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EDUCATION

B.S. Animal Science 1973. **Summa Cum Laude.** Texas A&M University, College Station Texas.

Ph.D. Genetics 1980, University of California at Davis.
Physiological Genetics / Biochemistry / Animal Breeding.

Post-Doctorate 1980-1983: University of Michigan, Ann Arbor, MI. **Human Genetics and Reproductive Endocrinology**

AWARDS AND SERVICE:

Robert E. Lee High School, Houston Texas- Graduated with honors - 1969

Texas A&M University:

Named as one of the 10 most outstanding freshmen and juniors in the College of Agriculture.
Womack Scholarship 1969-1973

B.S. Animal Science, Summa Cum Laude, 1973

University of California at Davis:

Graduate Student Representative, Department of Animal Science 1976-78.

Ralston Purina Research Fellowship 1976-1978.

Executive Council, Graduate Student Association, 1977-79.

University of Michigan, Ann Arbor:

NIH New Investigator Award- Response to Gonadotropins: Biochemical and Genetic Control.

University of California at Davis.

USDA CSRS, Animal Molecular Biology Program: Grant 89-37240-4909. Mapping and Identification of Genes Controlling Reproduction in Mice. P.I. Jimmy L. Spearow, Co-P.I. Marylynn Barkley. 9/30/89 to 9/31/91.

National Institute of Child Health and Human Development, Reproductive Biology Study Section: Grant R01 HD28253-01. Genetic Control of Ovarian Steroidogenesis. P.I. Jimmy L. Spearow, Co-P.I. Marylynn Barkley. 4/1/91 to 3/31/94.

National Science Foundation. Integrative Biology and Neuroscience: Integrative Animal Biology. Grant 9507872 Mapping and Characterization of Genes Controlling reproduction in Mice. P.I. Jimmy L. Spearow. 8/15/95 to 7/31/98.

National Institutes of Health. Grant U01 HD38205. Simple Methods for Mouse Sperm Cryopreservation. P.I. Ryuzo Yanagimachi; Co-P.I. David Wittingham; Co-Investigators T. Wakayama, Kent Lloyd, Jimmy Spearow and James Overstreet. August 1, 1999 to July 31, 2002.

Serono Laboratories, Inc. Grant IMP21224. Genetic Mechanisms Regulating Ovarian Response to Gonadotropins. P.I. Jimmy L. Spearow.

NIEHS Center for Environmental Health Sciences. Pilot Project. Genetic Variation in sensitivity to environmental toxicants: effects on gene expression. P.I. J.L. Spearow Co-P.I. Dorothy Woolley.

National Science Foundation. Integrative Biology and Neuroscience: Ecological and Evolutionary Physiology. Grant 9986077 Genetic Differences in Susceptibility to Endocrine Disruption. P.I. J.L. Spearow. 4/15/2000 to 4/14/2003.

NIEHS Center for Environmental Health Sciences Pilot Project. Of Mice and Metabolomics-Quantifying Susceptibility to Endocrine Disruption. PI, Mark R. Viant, Co-Investigators Marion G. Miller, Ph.D. and Jimmy L. Spearow, Ph.D. 4/1/03 to 3/31/04.

National Institutes of Health. Simple and cost-effective storage of mouse sperm using evaporative drying. P.I. Kent Lloyd. 12/01/03 through 11/30/06.

RESEARCH, TEACHING AND PROFESSIONAL EXPERIENCE

Ph.D. 1973-1979, University of California at Davis: Advisors Dr. G. Eric Bradford and Irving I. Geschwind. Research: Physiological basis of genetic differences in the ovulation rate of mice. Teaching Assistant for 6 different Animal Genetics and Animal Science classes.

Postdoctoral Scholar: 1980-1982. Department of Human Genetics and the Reproductive Endocrinology Program, University of Michigan. Advisors: Dr. A. Rees Midgley and Dr. Robert P. Erickson. Research: 1) developed a mouse model for major genetic differences in hormone-induced ovulation rate; and, 2) examined biochemical and physiological mechanisms mediating genetic differences in ovulation rate.

Research Investigator: 1983. Department of Human Genetics and Reproductive Endocrinology Program, University of Michigan. Research: biochemical mechanisms mediating genetic differences in ovarian function.

Assistant Professor: 1983 - 1987. Department of Meat and Animal Science, University of Wisconsin, Madison. Research on: 1) physiological mechanisms mediating genetic differences in ovulation between strains of mice; 2) genetic differences in estradiol negative feedback; 3) ovarian physiology; 4) developing enzyme linked immunosorbent assays (ELISA) for several reproductive hormones; and, 5) mapping genes controlling ovulation rate in sheep. Teaching: undergraduate and graduate courses in animal genetics and reproductive physiology.

Lecturer: Section on Neurobiology, Physiology and Behavior, and Section of Molecular and Cellular Biology, University of California at Davis. 1997 to 2001.

Teaching: Biological Science 101, Genes and Gene Expression. (Taught 3 times)
NPB152, Hormones and Behavior. (Taught once).

Laboratory and Research methods in mouse molecular genetics and Reproductive Endocrinology / Physiology. (NPB 190C, 192, 194 and 199).

Professional Development Sabbatical Leave: Lawrence Livermore National Laboratory, Human Genome Center, in the laboratory of Dr. Lisa Stubbs. Fall 1998. Molecular Biology, Genomic and Positional cloning methods.

Assistant Research Geneticist / Associate Research Geneticist / 1988 to 2003. Section on Neurobiology, Physiology and Behavior, University of California at Davis, Davis CA.

