyin Chen and Robert E. Johnston

64. SOCIAL DOMINANCE AND THE SPERM ACTIVITY IN MALE MICE

Sachiko Koyama and Shinji Kamimura

POSTER SESSION II: FRIDAY, JUNE 28, 4:30-7:30 PM

65. EXPRESSION OF UBIQUITIN C-TERMINAL HYDROLASE L1 IN THE RAT HIPPOCAMPUS FLUCTUATES ACROSS THE ESTROUS CYCLE

Yuesheng Li and Nancy L. Desmond

66. DIFFERENTIAL REGULATION OF PROSTAGLANDIN D SYNTHETASE MRNA IN THE MEDIAL PREOPTIC AREA AND THE MEDIAL BASAL HYPOTHALAMUS OF ADULT FEMALE MICE

Jessica A. Mong and Donald W. Pfaff

67. DISTRIBUTION OF GALANIN IMMUNOREACTIVE NEURONS IN THE BED NUCLEUS OF THE STRIA TERMINALIS IN SYRIAN HAMSTERS

Laura Szymanski and Jennifer Swann

68. DISTRIBUTION OF NADPH-DIAPHORASE IN THE BRAIN OF THE BIG BROWN BAT.

Raed Rahman, Mary T. Mendonca and Randolph W. Krohmer

69. A BEHAVIORALLY RELEVANT CANNABINOID SYSTEM IN AN AMPHIBIAN, TARICHA GRANULOSA.

Emma Coddington, Jolene Aubert, and Frank L. Moore

70. NORADRENERGIC MODULATION OF ZENK EXPRESSION IN MALE ZEBRA FINCHES ENGAGED IN FEMALE-DIRECTED SONG

Christina B. Castelino and Gregory F. Ball

71. PROGESTERONE RECEPTOR EXPRESSION IN THE MEDIAL PREOPTIC NUCLEUS OF FEMALE FETAL RATS: THE EFFECT OF INTRAUTERINE ENVIRONMENT

Erin M. Guiney, Princy S. Quadros, and Christine K. Wagner

72. ARGININE VASOTOCIN EXPRESSION IN THE BLUEHEAD WRASSE, *THALASSOMA BIFASCIATUM*: LOCALIZATION OF PROTEIN, MRNA, AND COREGIONALIZATION WITH SEROTONIN.

John Godwin and Jeanne Elkins

73. PUTATIVE ISOTOCIN DISTRIBUTIONS IN VOCAL FISH: RELATIONSHIP TO VASOTOCIN AND VOCAL-ACOUSTIC CIRCUITRY.

A. K. Evans, J. L. Goodson, and A.H. Bass

74. CHANGES IN THE NEURONAL NITRIC OXIDE SYNTHASE IMMUNOREACTIVE SYSTEM IN MALE MICE LACKING A FUNCTIONAL AROMATASE GENE

M. Sica, L. Plumari, S. Honda, N. Harada, P. Absil, C. Viglietti-Panzica, J. Balthazart, G.C. Panzica

75. ALTERATION OF NITRINERGIC AND VASOPRESSINERGIC SYSTEMS IN A MURINE MODEL FOR DOWN SYNDROME.

S. Gotti, M. Sica, E. Marti, C. Viglietti Panzica, S. Chiavegatto, R.J. Nelson, G.C. Panzica

76. SF-1 GENE EXPRESSION IS IMPORTANT FOR CELL POSITIONING, NOT CELL SURVIVAL, IN THE FORMATION OF THE MURINE VMH

Aline M. Davis, Marianne L. Seney, Keith Parker, and Stuart A. Tobet

77. ACUTE BEHAVIORAL EFFECTS OF ANABOLIC STEROIDS: ANXIETY, STEREOTYPY AND LOCOMOTOR ACTIVITY.

Z.J. Berbos, L. Chu, and R.I. Wood.

