

**CURRICULUM VITAE (rev. 7/08)**

**REINHOLD JOSEF HUTZ**

**PLACE OF BIRTH:** Salzburg, Austria (Naturalized U.S. Citizen, 1972)

**ADDRESS:** Business: Department of Biological Sciences  
3209 N. Maryland Avenue  
University of Wisconsin-Milwaukee, WI 53211-0413  
INTERNET: [rjhutz@uwm.edu](mailto:rjhutz@uwm.edu)  
TELE 414.229.5416  
FAX: 414.229.3926  
<http://www.uwm.edu/People/rjhutz>

**RESEARCH/PROFESSIONAL EXPERIENCE:**

- 2003-2005 · Interim Associate Dean for Research, Graduate School, University of Wisconsin-Milwaukee
- 2001-Present · Leader, Basic Sciences Core, Institute of Environmental Health, University of Wisconsin-Milwaukee
- 1999-Present · Associate Adjunct Professor, Departments of OB/GYN (primary) (1991); Physiology (1996); and Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee
- 1998-Present · Professor, Department of Biological Sciences, University of Wisconsin-Milwaukee
- 1993-Present · Investigator (Deputy Director, 1997-2006), NIEHS Marine and Freshwater Biomedical Sciences Center, Great Lakes Wisconsin Aquatic Technology and Environmental Research (WATER) Institute, University of Wisconsin, Milwaukee. (Group Leader, "Signal transduction and endocrine disruption")
- 1993-1997 · Director, Graduate Studies in Biological Sciences (co-Director, 2001-2002)
- 1992-Present · Affiliate, Women's Studies Program, University of Wisconsin-Milwaukee
- 1992-1998 · Associate Professor with Tenure; Department of Biological Sciences, University of Wisconsin-Milwaukee.
- 1987-Present · Affiliate Scientist; Wisconsin National (formerly Regional) Primate Research Center, University of Wisconsin-Madison.
- 1986-1992 · Assistant Professor; Department of Biological Sciences, University of Wisconsin-Milwaukee.
- 1983-1986 · Postdoctoral Research Associate; Wisconsin Regional Primate Research Center, Madison, Wisconsin (Reproductive Endocrinology; Dr. D.J. Dierschke,

- supervisor. Primary research area: Effects of estrogens on folliculogenesis.)
- 1980-1983 . Ph.D.; Michigan State University, East Lansing, Michigan (Physiology; Dr. W.R. Dukelow, advisor. Dissertation: Biochemical aspects of embryonic development in primates following fertilization in vitro.)
- 1978-1980 . M.S.; Loyola University of Chicago, Chicago, Illinois (Biology; Dr. J.J. Peluso, advisor. Thesis: Aging effects on ovum maturation and RNA and protein syntheses in vitro.)
- 1974-1978 . B.S.; Loyola University of Chicago, Chicago, Illinois (Biology)

### AWARDS AND HONORS:

Chartered member, ALTX-4 Study Section, National Institutes of Health (NIH), 2001-2003; recent grant awards, NIH R15 ES011569, 2002-2006, "Modulation by dioxin of ovarian estrogen synthesis"; NIH RO1 ES08342, 1996-2001, "PAH action on ovarian steroidogenesis *in vitro*"; NIH R15 ES06807, 1995-1998, "Molecular basis for TCDD modulation of estrogen at ovary"; NIH R13 RR07778, 1992-93, "New directions in primate reproduction" conference grant. Co-Recipient, Japanese Ministry of Education travel grant (MONBUSHO), 1998-2001.

Listed, "Who's Who in America", 2001-2007, 2009 (63<sup>rd</sup> Ed.); "Who's Who in the World", 1997; Recipient, 1996 Graduate School/UWM Foundation Annual Research Award; Listed, "American Men and Women of Science, 1996, 2002, 2004/05, 2006, 2009; "Who's Who in Science and Engineering in America," 1994; Senior Fellow, Japan Society for the Promotion of Science (JSPS) in collaboration with Fogarty International Center, NIH, Tokyo University of Agriculture and Technology (TUAT), April 1996. Travel Fellow, Burroughs-Wellcome Fund, National University of Ireland- (formerly University College-) Galway, Ireland, June/July 1997. Fulbright Senior Specialist in Environmental Science, 2003-2008 (TUAT, Tokyo, Japan, 2004, 2008).