Associate Research Geneticist: 2003 to 2006 in the Department of Environmental Toxicology, University of California, Davis, CA in Laboratory of Dr. Marion G. Miller.

Research Associate: 2006 to June 2007, Department of Civil and Environmental Engineering, University of California, Davis, CA in Laboratory of Dr. David Ostrach.

Research on:

- 1) Screening for and characterizing major genetic differences in gonadotropin-induced ovulation rate, and gonadotropin-induced aromatase activity between strains of mice;
- 2) Mapping and characterizing Quantitative Trait Loci (QTL), i.e. genes, controlling major differences in hormone-induced ovulation rate and hormone induced-aromatase activity using RFLPs, microsatellites and SNPs in mouse crosses and Recombinant Inbred strains.
- 3) Developing reproductive congenic strains of mice using marker assisted selection and using them to higher resolution map reproductive QTL.
- 4) Mapping soluble epoxide hydrolase and determining its endocrine control.
- 5) Screening for and characterizing major mouse strain differences in susceptibility to the disruption of spermatogenesis and male and female reproductive development by estrogen and Bisphenol A.
- 6) Determining physiological and transcriptional mechanisms mediating Genetic differences in susceptibility to the disruption of reproductive development by estrogens.
- 7) Developing Estrogen Receptor action INDicator (ERIN) transgenic mice on both estrogen-sensitive and estrogen-resistant mouse strain backgrounds.
- 8) Determining effects of mouse sperm cryopreservation methods on genetic stability.
- 9) Determining effects of environmental tobacco smoke exposure on rat and monkey sperm genetic and oxidative damage endpoints. Sperm toxicological endpoints examined include:
 - a) genetic damage as determined by TUNEL and Benzo[a]pyrene –DNA adduct assays; as well as,
 - b) oxidative damage as determined by lipid peroxidation and protein carbonyl assays. (Research conducted in Laboratory of Dr. Marion G. Miller.)
- 10) Developing Biomarkers for exposure to environmental contaminants in Striped Bass. (Research conducted in Laboratory of Dr. David Ostrach.)

Staff Toxicologist, Human and Ecological Risk Office, Department of Toxic Substances

Control, California Environmental Protection Agency, Sacramento, California. Conducting Human Health Risk Assessments. June 2007 to present.

SCIENTIFIC INPUT REGARDING NATIONAL PUBLIC POLICY:

National Toxicology Program / Environmental Protection Agency Endocrine Disruptors

Low-Dose Peer Review, October 10-12, 2000. Invited to contribute data and participate as an independent scientist in reviewing the scientific evidence related to low-dose effects of endocrine disruptors. Considered the implications of genetic variation in susceptibility to endocrine disruption on the development, validation and interpretation of reproductive and developmental toxicity assays.

Reviewer for the US EPA's White Paper on "Species/Strain/Stock in Endocrine Disruptor Assays." At the request of the US Environmental Protection Agency (EPA), I served as the sole external reviewer for the US EPA's White Paper on "Species/Strain/Stock for Mammalian *in vivo* Endocrine Disruptor Assays.

<http://www.epa.gov/scipoly/oscpendo/pubs/program/whitepaper.htm>

Reviewer's Presentation on EPA White Paper on Species/Strain/Stock in Endocrine Disruptor Assays. National Advisory Council for Environmental Policy and Technology (NACEPT) Endocrine Disruptor Methods Validation Subcommittee (EDMVS) Plenary Meeting. August 18-20, 2003. Golden, Colorado.

Author, Reviewer's Appendix to the White Paper on Species/Strain/Stock in Endocrine Disruptor Assays. Published by US EPA. March 2005.

<http://www.epa.gov/scipoly/oscpendo/pubs/program/whitepaper.htm>

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

Northern California Regional Chapter of the Society of Environmental Toxicology and Chemistry (NorCal SETAC), Member

Physicians for Social Responsibility (PSR), Member, Speaker, and Member of the Executive Board, Sacramento Chapter

American Association for the Advancement of Science (AAAS), Prior Member

Society for the Study of Reproduction (SSR), Prior Member

Complex Trait Consortium (CTC), Prior Member

Union of Concerned Scientists, Prior Member

International Mammalian Genome Society, Prior Member

PUBLICATIONS:

33. Durieux, Eric D.H, Connon, Richard E., Werner, Inge, D'Abronzio, Leandro S. , Fitzgerald Patrick S., Spearow, Jimmy L. and Ostrach, David J. Accepted for publication. Cytochrome P4501A mRNA and protein induction in the striped bass (*Morone saxatilis*). *Fish Physiology and Biochemistry*.

32. Spearow, Jimmy L., Kota, Rama S., and Ostrach, Davis J. 2011. Environmental Contaminants Effects on Juvenile Striped Bass in the San Francisco Estuary, California, USA. *Environmental Toxicology and Chemistry* 30:393-402.

31. Li MW, Willis BJ, Griffey SM, Spearow JL, Lloyd KC. 2009. Assessment of three generations of mice derived by ICSI using freeze dried sperm. *Zygote*. 2009 Aug;17(3):239-51. Epub 2009 May 6.

30. Wu JI, Centilli MA, Vasquez G, Young S, Scolnick J, Durfee LA, Spearow JL, Schwantz SD, Rennebeck G, Artzt K. 2007. Tint maps to mouse chromosome 6 and may interact with notochordal enhancer of Brachyury. *Genetics*. 2007 Oct;177(2):1151-61.