78. ESTROGEN RECEPTOR BETA (ER β) IS REQUIRED FOR ANXIOLYTIC BEHAVIOR IN FEMALE MICE.

D. Bradley Imwalle, Jan-Åke Gustafsson, and Emilie F. Rissman

79. TAMOXIFEN BLOCKS ESTROGEN REGULATION OF GABAERGIC INPUT TO CA1 PYRAMIDAL CELLS IN THE ADULT FEMALE RAT .

C.N. Rudick and C.S. Woolley

80. THE SERM RALOXIFENE IMPAIRS PERFORMANCE ON MEMORY TASKS IN FEMALE RATS

A. Lalmansingh, V. Luine, G. Mohan, L. Jacome, and M. Gordon

81. EFFECTS OF CHRONIC ESTROGEN AND PROGESTERONE ON MEMORY TASKS AND MONOAMINERGIC ACTIVITY IN THE BRAIN

Luis Jacome, Deveroux Ferguson, Govini Mohan, Maya Frankfurt, and Victoria Luine

82. ON THE ROLES OF THE α AND β ESTROGEN RECEPTOR IN SPATIAL WORKING MEMORY

Daniel Bitran, Melissa Lin, Tanya Barros, Olivia Vo, Patrick McGann, Genevieve Coutu, Rebecca Osgood, Jessica Baker, Jennifer McGrath, Ethan Skowronski, and Istvan Merchantaller

83. EFFECT OF SEX AND ESTROGEN TREATMENT ON LONG-LASTING SOCIAL RECOGNITION MEMORY IN MICE

Patrick O. McGowan and Christina L. Williams

84. ESTROGEN IN FEMALE RATS AND ANDROGENS IN MALE RATS IMPROVE ARM-CHOICE ACCURACY DURING ACQUISITION OF A RADIAL MAZE AND ATTENUATE THE AMNESTIC EFFECTS OF SCOPOLAMINE

Jill M. Daniel, Peter J. Winsauer, and Joseph M. Moerschbaeher

85. ESTROGEN'S IMPROVEMENT OF INHIBITORY AVOIDANCE MAY BE IN PART INDEPENDENT OF INTRACELLULAR ESTROGEN RECEPTORS IN THE HIPPOCAMPUS

Madeline E. Rhodes, Lauren Doherty, and Cheryl A. Frye

86. ESTROGEN REPLACEMENT THERAPY, WORKING MEMORY, AND EXECUTIVE FUNCTIONING IN HEALTHY POSTMENOPAUSAL WOMEN. A CROSS-SECTIONAL STUDY.

Miglena Grigorova and Barbara B. Sherwin

87. LOW LEVELS OF ESTRADIOL FACILITATE WORKING MEMORY OF ADULT FEMALE RATS IN NON-SPATIAL DELAYED ALTERNATION T-MAZE TASK

Jennifer K. Wide, Katherine M. Hanratty, Julia Y. Ting, and Liisa A.M. Galea

88. CHRONIC ESTRADIOL REPLACEMENT IN OVARECTOMIZED FEMALE RATS SHIFTS LEARNING STRATEGY IN A TIME-DEPENDENT MANNER.

D.L. Thomas, M.W. McElroy, and D.L. Korol.

89. SEASONAL PLASTICITY OF AROMATASE mRNA EXPRESSION AND DISTRIBUTION IN THE BRAIN AND OVARY OF A VOCAL TELEOST.

P.M. Forlano and A.H. Bass

90. EFFECT OF GONADAL HORMONES ON CIRCADIAN REENTRAINMENT RATE OF OCTODON DEGUS.

Cheryl D. Stimpson and Theresa M. Lee

91. REPRODUCTIVE RESPONSES TO LONG AND SHORT DAYS IN THREE HIGH LATITUDE SPECIES OF CARDUELINE FINCHES.

T.P. Hahn, M.E. Pereyra, S.M. Sharbaugh, and M.L. Morton

92. DEVOCALIZATION AFFECTS SEASONAL CHANGES IN SONG NUCLEI IN SONGBIRDS

Jennifer J. Sartor, Carolyn L. Pytte, Jacques Balthazart, and Gregory F. Ball

93. MEDIATION OF REPRODUCTIVE PHOTOREFRACTORINESS BY HYPOTHALAMIC EXPRESSION OF THYROID HORMONE BINDING PROTEINS

Brian J. Prendergast, Bedrich Mosinger Jr., Pappachan E. Kolattukudy, and Randy J. Nelson