### PROFESSIONAL ACTIVITIES:

Consulting ("Action") Editor, *American Journal of Primatology*, 1989-2004; member, Advisory Board, *Primates*, 1996-2009; Scientific Board, *Fish and Fisheries Research*, peer-reviewed on-line journal; review board, *Ind. J. Exp. Biol*; ad-hoc reviewer: *Endocrinology*, *Reproduction*, (formerly, *Journal of Reproduction and Fertility*), *J. Reprod. Genetics*, *Intl. J. of Primatology*, *Biotechnic and Histochemistry* (formerly *Stain Technology*), *Histochemistry and Cell Biology*, *Biology of Reproduction*, *Amer. J. Physiol.*, *J. Clin. Endo. Metab.*, *Endocrine (Journal)*, *J. Neuroendocrinology*, *J. Andrology*, *J. Zhejiang University Science*, *Reprod. Toxicology*, *J. Med. Primatol.*, *Comp. Beh. Physiol.*, *Life Sciences*, *Chemico-Biol Interactions*, *Toxicological Sci*, *Toxicol. Lett.*, *Environ. Health Perspect.*, *Brain Research*, *Planta Medica*, *Current Med Chem*, *Environmental Res*, *Reprod Nutrition Develop.*, *Reproduction*, *Science of the Total Environment*, *Comp Biochem Physiol*, "March of Dimes" grant applications, NSF Research and Travel Grants, "Anatomy and Physiology" texts and software; ad-hoc reviewer, ARP Study Sections, Special Review Committees (e.g., RFAs and Superfund projects), and SEPs, NIH 1990-99, 2003-2005 (EMNR), *ad-hoc*, ALTX-4, 2000, CDC/ATSDR, 2003; member, NIH Site Visit Team, Animal Resources Review Committee, to California National Primate Res. Ctr., 1989, 1999. Reviewer NIH, SEP, Superfund, Sept./October 1999, 2004, 2005, 2007. Reviewer, Raine Fdn., Australia, 2007.

Co-inventor, International Patent application, (WO/1995/030434) METHODS BASED ON THE ROLE OF NEUROTROPHIN 3 IN FEMALE REPRODUCTION, World Intellectual Property Organization, 1995, <http://www.wipo.int/pctdb/en/wo.jsp?wo=1995030434>, Regeneron Pharmaceuticals, applicant.

Elected Treasurer, International Primatological Society, 1992-1996; Chair, Election Counting Committee, Amer. Soc. Primatol., 1988. Chair, Education Committee, Amer. Soc. Primatol., 1988-90. Member, Election Committee, Int'l Primatol. Soc., 1991. Chair, Program Committee, Amer. Soc. Primatol., 1990-1992, organized bi-national meetings: Veracruz, Mexico and Toronto, Canada-logistics (local arrangements and travel accommodations) and scientific conference program/corporate sponsorship organizer. Chair, History Committee, International Primatol. Soc., 1990-1992. Invited Session Chairman, "Socioendocrinology and Environmental Physiology," XIIIth Congress of the Int'l Primatol Soc., Nagoya, Japan, 1990. Invited Symposium Organizer, "New Directions in Primate Reproduction," Int'l. Primatol. Soc., Strasbourg, France, 1992. Invited interviewee, Directorship of the German Primate Center (DPZ), Göttingen, Germany, December 1991. Participant, training course in "Molecular Techniques in Aquatic Biomedical Research"; NIEHS Core Center, Milwaukee, WI, July 6-31, 1993. Invited lecturer, Embryology and Andrology National Review Course for Certification of Directors of *In-vitro* Fertilization clinics, sponsored by Amer. Assoc. of Bioanalysts, Chicago, IL, August 27-28, 1994; April 15, 2000. Co-convener, Symposium on "Physiology and Toxicology in Non-human Primates", International Primatological Society Congress, Madison, WI, August 8-11, 1996. External Advisory Committee Member, Program Project, California Regional Primate Research Center, 1998. Appointed, Nominating Committee, Society for the Study of Reproduction (SSR), 1996. Invited Poster, Gordon Conference on "Environmental Endocrine Disruptors", Plymouth, NH, July 11-17, 1998. Invited Poster, EPA/NIEHS Investigators Meeting, Oct. 6-9, 1998, Research Triangle Park, NC. Reviewed graduate programs in Biological Sciences, Kent State University, 2004. Member, Program Committee, American Soc Primatologists, 2005-2008; Membership Committee, SSR (Wisconsin representative), 2005; Cmte. on Reproduction and the Environment, SSR, 2006-2008. Member, Sea Grant Program Advisory Council 2005-2007; Plenary Speakers Cmte., co-Chair, Program Cmte., Soc. for Environmental Toxicology and Chemistry (SETAC), 2007; invited BioSection Editor, Am. J. Applied Sciences, 2008.

### **TEACHING EXPERIENCE:**

At Loyola University, I participated in teaching lecture and/or laboratory portions of courses in Anatomy and Physiology to Nursing students, and in Biology and Physiology to Biology majors. At Michigan State University, I was involved in teaching Introductory and Comparative Physiology, and Gastrointestinal Physiology to Physiology majors, and various courses in Reproductive Physiology and Endocrinology to Physiology majors and graduate students. At the University of Wisconsin-Madison, I presented lectures in Primatology and Reproductive Physiology. At UW-Milwaukee, my teaching responsibilities have included comparative Animal and Human Anatomy and Physiology courses to undergraduates (Nursing, Health Sciences and pre-medical students); Physiology and Pathology of Reproduction to graduate students; Honors courses in "The New Assisted Reproductive Technologies"; and selected lectures in the "Biology of Women"; "Foundations of Biological Sciences"; "Modern Topics in Biology"; and Reproductive Endocrinology and Molecular Toxicology lectures at the Medical College of Wisconsin.