29. Spearow, Jimmy L. 2005. Reviewer's Appendix to the White Paper on Species/Stock/Strain in Endocrine Disruptor Assays. pp 1-91. US EPA Endocrine Disruptor Screening Program (EDSP). <http://www.epa.gov/scipoly/oscpendo/pubs/program/whitepaper.htm>
28. Clemons, Karl V., Spearow, Jimmy L., Parmar, Rachana, Espiritu, Marife, and Stevens, David A. 2004. Genetic Susceptibility of mice to *Candidia albicans* Vaginitis Correlates with Host Estrogen Sensitivity. *Infection and Immunity* 72: 4878-4880.
27. Churchill GA, Airey DC, Allayee H, Angel JM, Attie AD, Beatty J, Beavis WD, Belknap JK, Bennett B, Berrettini W, Bleich A, Bogue M, Broman KW, Buck KJ, Buckler E, Burmeister M, Chesler EJ, Cheverud JM, Clapcote S, Cook MN, Cox RD, Crabbe JC, Crusio WE, Darvasi A, Deschepper CF, Doerge RW, Farber CR, Forejt J, Gaile D, Garlow SJ, Geiger H, Gershenfeld H, Gordon T, Gu J, Gu W, de Haan G, Hayes NL, Heller C, Himmelbauer H, Hitzemann R, Hunter K, Hsu HC, Iraqi FA, Ivandic B, Jacob HJ, Jansen RC, Jepsen KJ, Johnson DK, Johnson TE, Kempermann G, Kendzioriski C, Kotb M, Kooy RF, Llamas B, Lammert F, Lassalle JM, Lowenstein PR, Lu L, Luskis A, Manly KF, Marcucio R, Matthews D, Medrano JF, Miller DR, Mittleman G, Mock BA, Mogil JS, Montagutelli X, Morahan G, Morris DG, Mott R, Nadeau JH, Nagase H, Nowakowski RS, O'Hara BF, Osadchuk AV, Page GP, Paigen B, Paigen K, Palmer AA, Pan HJ, Peltonen-Palotie L, Peirce J, Pomp D, Pravenec M, Prows DR, Qi Z, Reeves RH, Roder J, Rosen GD, Schadt EE, Schalkwyk LC, Seltzer Z, Shimomura K, Shou S, Sillanpaa MJ, Siracusa LD, Snoeck HW, Spearow JL, Svenson K, Tarantino LM, Threadgill D, Toth LA, Valdar W, de Villena FP, Warden C, Whatley S, Williams RW, Wiltshire T, Yi N, Zhang D, Zhang M, Zou F; Complex Trait Consortium. (2004). "The Collaborative Cross, a community resource for the genetic analysis of complex traits." *Nat Genet* 36(11): 1133-7.
26. Abiola O, Angel JM, Avner P, Bachmanov AA, Belknap JK, Bennett B, Blankenhorn EP, Blizzard DA, Bolivar V, Brockmann GA, Buck KJ, Bureau JF, Casley WL, Chesler EJ, Cheverud JM, Churchill GA, Cook M, Crabbe JC, Crusio WE, Darvasi A, de Haan G, Dermant P, Doerge RW, Elliot RW, Farber CR, Flaherty L, Flint J, Gershenfeld H, Gibson JP, Gu J, Gu W, Himmelbauer H, Hitzemann R, Hsu HC, Hunter K, Iraqi FF, Jansen RC, Johnson TE, Jones BC, Kempermann G, Lammert F, Lu L, Manly KF, Matthews DB, Medrano JF, Mehrabian M, Mittlemann G, Mock BA, Mogil JS, Montagutelli X, Morahan G, Mountz JD, Nagase H, Nowakowski RS, O'Hara BF, Osadchuk AV, Paigen B, Palmer AA, Peirce JL, Pomp D, Rosemann M, Rosen GD, Schalkwyk LC, Seltzer Z, Settle S, Shimomura K, Shou S, Sikela JM, Siracusa LD, Spearow JL, Teuscher C, Threadgill DW, Toth LA, Toyee AA, Vadasz C, Van Zant G, Wakeland E, Williams RW, Zhang HG, Zou F; Complex Trait Consortium. (2003). "The nature and identification of quantitative trait loci: a community's view." *Nat Rev Genet* 4(11): 911-6.
25. Spearow, Jimmy L., O'Henley, Peter, Doemeny, Paul, Sera, Robyn, Leffler, Rachel, Sofos, Taki, and Barkley, Marylynn. 2001. Genetic variation in physiological sensitivity to estrogen in mice. *Acta Pathologica, Microbiologica et Immunologica Scandinavica* 109: 356-364.
24. Spearow, Jimmy L., and Barkley, Marylynn. Reassessment of models used to test xenobiotics for oestrogenic potency is overdue. 2001. *Human Reproduction*. 16:, No. 5, 1027-1029.