94. CHANGES IN PLASMA CORTICOSTERONE AND ADRENOCORTICAL RESPONSE TO STRESS DURING THE BREEDING CYCLE IN HIGH ALTITUDE FLYCATCHERS

M.E. Pereyra and J.C. Wingfield

95. ROLE OF THE SUPRACHIASMATIC NUCLEUS IN DEVELOPMENT OF REFRACTORINESS TO SHORT DAY LENGTHS IN SIBERIAN HAMSTERS.

M.J. Paul, B.J. Prendergast, D.A. Freeman, K.E. Wynne-Edwards, and I. Zucker

96. SEASONAL CONTROL OF PENILE DEVELOPMENT OF SIBERIAN HAMSTERS (*PHODOPUS SUNGORUS SUNGORUS*) BY DAY LENGTH AND TESTICULAR HORMONES

Jin Ho Park, E. Martin Spencer, Ned J. Place, and Irving Zucker

97. OLFACTORY AND SOCIAL CUES INFLUENCE PHOTOPERIODIC TIME MEASUREMENT IN FEMALE SIBERIAN HAMSTERS.

J.C. Dodge and L.L. Badura

98. MELATONIN'S ROLE IN THE THERMOREGULATION OF ECTOTHERMIC VERTEBRATES

Deborah I. Lutterschmidt, William I. Lutterschmidt, and Victor H. Hutchison

99. FECAL MEASURE OF THE RAT CORTICOID CIRCADIAN RHYTHM

S.A. Cavigelli, T.K. Whitney, and M.K. McClintock

100. LOCALIZATION OF PERIOD 1 IN NEUROENDOCRINE CELLS: A POTENTIAL NOVEL MECHANISM OF CIRCADIAN ENDOCRINE RHYTHM REGULATION

Lance J. Kriegsfeld, Ruslan Korets, and Rae Silver

101. SHORT PHOTOPERIODS PROTECT SIBERIAN HAMSTERS FROM LETHAL ENDOTOXEMIA.

Steven G. Kinsey, Andrew K. Hotchkiss, Randy J. Nelson, and Brian J. Prendergast

102. BREAKING NEUROENDOCRINE REFRACTORINESS TO SHORT-DAY MELATONIN SIGNALS IN SIBERIAN HAMSTERS

A.S. Kauffman, D.A. Freeman, and I. Zucker

103. BREEDING RESPONSE TO LONG DAYS UNDER UNPREDICTABLE FOOD SUPPLIES: AN EXPERIMENT WITH HOUSE FINCHES

Madhusudan Katti, Scott A. MacDougall-Shackleton, and Thomas P. Hahn

104. ODOR SPECIFICITY IN THE USE OF OLFACTORY CUES TO ACCELERATE REENTRAINMENT FOLLOWING PHASE ADVANCES IN THE DIURNAL RODENT, *OCTODON DEGUS*.

Tammy J. Jechura, Cheryl D. Stimpson, and Theresa M. Lee

105. SEASONAL VARIATION OF AROMATASE IMMUNOREACTIVITY IN THE SPINAL CORD OF THE MALE RED-SIDED GARTER SNAKE

Kristin H. Huynh and Randolph W. Krohmer

106. FEEDING MELATONIN MIMICS SHORT DAY-INDUCED TESTES ATROPHY

Sara M. Hiebert, Stephen Green, and Steven M. Yellon

107. NORADRENERGIC CELLS PROJECT DIRECTLY TO THE MEDIAL AMYGDALA

N. Cameron, P.S. Carey, and M.S. Erskine

108. EFFECTS OF ESTROGEN AND A SELECTIVE ESTROGEN RECEPTOR MODULATOR (SERM) ON SEXUAL BEHAVIOR IN OVARIECTOMIZED RHESUS MONKEYS

Franklynn C. Graves, Mark E. Wilson, and Kim Wallen

109. ADMINISTRATION OF CHICKEN-GONADOTROPIN-RELEASING HORMONE-II REINSTATES MATING BEHAVIOR AFTER FOOD RESTRICTION IN THE FEMALE MUSK SHREW

Jennifer L. Temple and Emilie F. Rissman.