### **INVITED SEMINARS/SYMPOSIA PRESENTATIONS:**

1. "Embryonic development in primates", Hope College, Holland, MI, 1982.
2. "Primate in-vitro fertilization and development", Sienna Heights College, MI, 1982.
3. "Laboratory techniques in embryo manipulation", Aquinas College, MI, 1982.
4. "Uptake of steroids and <sup>3</sup>H-uridine during embryonic development", Western Michigan University, Kalamazoo, MI, 1983.
5. "Biochemical aspects of in-vitro fertilized primate embryos", Endocrinology-Reproductive Physiology Program, Univ. of Wisconsin-Madison, 1983.
6. "Seasonal effects on primate ovarian folliculogenesis", Wisconsin Reg. Primate Res. Ctr., Madison, July, 1984.
7. "Regulation of ovarian folliculogenesis by estrogen", Dept. of Biological Sciences, Univ. of Wisconsin-Milwaukee, January, 1986.
8. "Embryology and early development of nonhuman primates", Symposium, Gottingen, West Germany, July 20-25, 1986.
9. "Current advances in reproductive technologies", workshop on "Medical and Ethical Issues Pertaining to Reproductive Technologies", Center for Women's Studies, Univ. of Wisconsin-Milwaukee, October 24, 1989.
10. "Regulation by estrogen of ovarian folliculogenesis in guinea pigs", Biology Department, Beloit College, WI, October 27, 1989.
11. "The new reproductive technologies", Department of Biology, Univ. of Wisconsin-Whitewater, February 2, 1990.
12. "Regulation of ovarian follicular atresia in mammals by steroids and peptides", Division of Endocrinology, Metabolism, and Clinical Nutrition, Medical College of Wisconsin, Milwaukee, April 26, 1990.
13. "Biotechnology relating to human and nonhuman primate in-vitro fertilization", Symposium, Kyoto, Japan, July 18-24, 1990.
14. "Hormones and behavior in primate reproduction", Symposium, Kyoto, Japan, July 18-24, 1990.
15. "Effects of angiotensin II and estradiol-17 $\beta$  on ultrastructure and steroidogenesis of ovarian theca", 3rd Annual Meeting of the Hokkaido Soc. of Reprod. Med., Sapporo, Japan, July 27, 1990.
16. "Role of steroids and peptide hormones in the regulation of ovarian function", Endocrine/Diabetes Center, St. Luke's Hospital, Milwaukee, WI, Sept. 18, 1990.
17. "Regulation of ovarian function in primates", Department of OB/GYN, Faculty of Sciences,

- University of Veracruz, Xalapa, Mexico, November 29, 1990.
18. "Effects of estrogens and peptides on ovarian function in vivo and in vitro", Reproductive Endocrine Section, Rush-Presbyterian - St. Luke's Medical Center, Chicago, IL, March 6, 1991.
  19. "Latest developments in contraceptive and reproductive technologies", Minority Biomedical Research Support Program, Rutgers University, Newark, NJ, April 1, 1991.
  20. "Regulation of ovarian follicle development by estrogens and peptides in rhesus monkeys", German Primate Center, Gottingen, Germany, December 18, 1991.
  21. "Are there estrogen receptors in the rhesus monkey ovary?" Department of Zoology and Wisconsin Regional Primate Research Center, Madison, WI, April 24, 1992.
  22. "Role of angiotensin II in ovarian follicle regulation and atresia", Dept. of OB/GYN, Rush-Presbyterian - St. Luke's Medical Center, Chicago, IL, April 28, 1992.
  23. "New directions in primate reproduction", Symposium, Strasbourg, France, August 16-21, 1992.
  24. "A functional role for estrogen receptors in the ovary", NIEHS Marine and Freshwater Biomedical Core Ctr., Milwaukee, WI, February 25, 1993.
  25. "Recent developments in contraception and assisted reproductive technologies" , Honors Program, UWM, September 15, 1994.
  26. "Role of estrogenic compounds in ovarian follicle development", Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, January 12, 1995.
  27. "Primates as models for human diseases," Department of Biology, University of Wisconsin-Stevens Point, March 13, 1995.
  28. "Recent developments in contraceptives and assisted reproductive technologies," Department of Biology, University of Wisconsin-Platteville, April 6, 1995.
  29. "Role of estrogens and (anti)estrogenic xenobiotics in receptor-mediated ovarian function," Section of Endocrinology, Metabolism, and Clinical Nutrition, Department of Internal Medicine, Medical College of Wisconsin, June 1, 1995.
  30. "Assisted reproductive technologies" Ethics Seminar, St. Michael's Hospital, Milwaukee, WI, July 27, 1995.
  31. "Estrogenic molecules and the ovary", Department of Biology, Carroll College, Waukesha, WI, November 8, 1995.
  32. "Role of estrogens in ovarian follicle function", Department of Biology, Marquette University, Milwaukee, WI, November 10, 1995.