23. Spearow, Jimmy L., Doemeny, Paul, Sera, Robyn, Leffler, Rachel and Barkley, Marylynn. 1999. Genetic Variation in Susceptibility to Endocrine Disruption by Estrogen in Mice. *Science* 285: 20th August, 1259-1261.
22. Tzu-Huey Li, Jimmy Spearow, Carol M. Rubin, Carl W. Schmid. 1999. Physiological stresses increase mouse short interspersed element (SINE) RNA expression in vivo. *Gene* 239: 367-372.
21. Spearow, Jimmy L., and Barkley, Marylynn. 1999. Genetic Control of Hormone-Induced Ovulation Rate in mice. *Biology of Reproduction* 61: 851-856.
20. Spearow, Jimmy L., Nutson, Peter A., Mailliard, William S., Porter, Mark, and Marylynn Barkley. 1999. Mapping Genes That Control Hormone-Induced Ovulation Rate in Mice. *Biology of Reproduction* 61: 857-872.
19. Jimmy L. Spearow. Regulation of Ovulation Rate. In "Polycystic Ovary Syndrome". Ed R. Jeffery Chang. Publisher Springer-Verlag. NY, NY Inc. 1996. pp 1-20.
18. Anthony Parker, Franck Pinot, David F. Grant, Jimmy Spearow, and Bruce D. Hammock. 1996. Regulation of mouse liver microsomal esterases by clofibrate and sexual hormones. *Biochemical Pharmacology* 51:677-685.
17. Wong, Lawrence, Spearow, Jimmy L., Castracane, V. Daniel, and Barkley, Marylynn. 1995. Genetic variation in plasma androgens and ovarian aromatase activity during mouse pregnancy. *Proceedings of the Society for Experimental Biology and Medicine* 208:277-282.
16. Spearow, J.L. 1995. P450 (Cytochrome) oxidoreductase (Por) maps to mouse Chromosome 5, not Chromosome 6. *Mammalian Genome*. 6 (8):558-559.
15. Pinot, Franck, Grant, David F., Spearow, Jimmy L., Parker, Anthony G., and Hammock, Bruce D. 1995. Differential regulation of soluble epoxide hydrolase by clofibrate and sexual hormones in the liver and kidneys of mice. *Biochemical Pharmacology* 50:501-508.
14. Grant, David F., Spearow, Jimmy L., Storms, David H., Edelhoff, Susanne, Adler, David, A., Disteche, Christine M., Taylor, Benjamin A., and Bruce D. Hammock. 1994. Chromosomal mapping and expression levels of a mouse soluble epoxide hydrolase gene. *Pharmacogenetics*. 4:64-72.
13. Spearow, J.L., R.P. Erickson, T.I. Edwards and L. Herbon. 1991. The effect of H-2 region and genetic background on hormone-induced ovulation rate, puberty and follicular number in mice. *Genetical Research* 57:41-49.
12. Bradford, G.E., Spearow J.L., and J.P Hanrahan. 1991. Genetic Variation and Improvement in Reproduction. In "Reproduction in Domestic Animals." 4th Edition Ed. Perry Cupps. Academic Press. New York. pp. 605-636.

11. Spearow, J. L. 1988a. Major genes control hormone-induced ovulation rate in mice. *Journal of Reproduction and Fertility*. 82:787-797.
 10. Spearow, J. L. 1988b. Characterization of genetic differences in hormone-induced ovulation rate in mice. *Journal of Reproduction and Fertility*. 82:799-806.
 9. Spearow, J. L. and B. Trost. 1987. Development of a sensitive Enzyme-Linked Immunosorbent Assay for Cattle, Sheep, Rat and Mouse Luteinizing hormone. *Biology of Reproduction* 37:595-605.
 8. Dincer, B., J. L. Spearow, R. G. Cassens, M. L. Greaser. 1987. The effects of curing and cooking on the detection of species origin of meat products by competitive and indirect ELISA techniques. *Meat Science* 20:253-265.
 7. Spearow, J. L. 1986. Changes in the kinetics of follicular growth in response to selection for large litter size in mice. *Biology of Reproduction* 35:1175-1186.
 6. Spearow, Jimmy L. 1985. The mechanism of action of genes controlling reproduction. In: *Genetics of Reproduction in Sheep*. (R. B. Land and D. W. Robinson, Ed.) Ch. 22, pp. 203-215.
 5. Spearow, J. L. 1984. Mechanism of action of genes controlling gonadal function. *Proceedings of the 10th International Congress on Animal Production and Artificial Insemination*, Congress Proceedings VI:9-16.
 4. Spearow, J. L. and G. E. Bradford. 1983. Genetic variation in spontaneous ovulation rate and LH receptor induction in mice. *J. Reprod. Fertil.* 69:529-537.
- Spearow, Jimmy L. 1980. The physiological basis of genetic differences in the ovulation rate of mice. Ph.D. Dissertation, University of California, Davis, California. Dissertation Abstract #8027089.
3. Bradford, G. E., M. S. Barkley and J. L. Spearow. 1980. Physiological effects of selection for aspects for efficiency of reproduction. *Proceedings of the Symposium on Selection*, E.A.A.P., Harrowgate, England, 1979, Commonwealth Bureau, pp. 161-174.
 2. Spearow, J. L., I. I. Geschwind and G. E. Bradford. 1979. A characterization of the effects of selection for increased litter size. In: *Ovarian Follicular Function and Development* (A. R. Midgley and W. A. Sadler, Ed.), Raven Press, New York, pp. 35-37.
 1. Spearow, J. L. and G. E. Bradford. 1977. Ovarian responses to gonadotropins of lines of mice selected for litter size or gain. *Proceedings, Western Section of Animal Science* 28:188-190.

Additional Manuscripts In Preparation:

6. Effects of Environmental Tobacco Smoke on Sperm genetic and oxidative damage. Spearow, J.L., Vandevort, C.A., Miller, M.G. In preparation.
5. Genetic Variation in the Induction of Ovarian Aromatase Activity in Mice. Valery Bergeron, Jimmy L. Spearow, Margot Wilhelm, Fang Hung and Marylynn Barkley. In preparation.
4. Spearow, J. L. (In Preparation). Mapping Genes Controlling Hormone-Induced Ovulation Rate in AXB,BXA Recombinant Inbred Strain mice. In Preparation.
3. Spearow, J.L., Mark Porter, Megan Lynch, Mark Kokoris, and Marylynn Barkley. Genetic Mapping of Gonadotropin-Induced Aromatase Activity QTL In Mice. In preparation.
2. Spearow, J.L., Morris, D.R., Wong, U., Hawatky, A., Burden, E., Martinez, L., Ordonjez, H, Barkley, M. and Miller, M.G. Effect of Inbreeding and Crossing on Susceptibility to Endocrine Disruption by Estradiol in Mice. In preparation.
1. Spearow, J. L., R. Altafi, D. R. Morris, U. Wong, A. Hatawaky, S. W. Eteivi, Barkley M. and Miller, M.G.. Genetic Variation Between Strains of Mice in Susceptibility to Endocrine Disruption by Estrogen. In preparation.