110. REPRODUCTION IN EARLY MATURING RHESUS MONKEY FEMALES

Julia L. Zehr, Page Van Meter, Jessica Ganas, and Kim Wallen

111. OLFATORY BULBECTOMY SUPPRESSES FEMALE-MALE MOUNTING AND OTHER APPETITIVE SEXUAL BEHAVIORS IN THE FEMALE RAT

Amélie Woehrling, Veronica M. Afonso, and James G. Pfaus

112. AMPHETAMINE MODULATION OF PACED MATING BEHAVIOR: ACTIVITY INDEPENDENT AND DEPENDENT EFFECTS

Fay A. Guarraci and Ann S. Clark

113. PACED MATING: DOES ENVIRONMENT MATTER?

Susan E. Gans, Edward I. Pollak, Robert Coulter, and Jillian Wintersteen

114. EFFECTS OF EARLY DHT AND E₂ TREATMENT ON ADULT SEXUAL BEHAVIOR IN FEMALE MUSK SHREW

Tiffany A. Ewton and Louise M. Freeman

115. EFFECTS OF REPEATED NEONATAL EXPOSURE TO OXYTOCIN ON SEXUAL BEHAVIOR IN ADULT FEMALE PRAIRIE VOLES

Pamela Epperson and Bruce Cushing

116. SELECTIVE FACILITATION OF SEXUAL SOLICITATION IN THE FEMALE RAT BY A MELANOCORTIN RECEPTOR AGONIST

James G. Pfaus, Tanya Van Soest, and Annette Shadiack

117. INFUSIONS TO THE VENTRAL TEGMENTAL AREA OF THE GABA_B AGONIST BACLOFEN INCREASE PROGESTERONE-FACILITATED SEXUAL BEHAVIOR OF ESTROGEN-PRIMED RATS AND HAMSTERS

Sandra M. Petralia and Cheryl A. Frye

118. FACILITATION OF FEMALE-MALE MOUNTING FOLLOWING AMPHETAMINE-OR STRESS-INDUCED BEHAVIORAL SENSITIZATION

Devin Mueller, Veronica M. Afonso, Jane Stewart, and James G. Pfaus

119. A ROLE FOR PERIPHERAL ESTROGEN RECEPTORS IN THE DISPLAY OF PACED MATING BEHAVIORS IN ESTROGEN AND PROGESTERONE-PRIMED FEMALE RATS

Ann S. Clark, Fay A. Guarraci, and Alison B. Megroz

120. THE ROLE OF REPRODUCTIVE STAGE IN PRODUCING WITHIN-INDIVIDUAL VARIATION IN FEMALE MATE CHOICE

Kathleen Lynch, Michael Ryan and Walter Wilczynski

121. GLUTAMATERGIC STIMULATION OF THE MEDIAL AMYGDALA (MEAPD) INDUCES STEROID DEPENDENT FOS EXPRESSION WITHIN NUCLEI RESPONSIVE TO MATING STIMULATION.

M.L. Lehmann, G.M. Sable, and M.S. Erskine

122. DOPAMINE FACILITATES DISPLAY OF LORDOSIS BEHAVIOR IN MALE MICE

A.E. Kudwa, J-Å Gustaffson, and E.F. Rissman

123. DIFFERENTIAL CONTROL OF FEMALE RAT SEXUAL BEHAVIOR BY THE LATERAL SEPTUM AND MEDIAL PREOPTIC AREA: EFFECTS OF LESION ON LORDOSIS, PACING BEHAVIOR AND PARTNER PREFERENCE

Y. Kondo, K. Xiao, and Y. Sakuma

124. VAGINOCERVICAL STIMULATION INHIBITS, AND FLANK STIMULATION FACILITATES, FEMALE-MALE MOUNTING IN THE FEMALE RAT

Veronica M. Afonso, Vasiliki Bablekis, and James G. Pfau

125. EXPRESSION OF C-FOS AND ER α IN FEMALE RAT VENTROMEDIAL HYPOTHALAMIC NEURONS (VMH) THAT PROJECT TO THE PERIAQUEDUCTAL GRAY (PAG)