33. "Use of the guinea pig as a model to investigate polycystic ovarian syndrome", Laboratory of Reproductive Physiology, Tokyo University of Agriculture and Technology, Fuchu, Tokyo, Japan, April 5, 1996.
34. "Estrogen receptor in ovarian follicle development and atresia", Biological Sciences Seminar, Department of Veterinary Physiology, Tokyo University of Agriculture and Technology, Tokyo, Japan, April 5, 1996.
35. "Dioxin modulation of the estrogen signal at the ovary", Laboratory of Veterinary Physiology, University of Tokyo, April 12, 1996.
36. "Localization of estrogen receptor in primate ovary: a functional role?", California Regional Primate Research Center, UC-Davis, May 7, 1996.
37. "Dioxin effects on the estrogen-receptor signaling pathway", Institute of Toxicology and Environmental Health, University of California-Davis, May 7, 1996.
38. "Perturbation of ovarian function by tetrachlorodibenzo-p-dioxin (TCDD)", NIEHS, Research Triangle Park, NC, November 21, 1996.
39. "Dioxin modulation of the estrogen signal and ovarian function", Institute of Chemical Toxicology, Wayne State University, Detroit, MI, January 16, 1997.
40. "Disruption of the reproductive axis by dioxin", University College Galway, (now National University of Ireland, Galway), Ireland, June, 1997.
41. "Modulation by dioxin of female reproductive axis function: physiologic relevance or fantasy?", Department of Biological Sciences, UWM, December 10, 1997.
42. "Xenobiotic estrogens and reproduction", Dept of Veterinary Physiology, Tokyo Univ. of Agriculture and Technology (TUAT), February 5, 1999.
43. "Modulation of ovarian function by dioxin". National Institute of Environmental Studies, Tsukuba Science City, Japan, Feb 9, 1999.
44. "Defects in reproductive function due to TCDD", Graduate Program, Dept of Vet. Physiol., TUAT, Tokyo, Feb 12, 1999.
45. "Modulation of female reproductive function by dioxin", University of Wisconsin-Whitewater, March 12, 1999.
46. "Use of competitive RT-PCR to quantify modulation in steroidogenic enzyme mRNAs by dioxin", Dept. of Zoology, University of Wisconsin-Madison, October 15, 1999.
47. "Dioxins and reproduction", Azabu University School of Pharmacy, Japan, February 22, 2000.
48. "TCDD modulation of ovarian structure and estrogen secretion", Tokyo University of Pharmacy and Life Sciences, February 21, 2000.

49. “Female Reproductive Physiology and Anatomy” lecture, American Association of Bioanalysts Board national review course, Rush Medical University, Chicago, IL, April 15, 2000.
50. “Environmentally relevant concentrations of tetrachlorodibenzo-p-dioxin (TCDD, dioxin) inhibit ovarian steroid production by reducing levels of mRNAs for steroidogenic enzymes, and induce programmed cell death in granulosa cells”, plenary talk, Annual Symposium of the Endocrinology-Reproductive Physiology Program, University of Wisconsin-Madison, September 15, 2000.
51. “Reproductive effects of environmental pollutants”, Tokyo University of Agriculture and Technology (TUAT), Fuchu, Tokyo, Japan, April 4, 2001.
52. "Modulation of reproductive axis by dioxin *in vivo* and *in vitro*", Dept of Pharmacology, Case Western Reserve University, May 14, 2002.
53. “Dioxin modulation of female reproductive function”, Dept. of Veterinary Physiology (graduate program), TUAT, Fuchu, Tokyo, April 6, 2004.
54. “Environmental pollutants and endocrine disruption”, Dept. of Veterinary Physiology (undergraduate veterinary program, *Ibid.*, April 7, 2004.
55. “Helpful hints on manuscript and grant proposal preparations”, Tokyo University of Agriculture and Technology, School of Veterinary Medicine, *Ibid.*, April 12, 2004.
56. “Effects of PCBs and ammonium perchlorate on ovarian follicle maturation, Azabu University, School of Veterinary Medicine, Fuchinobe, Japan, April 14, 2004.
57. “Dioxin and ovarian function”, Division of Endocrinology, Metabolism and Clinical Nutrition, Dept of Internal Medicine, Medical College of Wisconsin, Milwaukee, October 24, 2006.
58. “Disturbances in female reproductive function due to dioxin”, Robert Wood Johnson Medical School-University of Medicine and Dentistry of New Jersey, March 21, 2007.
59. “Perturbation of female reproductive function by dioxin”, NIEHS Biomedical Sciences Center, Great Lakes WATER Institute, UW-Milwaukee, April, 2007.
60. “Dioxin alters biomarkers of fertility in mammals and fish”, Dept. of Veterinary Physiology (graduate program), TUAT, Fuchu, Tokyo, April 2, 2008.
61. “Tips for writing manuscripts in English-language scientific journals”, Tokyo University of Agriculture and Technology, School of Veterinary Medicine, *Ibid.*, March 26, 2008.