INVITED TALKS

- 22I. Jimmy L. Spearow. 2005. Reproductive and Toxicological Genetics: Mapping and Characterizing Genes Controlling Sensitivity to fertility Drugs and Estrogens. Department of Animal Science, November 21, 2005, University of California at Davis.
- 21I. Jimmy L. Spearow, 2005. Molecular Markers for Mammalian Reproductive Genetics; Developing / Characterizing mouse models and Mapping Genes Controlling Sensitivity to Gonadotropins and Estrogens. September 13, 2005. Molecular Markers Meeting, Genome Center, University of California At Davis.
- 20I. Jimmy L. Spearow, 2004. Strain Differences in Susceptibility to Endocrine Disruption: Implications for the Design of Toxicological Screening Assays, or Are We Testing on Bambi or King Kong? October 28, 2004. E.Hormone 2004, New Orleans, La.
- 19I. Jimmy L. Spearow, 2004. Sensitive Species and Strain considerations: Estrogenic Compounds as an Example. Northern/Southern California Society of Toxicology Meeting. San Diego California. September 30, 2004.
- 18I. Jimmy L. Spearow. Reproductive Genetics: Identifying Genes Controlling Ovulation Induction and Susceptibility to Endocrine Disruption. University of California at Berkley. May 2, 2003.
- 17I. Jimmy L. Spearow. Genetic Variation in Susceptibility to Endocrine Disruption by Estrogenic Agents. Sacramento State University April 23, 2003.
- 16I. Jimmy L. Spearow. Genetic variation in response to gonadal hormones. American Physiology Society Conference on Genome and Hormones. October 17-21, 2001, Pittsburgh, Pennsylvania.
- 15I. Jimmy L. Spearow. Genetic Variation in Susceptibility to Endocrine Disruption by Estrogenic Agents. 2001. Society for the Study of Reproduction Minisymposium on Adverse Effects on Reproductive Development in the Male. Ottawa Canada.
- 14I. Jimmy L. Spearow. Reproductive Genetics: Mapping, Characterizing and Utilizing Genes Controlling Reproductive Function. Kent State University, Kent Ohio, February 22, 2001.

- 13I. Jimmy L. Spearow. Mapping and Characterizing Genes and QTL controlling Reproduction in Mice. Animal Comparative Mapping Workshop. Plant and Animal Genome IX. San Diego, CA. January 16, 2001.
- 12I. Jimmy L. Spearow. Reproductive Genetics: Mapping, characterizing and identifying genes controlling major differences in reproductive function in mice. Stanford Medical School, Palo Alto, CA. December 18, 2000.
- 11I. Jimmy L. Spearow. Invited to participate, present data and talk. National Toxicology Program, National Institutes Health and Environmental Sciences and U.S. Environmental Protection Agency Endocrine Disruptors Low-Dose Peer Review, October 10-12, 2000. Raleigh, NC.
- 10I. Jimmy L. Spearow. Genetic differences in sensitivity to estrogens in mice. Invited talk at the International workshop "Hormones and Endocrine Disruptors in Food and Water: Possible effects on Human Health" Copenhagen, Denmark, May 27-30, 2000.
- 9I. Jimmy L. Spearow. Genetic Variation in Susceptibility to Endocrine Disruption: Significance to Ecotoxicology. University of California at Berkeley. May 2, 2000
- 8I. Jimmy L. Spearow. Genetic Variation in Response to Estrogenic and Gonadotropic Hormones: Relevance to Endocrine Disruption and Hormonal Control of Fertility" Invited seminar, University of California at Berkeley. March 8, 2000.
- 7I. Jimmy L. Spearow. Genetic Variation in Susceptibility to Endocrine Disruption: Relevance to Toxicological Product Safety Testing. Department of Pesticide regulation, California Environmental Protection Agency, November 16, 1999.
- 6I. Jimmy L. Spearow. Genetic Variation in Susceptibility to Endocrine Disruption by Estrogen. Environmental Hormones: Past, Present, Future. Symposium at Tulane University, October 18-20, 1999.
- 5I. Jimmy L. Spearow. Genetic Control of Ovarian Response to Gonadotropins" Ares-Serono, Randolf, Mass, Aug. 26, 1999.
- 4I. Spearow, Jimmy, and Gray, Karen. "Genes may influence environmental hormone effects." Article summary by Karen Gray and summary of research results by Jimmy Spearow. Invited publication on the web site of the Center for Bioenvironmental Research, Tulane and Xavier Universities. See <http://www.tmc.tulane.edu/ecme/eehome/newsviews/research/>
- 3I. Jimmy L. Spearow. Regulation of Ovulation Rate. Invited Talk at 1995 Serono Symposium on the Polycystic Ovary Syndrome, Boston, Mass.
- 2I. Jimmy L. Spearow, Genetic Variation in Reproduction: Mapping genes controlling hormone-induced ovulation rate. Invited talk at Research Triangle Institute, Raleigh, North Carolina, March 25, 1992.
- 1I. Jimmy L. Spearow. Genetic control of ovulation rate in mice. Invited talk presented at NIH workshop on Follicular Selection, Bethesda Maryland, March 1992.