L.H. Calizo and L.M. Flanagan-Cato

POSTER SESSION III: SATURDAY, JUNE 29, 4:20-7:20 PM

126. WOMEN'S INTERCOLLEGIATE VARSITY SOCCER: MATCH PLAY ELEVATES SALIVA TESTOSTERONE AND CORTISOL IN VICTORY AND DEFEAT

David A. Edwards and Karen Wetzel

127. INTERCOLLEGIATE SOCCER: SALIVA TESTOSTERONE IS RELATED TO TEAMMATE-RATINGS OF PLAYING ABILITY AND SELF-RATINGS OF ATTRACTION TO THE SOCIAL ASPECTS OF TEAM MEMBERSHIP

Dana R. Wyner and David A. Edwards

128. CLONING AND CHARACTERIZATION OF A FULL-LENGTH CDNA SEQUENCE THAT ENCODES FOR THE VASOTOCIN GENE IN AN AMPHIBIAN

Brian T. Searcy, Richmond R. Thompson, Joanne Chu, and Frank L. Moore

129. EFFECTS OF ESTRADIOL AND SERM, LY353381, ON NEUN IMMUNOREACTIVITY IN THE FEMALE MOUSE BRAIN

Kimberly D. Hillsman and Emilie F. Rissman

130. ADRENAL AND GONADAL STEROID HORMONES RAPIDLY MODULATE RHYTHMIC VOCAL MOTOR OUTPUT

L. Ramage-Healey and A.H. Bass

131. PRENATAL ANDROGEN EXPOSURE AFFECTS PUBERTY ONSET IN MALE RHESUS MONKEYS

Rebecca A. Herman, Julia L. Zehr and Kim Wallen

132. ESTROGEN RECEPTOR- β REGULATES PUBERTAL MATURATION IN MALE MICE.

Elka M. Scordalakes, Jennifer L. Temple, Jan-Åke Gustaffson, and Emilie F. Rissman

133. SEXUAL DIFFERENTIATION OF NEURAL MORPHOLOGY IN STEROID RECEPTOR COACTIVATOR-1 NULL MICE

Ashley Monks, Kimberly Clark, Jianming Xu, Bert W. O'Malley, and Cynthia Jordan

134. SEX DIFFERENCES IN THE DISTRIBUTION OF THE STEROID RECEPTOR COACTIVATOR-1 IN THE CANARY BRAIN

T. Charlier, G.F. Ball, and J. Balthazart

135. EXPRESSION OF STEROID RECEPTOR COACTIVATOR-1 (SRC-1) IN THE BRAIN OF TWO SPECIES OF SONGBIRD.

Catherine J. Auger and Gregory F. Ball

136. REPRODUCTIVE COSTS OF IMMUNE SYSTEM ACTIVATION IN JUVENILE SIBERIAN HAMSTERS

Andrew K. Hotchkiss, Brian J. Prendergast, Staci D. Bilbo, and Randy J. Nelson

137. THE SIMULTANEOUSLY POLYANDROUS BLACK COUCAL (*CENTROPUS GRILLII*): HORMONAL CORRELATES OF AN UNUSUAL BREEDING SYSTEM

Wolfgang Goymann and John C. Wingfield

138. MATERNAL BEHAVIOR IN INFANCY REGULATES METHYLATION OF THE HIPPOCAMPAL GLUCOCORTICOID RECEPTOR PROMOTER.

I.C.G. Weaver, N. Cervoni, J. Diorio, M. Szyf, and M.J. Meaney

139. A HUMANE METHOD FOR QUANTIFYING INFANTICIDAL BEHAVIOR IN HAMSTERS

Emily Vella, Siân Williams, Brenda Nielsen, and Katherine Wynne-Edwards

140. THE MPOA IS ENGAGED IN THE MOTIVATION TO PERFORM MATERNAL BEHAVIOR.

K.S. Smith, B.J. Mattson, and J.I. Morrell.