## **SOCIETIES:**

American Association for the Advancement of Science  
American Physiological Society (APS, member of FASEB); Sections of Endocrinology and

Metabolism, History of Physiology, Teaching of Physiology, and Cell and General Physiology  
 American Society of Primatologists (ASP)  
 Endocrine Society (peer-reviewed, elected)  
 International Primatological Society (IPS)  
 National Geographic Society (NGS)  
 Sigma Xi  
 Society for the Study of Reproduction (SSR)  
 Society of Environmental and Chemistry (SETAC), 2007-2008  
 Society of Toxicology (peer-reviewed, elected) (SOT)  
 Wisconsin Association for Biomedical Research and Education (WABRE, Board of Directors, 2005-2007)  
 Zoological Society of Japan (ZSJ)

### INVITED REVIEWS:

1. Hutz, R.J. Disparate effects of estrogens on in-vitro steroidogenesis by mammalian and avian granulosa cells. Biol. Reprod. 40:709-713, 1989.
2. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Role of estradiol in regulating ovarian folliculogenesis in rhesus monkeys. J. Med. Primatol. 19:553-571, 1990.
3. Hutz, R.J. and O'Shaughnessy, I.M. Superovulation and ovulation induction. In: The Encyclopedia of Human Biology, R. Dulbecco, ed. Academic Press, Inc., San Diego, CA, Vol. 7., 1991, pp. 345-351.
4. Hutz, R.J., Ellis, L.C., Stagg, L., and Wehrenberg, W.B. The Reproductive Biology of Female Mink. In: The Blue Book of Fur Farming, Fur Rancher, Eden Prairie, MN, 1992, pp. 47-51.
5. Dierschke, D.J., Chaffin, C.L., and Hutz, R.J. Role and site of estrogen action in follicular atresia. Trends in Endo. Metab. 5:215-219, 1994.
6. Hutz, R.J. Overview of female reproductive anatomy and physiology. In: Embryology and Andrology Review Course Manual. AAB, St. Louis, MO, 1994.
7. Hutz, R.J. International Directory of Primatology, 2nd Edition, L.Jacobsen et al., eds., Madison, WI. Int'l J. Primatol. 16:683-684, 1995 (Book Review).
8. Trewin AL, Hutz RJ. The Female Guinea Pig. In: The Encyclopedia of Reproduction, E. Knobil and J. Neill (eds.), Academic Press, San Diego, 1999, pp. 583-588.
9. Hutz, R.J. and O'Shaughnessy, I.M. Superovulation and ovulation induction. In: The Encyclopedia of Human Biology, R. Dulbecco, ed. Academic Press, Inc., San Diego, CA, 2nd Edition, 1998.
10. Hutz, R.J. Reproductive endocrine disruption by environmental xenobiotics that modulate the

estrogen-signaling pathway, particularly TCDD. *J. Reprod. Develop.* 45:1-12, 1999.

11. Hutz RJ, Carvan MJ III, Baldrige MG, Conley LK, King Heiden T. Environmental toxicants and effects on female reproductive function. *Trends in Reproductive Biology* Vol. 2:1-11, 2006/07 (also NIH PubMed Central).