ABSTRACTS

- 51A. Behrsing, T, Carlisle, J., Sciallo, E., Spearow, J., Davis, B. Day, K., and Wade, M. 2011. Lead Soil Screening Levels and Cleanup at Hazardous Waste Sites. Society of Toxicology. March 2011.
- 50A. Spearow, Jimmy L., Taylor, Anne and Nagel, Susan C. 2007. Mouse Models For Identifying Genes Controlling Sensitivity To Gonadotropins And Estrogens. Environment CA, San Francisco, CA Jan. 2007.
- 49A. Spearow, Jimmy L., Taylor, Anne and Nagel, Susan C. 2006. Mouse Models For

- Identifying Genes Controlling Sensitivity To Gonadotropins And Estrogens. Society for the Study of Reproduction, Omaha, NE, July 29-August 1, 2006.
- 48A. Spearow, Jimmy L., Nihart, Victoria M. and Miller, Marion G. 2004. Do Strain Differences In Estrogen Sulfotransferase Contribute To Genetic Variation In Susceptibility To Endocrine Disruption Between Strains Of Mice? Annual meeting of the Society for the Study of Reproduction, University of British Columbia, Vancouver, B.C.
- 47A. Vue, Tou Y. and Spearow, Jimmy L.: 2004. B6 And CD-1 Derived Strains Of Mice Differ In Ovulation Rate And Litter Size But Not In Susceptibility To The Disruption Of Gestation By Bisphenol A. Northern California SETAC meeting.
- 46A. Jimmy L. Spearow, Dale R Morris, Uland Wong, Amna Hawatky, Erica Burden, Luis Martinez, Bianca M Lang, Hemly Ordonez, and Marylynn Barkley. Genetic Variation Between Strains of Mice in Susceptibility to the Disruption by Estradiol, of Pubertal Reproductive Development, Spermatogenesis, Fetal Survival and Gestation. 2003. Society for the Study of Reproduction.
- 45A. R. Parmar, J.L. Spearow, M. Espiritu, K. V. Clemons, and D. A. Stevens. Genetic Susceptibility of Mice to Candida Albicans Vaginitis Correlates With Estrogen Sensitivity. 2003. International Society of Human and Animal Mycosis Meeting May 24-31, 2003, San Antonio, Texas.
- 44A. Jimmy L. Spearow, Dale R Morris, Uland Wong, Rashid Altafi, Trevor T. Stearns, Karl J. Mogel, Mark R. Sanford, Saeed W. Eteiw, and Marylynn Barkley. Genetic Control of Susceptibility to Endocrine Disruption of Testicular Development and Spermatogenesis by Estradiol. 2002 annual Meeting of the Endocrine Society. P3-74 San Francisco, CA
- 43A. Jimmy L. Spearow, Dale R Morris, Tiffany Lu, Angela Chen, Uland Wong, Hemly Ordonez, Erica Burden, Francisco Guevara, Erin Flynn, Suanne Chen, Rashid Altafi, Saeed W. Eteiw, and Marylynn Barkley. Evolutionary Toxicogenetics: Genetic Variation in Susceptibility to the Disruption of Male and Female Reproductive Development, Function and Pregnancy by Estrogenic agents. 4th Annual University of California at Davis Conference for Environmental Health Scientists, August 26, 2002, Napa, CA.
- 42A. Genetic Control of Susceptibility to Endocrine Disruption by Estradiol and Bis Phenol A. J.L. Spearow; A. Chen; T. Lu; L. Martinez; D.R. Morris; U. Wong; N. Lavan; R. Altafi; F.A. Guevara and M. Barkley. 2002 annual Meeting of the Northern California Society for Environmental chemistry and Toxicology. Davis, CA May 28-29, 2002.
- 41A. Spearow, Jimmy L., Mogel, Karl, Lee, Wooje, Barkley, Marylynn. Mapping Major Gene QTL Controlling Induced Ovulation Rate in Mice. 1st Annual Complex Trait Consortium Meeting, Memphis Tennessee, 2002.
- 40A. Genetic Variation In Susceptibility To The Disruption Of Testicular Development And Gene Expression By Pubertal Exposure To Estrogenic Agents. Jimmy L. Spearow, Dale Morris, Uland Wong, Rashid Altafi, Saeed Eteiw, Mark Stanford, Trevor Stearns, Lorena Orozio, Angela Chen, Marylynn Barkley, John Rockett, Douglas Tully and David Dix. Third Annual University of California at Davis Conference for Environmental Health Scientists, Disruption of Developing Systems and Advances in Therapeutic Approaches. August 27, 2001. Napa California.
- 39A. Cameron Cunningham, Christopher Nguyen, Amna Hawatky, Daniel Lee, Stacey Saephanh, Erin Kambestad, Sara Barone, and Jimmy L. Spearow. Strain Differences in Sensitivity to Developmental Exposure to Estrogenic Agents. Third Annual University of California at Davis Conference for Environmental Health Scientists, Disruption of