141. ONCE-A-DAY SUCKLING ACTIVATES C-FOS IN SPECIFIC AREAS OF THE RABBIT FOREBRAIN: EFFECT OF REDUCING INTER-SUCKLING INTERVAL

G. González-Mariscal, A. Jiménez, and C. Beyer.

142. THE EFFECTS OF SEPTAL LESIONS ON PARENTAL BEHAVIOR IN MALE PRAIRIE VOLES

Benjamin D. Rood and Geert J. De Vries

143. CHRONICALLY SEPARATED FEMALE RATS SHOW LOWER CORTICOSTERONE AND LONGER LATENCIES TO BECOME MATERNAL DURING THE JUVENILE PERIOD

Stephanie L. Rees, Angel Melo, and Alison S. Fleming

144. EFFECTS OF CENTRAL PROLACTIN AND OXYTOCIN ON NADPH-d STAINING IN THE SUPRAOPTIC AND PARAVENTRICULAR NUCLEI OF STEROID PRIMED FEMALE RATS

N. Popeski, S. Amir and B. Woodside.

145. ADAPTIVE PROVISIONING OF YOLK ANDROGENS IN THE EUROPEAN STARLING? OFFSPRING EFFECTS AND MATERNAL ALLOCATION IN A SINGLE SPECIES

Kevin M. Pilz, Elizabeth Adkins-Regan, and Henrik G. Smith

146. POSTNATAL OXYTOCIN ACTIVITY INFLUENCES ADULT MATERNAL BEHAVIOR

Cort A. Pedersen and Maria L. Boccia

147. EXPOSURE TO LOW DOSES OF ESTROGENIC ENDOCRINE DISRUPTORS ALTERS MATERNAL BEHAVIOR IN MICE

P. Palanza, K. Howdeshell, S. Parmigiani, and F. vom Saal

148. MODULATION OF REPRODUCTIVE BEHAVIORS BY ANTISENSE GNRH IN CICHLID FISH

Satoshi Ogawa, Tomoko Soga, Naoyuki Yamamoto, Yasuo Sakuma, and Ishwar Parhar

149. MATERNAL AGGRESSIVE BEHAVIOR AND OXYTOCIN IN CEREBROSPINAL FLUID OF LACTATING WISTAR RATS AND THEIR PUPS

A.R. Consiglio, A. Borsoi, L. Ellwanger, and A.B. Lucion

150. CONTROL OF PROLACTIN RELEASE IN AN OPPORTUNISTIC BREEDER, THE ZEBRA FINCH.

D. Christensen and C. Vleck

151. IMPACT OF ENVIRONMENTAL ENRICHMENT AND IMPOVERISHMENT ON NATURAL VARIATIONS IN MATERNAL BEHAVIOR IN THE RAT

F. Champagne and M.J. Meaney

152. NEONATAL HANDLING, PATERNAL CARE AND OFFSPRING COGNITIVE DEVELOPMENT IN THE MONOGAMOUS CALIFORNIA MOUSE (*PEROMYSCUS CALIFORNICUS*).

Timothy W. Bredy, Anna Lee, Michael J. Meaney and Richard E. Brown

153. MEDIAL PREOPTIC LESIONS DISRUPT PARENTAL BEHAVIOUR IN BOTH MALE AND FEMALE CALIFORNIA MICE (*PEROMYSCUS CALIFORNICUS*)

Anna W. J. Lee and Richard E. Brown

154. OXYTOCIN FACILITATES PARENTAL CARE IN FEMALE PRAIRIE VOLES (BUT NOT IN MALES)

K.L. Bales and C.S. Carter

155. FEMALE BIAS OF X GENE EXPRESSION IN MOUSE BRAIN

Jun Xu and Arthur P. Arnold

156. SEX DIFFERENCES IN DISEASE: ROLE OF BRAIN MAST CELLS.

Lori Asarian, Ann-Judith Silverman, and Rae Silver

157. BRAIN-DERIVED NEUROTROPHIC FACTOR PROTEIN LEVELS ARE SEXUALLY DIMORPHIC AND HORMONALLY MODULATED IN DEVELOPING BRAIN.

Tara S. Perrot-Sinal, Anthony P. Auger, Laura A. Ekas, and Margaret M. McCarthy

158. ESTROGEN INCREASES ATTRACTION THRESHOLDS FOR VOLATILE ANAL SCENT GLAND ODORS IN MALE AND FEMALE FERRETS

Sarah K. Woodley and Michael J. Baum

159. SEX DIFFERENCES IN THE LOCATION OF IMMUNOCHEMICALLY DEFINED CELL POPULATIONS OF THE MOUSE PREOPTIC AREA/ANTERIOR HYPOTHALAMUS (POA/AH).