**FULL PAPERS** (78+ peer-reviewed, published as of 1 January 2008):

12. Peluso, J.J., England-Charlesworth, C., and Hutz, R. Effect of age and of follicular aging on the preovulatory oocyte. *Biol. Reprod.* 22:999-1005, 1980.
13. Peluso, J.J. and Hutz, R. The effect of age on the ability of oocytes to synthesize RNA and protein during *in-vitro* maturation. *Cell Tiss. Res.* 213:29-35, 1980.
14. Peluso, J.J., Hutz, R., and England-Charlesworth, C. *In-vitro* maturation of preovulatory oocytes collected from mature and aged proestrous rats. *In: Dynamics of Ovarian Function*, Raven Press, New York, 1980.
15. Peluso, J.J., Hutz, R., and England-Charlesworth, C. Development of preovulatory follicles and oocytes during the estrous cycle of mature and aged rats. *Acta Endocrinol.* 100:434-443, 1982.
16. Chan, P.J., Hutz, R.J., and Dukelow, W.R. Non-human primate *in-vitro* fertilization: Seasonality, cumulus cells, cyclic nucleotides, RNA and viability assays. *Fertil. Steril.* 38:609-615, 1982.
17. Ghosh, M., Hutz, R.J., and Dukelow, W.R. Serum estradiol-17 $\beta$ , progesterone and relative LH levels in *Saimiri sciureus*: Cyclic variation and effect of laparoscopy and follicle aspiration. *J. Med. Primatol.* 11:312-318, 1982.
18. Hutz, R.J., Chan, P.J., and Dukelow, W.R. Nonhuman primate *in vitro* fertilization: Biochemical changes associated with embryonic development. *Fertil. Steril.* 40:521-524, 1983.
19. Dukelow, W.R., Chan, P.J., Hutz, R.J., DeMayo, F.J., Dooley, V.D., Rawlins, R.G., and Ridha, M.T. Preimplantation development of the primate embryo after *in-vitro* fertilization. *J. Exp. Zool.* 228:215-221, 1983.
20. Hutz, R.J., Holzman, G.B., and Dukelow, W.R. Synthesis of ribonucleic acid in oocytes collected from squirrel monkeys and humans following chorionic gonadotropin administration. *Am. J. Primatol.* 5:267-270, 1983.
21. Hutz, R.J., Ghosh, M., and Dukelow, W.R. Steroid uptake and  $^3\text{H}$ -uridine incorporation by early hamster and squirrel monkey (*in-vitro* fertilized) embryos: Effects of ovulatory regimen. *Zool. Sci.* 1:771-776, 1984.
22. Hutz, R.J., DeMayo, F.J., Chan, P.J., and Dukelow, W.R. Accumulation of 2-deoxy-D-glucose by primate oocytes fertilized *in vitro*. *Am. J. Primatol.* 7:57-61, 1984.
23. Hutz, R.J., DeMayo, F.J., and Dukelow, W.R. The use of vital dyes to assess embryonic

- viability in the hamster (Mesocricetus auratus). Stain Technol. 60:163-167, 1985.
24. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Seasonal effects on ovarian folliculogenesis in rhesus monkeys. Biol. Reprod. 33:653-659, 1985.
  25. Dierschke, D.J., Hutz, R.J., and Wolf, R.C. Induced follicular atresia in rhesus monkeys: Strength-duration relationships of the estrogen stimulus. Endocrinology 117:1397-1403, 1985.
  26. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Markers of atresia in ovarian follicular components from rhesus monkeys treated with estradiol-17 $\beta$ . Biol. Reprod. 34:65-70, 1986.
  27. DeMayo, F.J., Hutz, R.J., and Dukelow, W.R. Cryopreservation of squirrel monkey (Saimiri sciureus) oocytes. In: Current Perspectives in Primate Biology. D.M. Taub and F. King, eds. Van Nostrand Reinhold Co., Inc., 1986.
  28. Morgan, P.M., Hutz, R.J., Kraus, E.M., and Bavister, B.D. Ultrasonographic assessment of the endometrium in rhesus monkeys during the normal menstrual cycle. Biol. Reprod. 36:463-469, 1987.
  29. Dierschke, D.J., Hutz, R.J., and Wolf, R.C. Atretogenic action of estrogen in rhesus monkeys: Effects of repeated treatment. Am. J. Primatol. 12:251-261, 1987.
  30. Hutz, R.J., Gold, D.A., and Dierschke, D.J. Diminished steroidogenic response of hamster granulosa cells to estrogen in vitro. Cell Tiss. Res. 248:531-534, 1987.
  31. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Temporal and endocrine sequelae of aspirating follicular contents in rhesus monkeys. Am. J. Primatol. 13:195-202, 1987.
  32. Hutz, R.J., Krueger, G.S., Meller, P.A., Sholl, S.A., and Dierschke, D.J. FSH-induced aromatase activity of hamster granulosa cells: Effect of estradiol-17 $\beta$  in vitro. Cell Tiss. Res. 250:101-104, 1987.
  33. Morgan, P.M., Hutz, R.J., Kraus, E.M., Cormie, J.A., Dierschke, D.J. and Bavister, B.D. Evaluation of ultrasonography for monitoring follicular growth in rhesus monkeys. Theriogenology 27:769-780, 1987.
  34. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Induction of atresia of the dominant follicle in rhesus monkeys by the local application of estradiol-17 $\beta$ . Am. J. Primatol. 15:69-77, 1988.
  35. Hutz, R.J., Krueger, G.S., Dierschke, D.J., and Wolf, R.C. Menstrual cycles in rhesus monkeys are unaffected by a single dose of the anesthetics ketamine and xylazine administered during the midfollicular phase at laparoscopy. Am. J. Primatol. 15:79-84, 1988.
  36. Wehrenberg, W.B., Bejvan, S.M., Hutz, R.J., and Kurhajec, J. Reproductive performance of difficult breeding mink given PMSG. Fur Anim. Res. 1:3, 1988.
  37. Wehrenberg, W.B., Bejvan, S.M., Kurhajec, J., and Hutz, R.J. The role of pregnant mare serum gonadotropin in the practical management of non-breeding female mink. In: Biology,