- Developing Systems and Advances in Therapeutic Approaches. August 27, 2001. Napa California.
- 38A. Jimmy L. Spearow, Rashid Altafi, Maureen Cahill, Peter O'Henley, Trevor Stearns, Lorena Orozio, Amber Jewison and Marylynn Barkley. Genetic Variation in Susceptibility to Endocrine Disruption by Estrogenic Agents. 34th Annual Meeting of the Society for the Study of Reproduction. July 2001. Ottawa, Canada.
- 37A. Jimmy L. Spearow, Taki Sofos, Peter O'Henley, Erin Flynn, Suanne Chen and Matt Karlsson. Genetic variation in sensitivity to endocrine disruption by estrogenic agents. Second Annual UC Davis Conference for Environmental Health Scientists, August 28, 2000, Napa California.
- 36A. Jimmy L Spearow, Charity L Turner, Oriole M Moeras, Nicholas J Alcaraz, Tuan Nguyen, Aruna Venkatesan, Diana Huang, Leslie Sullivan, Brita C Hugins and Marylynn Barkley. Higher-Resolution Mapping and Characterization of Ovulation Rate Induced and Aromatase Activity Induced QTL in Mice. 33rd Annual Meeting of the Society for the Study of Reproduction. July 2000. Madison, Wisconsin.
- 35A. Jimmy L. Spearow and Marylynn Barkley. Discovering and Mapping Genes that Control Major Differences in the Induction of Ovulation, Ovarian Aromatase Activity and Sensitivity to Estrogen in Mice. New Frontiers in Women's Health Research. UC Davis Cancer Center, April 21, 2000.
- 34A. Jimmy L. Spearow. Genetic variation in sensitivity to estrogen and gonadotropins: Relevance to endocrine disruption. Northern California Society of Environmental Toxicology And Chemistry (SETAC) Meeting. April 10, 2000, Davis, CA.
- 33A. J.L. Spearow, R. Hoglund, J. Velasco, E. Lopez, C. Low, J. Orduna, S. Sieckert, A. Emanstrom, M. Park, M. Muse, S. Cox, and M. Barkley. Mapping Ovulation Rate Induced and Aromatase Activity Induced QTL In Congenic Strains Of Mice. 32nd Annual Meeting of the Society for the Study of Reproduction. Pullman Washington. 1999. Abstract 200.
- 32A. K. Bogovich, J. Spearow, M. Hernandez, M. Nguyen, and B.B. Wheeler. Genetic Differences in Ovarian Androgen Production in Mice. 32nd Annual Meeting of the Society for the Study of Reproduction. Pullman Washington. 1999. Abstract 471.
- 31A. Lisa Stubbs, Jimmy Spearow and Xiajia Ren. Generation of Large-Insert Mouse cDNA Libraries. DOE Human Genome Program Contractor-Grantee Workshop VII. Functional Genomics Section. January 12-16, 1999 Oakland CA. (<http://www.ornl.gov/hgmis/publicat/99santa/124.html>)
- 30A. J.L. Spearow, B. Nguyen, C. Low, E. Barker, I. Banova, S. Sariano, B. Le, S. Hartouni, T. Duong, D. Ng, R. Estanol, and M. Barkley. Mapping reproductive QTL in reproductive congenic strains of mice. 1998. *Biology of Reproduction* 58; Suppl.1. Abstract 332.
- 29A. Jimmy L. Spearow, Hesham Fallah, Nathalie Zayek, Iskra Banova, Marty Reed, Sal Sariano, Binh Le, Brian O'Relli, Binh Nguyen, Thi Duong, and Marylynn Barkley. Mapping reproductive QTL in backcrosses and reproductive congenic strains of mice. Proceedings of the 11th International Mouse Genome Conference, St. Petersburg, FL, Oct 12-16, 1997.
- 28A. J.L. Spearow, R. Sera, P. Doemeny, R. Leffer. Genetic Variation in Disruption of Mouse Testicular Development by Estrogen. 1997. *Biology of Reproduction* 56 Suppl.1: 70A.
- 27A. Jimmy L. Spearow, and Marylynn Barkley. Genetic Variation in Ovarian Aromatase Activity in Mice. 1996 International Granlibakken Aromatase Conference, Tahoe City, CA.