Heather Walker, Aline M. Davis, Marianne Seney, Margaret VanDoren, Elizabeth Bless, Robin Johnson, and Stuart Tobet

160. MATE PREFERENCE, MATERNAL HORMONES AND SEX RATIO IN THE ZEBRA FINCH

Nikolaus von Engelhardt, Claudio Carere, Cor Dijkstra, Ton Groothuis, and Serge Daan

161. ANDROGEN CORRELATES OF PERCEPTUAL DIFFERENCES BETWEEN MALE BROWN GHOST KNIFEFISH

F. Triefenbach and H. H. Zakon

162. OVEREXPRESSION OF BCL-2 REDUCES SEX DIFFERENCES IN NEURON NUMBER IN THE BRAIN AND SPINAL CORD OF MICE

S.L. Zup, H. Carrier, A. Tabor, L. Bengston, G. Rosen, and N.G. Forger

163. IMMUNOREACTIVITY OF C-FOS IN NEONATAL PRAIRIE VOLES BRAIN: EFFECT OF NEONATAL ACUTE MANIPULATION OF OXYTOCIN

Yukiyo Yamamoto, Bruce Cushing, Sue Carter, and Gloria Hoffman

164. DHEA METABOLISM BY 3 β -HSD IN SONGBIRD BRAIN: SEX AND REGIONAL DIFFERENCES

Kiran K. Soma, Noel A. Alday, and Barney A. Schlinger

165. CIRCULATING ESTRADIOL CONCENTRATIONS ARE AS HIGH IN MALE DWARF HAMSTERS AS IN THEIR FEMALE PARTNERS

Jennifer E. Schum and Katherine E. Wynne-Edwards

166. EFFECT OF METHOXYCHLOR ON SEXUAL MATURATION IN JAPANESE QUAIL

Michael G. Ruscio, Julie Hazelton, Nichola Thompson, and Mary Ann Ottinger

167. SEX DIFFERENCES IN LENGTH RATIOS FROM THE EXTREMITIES OF HUMANS, GORILLAS, AND CHIMPANZEES

Dennis McFadden and Mary S. Bracht

168. LACK OF CORRELATION BETWEEN OTOACOUSTIC EMISSIONS AND RELATIVE LENGTHS OF FINGERS IN HUMANS (THE 2D:4D RATIO)

Dennis McFadden and Erin Shubel

169. YOLK TESTOSTERONE VARIES WITH SEX IN LIZARD EGGS

M.B. Lovern and J. Wade

170. CYP17 EXPRESSION IN ADULT AND DEVELOPING ZEBRA FINCH BRAIN

Sarah E. London and Barney A. Schlinger

171. GLUCOCORTICOID AND MINERALOCORTICOID RECEPTORS IN THE FETAL RAT BRAIN

Alicia L. Barratt and Geert J. De Vries

172. NEW EVIDENCE THAT ESTRADIOL IS REQUIRED DURING DEVELOPMENT IN THE FEMALE MOUSE FOR THE EXPRESSION OF SOCIO-SEXUAL BEHAVIORS IN ADULTHOOD

J. Bakker, S. Honda, N. Harada, and J. Balthazart

173. HOW PLASTIC IS THE BRAIN? HORMONAL CONTROL OF BRAIN MORPHOLOGY AND FUNCTION IN THE TREE LIZARD, *UROSAURUS ORNATUS*

David Kabelik, Stacey L. Weiss, and Michael C. Moore

174. ESTRADIOL INCREASES THE LEVELS OF SRC-1, BUT DECREASES CREB-BINDING PROTEIN, IN THE DEVELOPING RAT HYPOTHALAMUS.

A.P. Auger, L. A. Ekas, and M.M. McCarthy

175. ROLE OF GONADAL HORMONES IN THE DEVELOPMENT OF A SEX DIFFERENCE IN FREE-RUNNING CIRCADIAN RHYTHMS IN *OCTODON DEGUS*.