- Pathology, and Genetics of Fur-Bearing Animals, B.D. Murphy and D.B. Hunter, eds., 1988.
38. Wehrenberg, W.B., Bejvan, S.M., Hutz, R.J., and Kurhajec, J. Pregnant mare serum gonadotrophin for non-breeding female mink. *Fur Rancher* 69:8-13, 1989.
  39. Hutz, R.J., Krueger, G.S., Durning, M., Morgan, P.M., Dierschke, D.J., and Wolf, R.C. Atresia of the dominant ovarian follicle in rhesus monkeys is detected within 24 hours of estradiol treatment. *Am. J. Primatol.* 18:237-243, 1989.
  40. Hutz, R.J., Morgan, P.M., Krueger, G.S., Durning, M., and Dierschke, D.J. Direct effect of estradiol-17 $\beta$  on progesterone accumulation by ovarian granulosa cells from rhesus monkeys. *Am. J. Primatol.* 17:87-92, 1989.
  41. Wehrenberg, W.B., Fowler, S., Kurhajec, J., and Hutz, R.J. The role of pregnant mare serum gonadotropin in follicular development, mating, and pregnancy in the mink. *Dom. Anim. Endocrinol.* 6:371-378, 1989.
  42. Hutz, R.J., Bejvan, S.M., Durning, M., Dierschke, D.J.; with the technical assistance of C.L. Fischer and R.J. Zachow. Changes in ovarian follicular populations, in serum estrogen and progesterone, and in ovarian steroid secretion *in vitro* during the guinea pig estrous cycle. *Biol. Reprod.* 42:266-277, 1990.
  43. Dierschke, D.J., Hutz, R.J., Golos, T.G., and Wolf, R.C. Regulation of ovarian folliculogenesis and atresia in rhesus monkeys: role of estrogen. *In: Psychoneuroendocrinology of Growth and Development*, A.K. Slob and M.J. Baum (eds.). Medicom Europe B.V., pub., Bussum, Holland, 1990, pp. 249-266.
  44. Hutz, R.J., Schaller, M., Kitzman, P.H. and Bejvan, S.M. Estradiol-17 $\beta$  affects differentially viability, progesterone secretion, and apical surface morphology of hamster ovarian follicles *in vitro*. *Zool. Sci.* 8:81-88, 1991.
  45. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Estradiol-induced follicular atresia in rhesus monkeys is not prevented by exogenous gonadotropins. *Amer. J. Primatol.* 23:247-255, 1991
  46. Kitzman, P.H. and Hutz, R.J. Oestradiol exerts disparate effects on ultrastructure of and steroidogenesis by ovarian theca from preovulatory hamster follicles. *Zool. Sci.* 8:767-774, 1991.
  47. Kitzman, P.H. and Hutz, R.J. *In-vitro* effects of angiotensin II on steroid production of hamster ovarian follicles and on ultrastructure of the theca interna. *Cell Tiss. Res.* 268:191-196, 1992.
  48. Wehrenberg, W.B., Kurt, K.J., and Hutz, R.J. Effects of equine chorionic gonadotropin on reproductive performance in anestrus mink. *J. Anim. Sci.* 70:499-502, 1992.
  49. Wehrenberg, W.B., Stagg, L.C., Voltz, D.M., Ellis, L.C., and Hutz, R.J. The biological efficacy of pregnant mare serum gonadotropin (PMSG) to stimulate reproductive function in anestrus mink. *Norw. J. Agric. Sci.* S9:137-144, 1992.