- 26A. J. L. Spearow, V. Bergeron, F. Hung, P. Chien, M. Tran, J. Welsh, and M. Barkley. Mapping genes controlling differences in hormone-induced aromatase activity to mouse chromosome 2. 10th International Congress of Endocrinology, San Francisco, CA. 1996. Vol1, Abstract P2-731.
- 25A. M. Barkley, L. Botsford, B. Sommer and J. Spearow. Hypothalamic-pituitary-ovarian and immune system function during lyme borreliosis. 10th International Congress of Endocrinology, San Francisco, CA. 1996. Vol1; Abstract P2-924.
- 24A. J. L. Spearow, S. Keisner, L. Carr, M. Peters, J. Barthelow, J. Faridi, R. Freed, R. Bury, V. Patel and M. Barkley. Use of molecular genetic markers to develop congenic strains and selected lines of mice with altered reproduction. 1995. *Biology of Reproduction* 52 Suppl 1: 20A.
- 23A. Valery Bergeron, Jimmy L. Spearow, Margot Wilhelm, Alice Brinkman and Marylynn Barkley. Major genetic differences in ovarian aromatase activity in mice. 1995 *Biology of Reproduction* 52 Suppl 1: 21A.
- 22A. Sonia Erickson, Jimmy L. Spearow, Tarang Patel, Beth Dahl, Jessica Preciado, and Araacelli Martinez. Genetic Variation in Estrogen Negative Feedback In Male Mice. 1995. *Biology of Reproduction* 52 Suppl 1: 70A.
- 21A. Jimmy L. Spearow, Mark Porter, Mark Kokoris, Meredith Peters, Laura Carr, and Marylynn Barkley. 1994. Genetic mapping of ovarian aromatase activity QTL in mice. *Biology of Reproduction* 1994. Supplement 1, Abstract 527. Presentation at the 27th annual meeting of the Society for the Study of Reproduction, Ann Arbor, Michigan.
- 20A. Jimmy L. Spearow, Mark Porter, Megan Lynch, Sandy Wei, Mark Kokoris, Meredith Peters, Kristen Burgess, Laura Carr, Miranda Kheramand, Vicky Tran, and Marylynn Barkley. Genes controlling major differences in ovarian aromatase activity in mice map to chromosomes 4 and 18, not to P450-Aromatase on chromosome 9. *Biology of Reproduction* 1993. Supplement 1, Abstract 368. Slide presentation at the 26th annual meeting of the Society for the Study of Reproduction, Fort Collins Colorado.
- 19A. J. L. Spearow and M. Barkley. Mapping genes controlling induced ovulation rate in mice Poster presentation. 74th Annual Meeting of the Endocrine Society, June 1992; Abstract 1462; Page 417.
- 18A. Jimmy Spearow, Peter Nutson, Will Mailliard, Megan Lynch, Mark Porter, Chris Thomassian, Loan Nguyen, Amy Volz, Tuyen Nguyen, Minh Ly and Marylynn Barkley. 1991. Mapping genes controlling induced ovulation rate in mice. Fifth International Workshop on Mouse Genome Mapping. Lunteren, The Netherlands. p 87.
- 17A. Jimmy L. Spearow, Peter Nutson, Will Mailliard, Chris Thomassian and Marylynn Barkley. 1991. Mapping genes controlling hormone-induced ovulation rate in mice. *Biology of Reproduction* Sup. 1 44: Abstract 547.
- 16A. Jimmy L. Spearow, Peter Nutson, Will Mailliard, Lillian Fua, Sara McGee and Marylynn Barkley. 1991. Mapping QTL controlling hormone-induced ovulation rate in mice. *J. Animal Science* 69: Suppl. 1: Abstract 43.
- 15A. Mao, Frank C., Jimmy Spearow and Peter Nutson. 1990. Major genes control differences in ovarian steroidogenesis in mice. *Proceedings of 1990 Pacific Division Meeting of AAAS*. Vol 9: Part 1.
- 14A. Spearow, Jimmy , Peter Nutson, Tim Anderson, Stephan Telm, Phoebe Johnson, Lawrence Wong, Anna Dombrowski and Marylynn Barkley. 1990. Mapping genes controlling

- reproduction in mice. Proceedings of 1990 Pacific Division Meeting of AAAS. Vol 9: Part 1.
- 13A. Wong, Lawrence, Anna Dombrowski, Jimmy Spearow and Marylynn Barkley. 1990. Genetic variation in aromatase activity during pregnancy in mice. Proceedings of 1990 Pacific Division Meeting of AAAS. Vol 9: Part 1.
 - 12A. Spearow, J.L., J.T. Turgai, F.C. Mao, P.J. Smith, and B.A. Trost. 1987. Genetic variation in estradiol negative feedback on testes and vesicular gland weight and LH in mice. *J. Animal Sci.* 65 Suppl. 1:399A.
 - 11A. Spearow, J. L., S. Bednarek, J. Piccolo and B. Trost. 1985. Do genetic differences in steroidogenesis mediate major genetic differences in induced ovulation rate in mice? *Biol. Reprod.* Vol. 32, Suppl. 1, 198A.
 - 10A. Spearow, Jimmy L. and Tanya I. Edwards. 1984. Do genetic differences in hormone induced follicular number mediate differences in hormone induced ovulation rate? *Biol. Reprod.* 30, Suppl. 1: 62A.
 - 9A. Spearow, Jimmy L., L. Herbon, E. Malone and S. Fields. 1983. Genetic variation in LH receptor characteristics of mice. *J. Anim. Sci.* 57, Suppl. 1:375A.
 - 8A. Spearow, Jimmy L. and Arthur J. Vander. 1983. The effects of nuclear war on animal agriculture. *J. Anim. Sci.* 57, Suppl. 1:178-179A.
 - 7A. Spearow, J. L., R. P. Erickson, A. R. Midgley, L. Herbon, S. Fields and E. Malone. 1983. Effect of H-2 on hormone induced ovulation rate and LH receptor induction. *Endocrinology* 112, Suppl. 1: 92A.
 - 6A. Spearow, Jimmy L. 1982. Do differences in LH receptor characteristics mediate genetic differences in ovarian response characteristics? *UCLA Symposium on the Evolution of Hormone-Receptor Systems.* 476A.
 - 5A. Spearow, Jimmy L. 1981. Genetics of gonadotropin induced ovulation rate and LH receptor induction. *Biol. Reprod.* 24 (Suppl. 1): 110A.
 - 4A. Spearow J.L. and G.E. Bradford. 1980. The genetics of ovulation rate and LH receptor induction. 1980 Meeting of American Society of Animal Science, Abstract 60.
 - 3A. Spearow, Jimmy L. 1980. Are genetic differences in ovulation rate mediated by changes in serum hormone concentrations or ovarian FSH and LH receptor characteristics. *Biol. Reprod.* 22, Suppl. 1:107A.
 - 2A. Spearow, Jimmy L. and Irving I. Geschwind. 1979. The physiological basis of genetic differences in the ovarian responsiveness to gonadotropins in selected strains of mice. *Biol. Reprod.* 20, Suppl. 1: 72A.
 - 1A. Spearow, Jimmy L., R. Neira, and G. E. Bradford. 1976. Litter size and gain: Selection and crossing effects. *Journal of Animal Science* 43:222.