Tammy Jechura, Cheryl Stimpson, Dan Hummer, and Theresa Lee

176. EARLY EXPOSURE TO ESTRADIOL MEDIATES THE DIFFERENTIATION OF ASTROCYTE MORPHOLOGY IN THE DEVELOPING PREOPTIC AREA

S.K. Amateau and M.M. McCarthy

177. GLUCOCORTICOID SYSTEMS IN MERRIAM'S KANGAROO RATS (*DIPODOMYS MERRIAM*).

S.D. Preston, K.E. Wynne-Edwards, J. Raber, and L.F. Jacobs

178. BEHAVIORAL AND NEUROENDOCRINE PROFILES OF MIXED-GENDER AND MALE-ONLY VBS RAT COLONIES.

K.L.K. Tamashiro, D. Choi, J.P. Herman, C.M. Markham, D.C. Blanchard, R.J. Blanchard, L.Y. Ma, and R.R. Sakai

179. SOCIAL STRESS CONTROLS TERMINAL NERVE GnRH NEURONS

Goh Akiyama, Shumei Kato, Tomoko Soga, Kyoko Tamano, Takashi Kawai, Yasuo Sakuma, and Ishwar Parhar

180. ANXIETY ASSOCIATED WITH ALCOHOL WITHDRAWAL IS BLOCKED BY ADMINISTRATION OF PK 11195, A PERIPHERAL BENZODIAZEPINE RECEPTOR MIXED AGONIST

Daniel Bitran, Michelle Tangredi, and Rebecca A. Smith

181. PYRUVATE SUPPLEMENTATION AMELIORATES STRESS-EVOKED IMMUNOSUPPRESSION

Gretchen Neigh McCandless, Staci D. Bilbo, Andrew K. Hotchkiss, and Randy J. Nelson

182. SIGNIFICANCE OF CHRONIC STRESS-INDUCED CA3 DENDRITIC RETRACTION

C.D. Conrad, J.L. Jackson, and L. Wise

183. SOCIAL ISOLATION DIFFERENTIALLY AFFECTS THE STRIATAL DOPAMINE SYSTEM IN VOLES

J. Thomas Curtis, Jennifer R. Stowe, and Zuoxin Wang

184. ARGININE VASOTOCIN (AVT) DECREASES HEART RATE AND INCREASES DISPLACEMENT BEHAVIORS FOLLOWING ACUTE STRESS IN STARLINGS

Benjamin C. Nephew and L. Michael Romero

185. STRESS RESPONSIVENESS IN THE SOLITARY LITTLE GOLDEN-MANTLED FLYING FOX (*PTEROPUS PUMILUS*): GLUCOCORTICOIDS, TESTOSTERONE, AND BEHAVIOR

DeeAnn M. Reeder, Eric P. Widmaier, and Thomas H. Kunz

186. FEMALE STRESS VULNERABILITY; THE ROLE OF 17 β -ESTRADIOL IN CHRONIC STRESS COPING

M. Gerrits, B.F. Bekkering, G.J. ter Horst, and J.A. den Boer

187. GENDER-SPECIFIC EFFECTS OF 'SOCIAL SUPPORT' IN RATS AFTER CHRONIC STRESS

C. Westenbroek, J. A. den Boer, and G. J. Ter Horst

188. DIFFERENCES IN OVARIAN HORMONAL STATE AND EXPECTANCY PRODUCE DIFFERENCES IN STRESS REACTIVITY

Wendy J. Smith, Tania Schramek, and James G. Pfaus

189. DIFFERENTIAL ACTIVATION OF THE EXPRESSION OF TYROSINE HYDROXYLASE BY CHRONIC STRESS DURING PUBERTY

Joel C. Wommack and Yvon Delville

190. ANXIETY AND ASSOCIATED NEURONAL ACTIVATION IN MALE PRAIRIE AND MEADOW VOLES

Jennifer R. Stowe, Yan Liu, Marc E. Freeman, and Zuoxin Wang

191. CHANGES IN ANXIETY BEHAVIOR OF FEMALE RATS MAY BE DUE TO PROGESTERONE-MEDIATED MECHANISMS IN THE HIPPOCAMPUS

Alicia A. Walf and Cheryl A. Frye