50. Hutz, R.J. and Quandt, L.M. Induction by estrogen of atretic follicles and cysts in rhesus monkeys (Macaca mulatta) and (Cavia porcella) guinea pigs. In: Topics in Primatology, Vol. 3. Evolutionary Biology, Reproductive Endocrinology, and Virology. University of Tokyo 4. Press, Tokyo, 1992.
51. Heimler, I., Hutz, R.J., and Wehrenberg, W.B. Gonadotropins and reproductive function in female mink. In: the Blue Book of Fur Farming, Fur Rancher, Eden Prairie, MN, 1993.
52. Quandt, L.M. and Hutz, R.J. Induction by estradiol-17 $\beta$  of polycystic ovaries in the guinea pig. Biol. Reprod. 48:1088-1094, 1993.
53. Hutz, R.J., Wagner, N., Krause, P., Fischer, C., Syed, N., Dierschke, D.J., Monniaux, D., and Tomanek, M. Localization of estrogen receptors in rhesus monkey ovary. Amer. J. Primatol. 31:299-309, 1993.
54. Hutz, R.J. Technologic advances in the imaging of ovarian morphology and hormone receptors and their role in ascertaining follicular growth and development in the rhesus monkey. Int'l. J. Primatol. 15:629-637, 1994.
55. Hutz, R.J., Campion, C., Krause, P., Gieryn, D., Fischer, C.L., Heimler, I., Waraksa, J. Kunch, V., Chaffin, C., Dierschke, D., Pierson, R., Sharpe, G., Monniaux, D., and Tomanek, M. Recent studies detailing the imaging of ovarian follicles and hormone receptors, and their use in understanding regulation of folliculogenesis and atresia in primates. In: Current Primatology. Vol. III. Behavioural Neuroscience, Physiology and Reproduction. Eds., J.R. Anderson, J.J. Roeder, B. Thierry, N. Herrenschmidt, Strasbourg, 1994.
56. Dierschke, D.J., Golos, T.G., Durning M., and Hutz, R.J. Incidence of atresia or luteinization without rupture of the dominant ovarian follicle in rhesus monkeys treated with estradiol-17 $\beta$  on day 8 of the menstrual cycle. Amer. J. Primatol. 34:261-273, 1994.
57. Heimler, I., Rawlins, R.G., Aiman, J., Raff, H., and Hutz, R.J. Elevated follicular fluid angiotensin II and pregnancy outcome. Fertil. Steril. 63:528-534, 1995.
58. Waraksa, J.A. and Hutz, R.J. Neurotrophin-3 augments steroid secretion by hamster ovarian follicles in vitro. Zool Sci. 12:499-502, 1995.
59. Hutz, R.J. International Directory of Primatology, 2nd Edition, L.Jacobsen et al., eds. Wisconsin Reg. Primate Res. Ctr., Madison, WI, Int'l. J. Primatol. 16:1995.
60. Heimler, I., Hutz, R.J., Attaran, M., Mack, S.R., Chaffin, C.L., Morrissey, W.G., Hibner, M., and Rawlins, R.G Ovarian follicular granulosa-lutein cells from IVF procedures demonstrates a very low incidence of apoptotic cell death post aspiration. Proc. IXth World Congress on in vitro Fertilization and Assisted Reproduction, Monduzzi Editore, Bologna, Italy, 1995, pp. 743-746.
61. Hibner, M., Heimler, I., Morrissey, W.G., Piekos, M., Hutz, R.J., Marianowski, L., Radwanska, and Rawlins, R.G. A new method for the detection and localization of apoptosis in

- mouse blastocysts. Ibid., 1995.
62. Champion, C.E., Trewin, A. and Hutz, R.J. Effects of follicle-stimulating hormone (FSH) administration on estradiol-induced cystic ovaries in guinea pigs. Zool. Sci. 13:137-143, 1996.
  63. Chaffin, C.L., Peterson, R.E., and Hutz, R.J. In-utero and lactational exposure of female Holtzman rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD): modulation of the estrogen signal. Biol. Reprod. 55:62-67, 1996.
  64. Chaffin, C.L., Brogan, R.S., Peterson, R.E., Hutz, R.J., Wehrenberg, W.B. Modulation of growth axis gene expression by in-utero and lactational exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in the weanling Holtzman rat. Endocrine 5:129-134, 1996.
  65. Chaffin C.L. and Hutz, R.J. Molecular regulation of ovarian steroid receptors. Proc. XVth Congress of the International Primatological Society, Current Primatology 1997.
  66. Chaffin, C.L., Heimler, I. B Wimpee, C Sommer, RG Rawlins, and Hutz, R.J. Estrogen receptor and aromatic hydrocarbon receptor in the primate ovary. Endocrine 5:315-321, 1997.
  67. Heimler, I., Hutz, R.J., Voltz, D.M., and Wehrenberg, W.B. Exogenous chorionic gonadotropin and breeding efficiency in female mink. Norw. J. Agric. Sci. 10:179-186, 1996.
  68. Chaffin, C.L. and Hutz, R.J. Regulation of the aromatic hydrocarbon receptor (AHR) by in-utero and lactational exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). J. Reprod. Develop. 43:47-51, 1997.
  69. Chaffin CL, Trewin, A.L., Watanabe, G, Taya, K., Hutz, R.J. Disruption of the pituitary-gonadal axis due to in-utero and lactational exposure to dioxin in the peripubertal female rat. Biol. Reprod. 56:1498-1502, 1997.
  70. Chaffin, C.L.,Trewin, A.L., and Hutz, R.J. Estrous-cycle-dependent changes in the expression of aromatic hydrocarbon receptor (AHR) and AHR-nuclear translocator (ARNT) mRNAs in the rat ovary and liver. Chemico-Biological Interactions 124:205-216, 2000.
  71. Heimler, IH, Trewin A, Binor Z, Hutz RJ, Rawlins RG. In-utero and lactational exposure to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD): effects on folliculogenesis and apoptosis in rat offspring. Proceedings of the annual meeting of the Chicago Area Reproductive Endocrinologists, 1998.
  72. Hutz RJ, Wimpee BAB, Dasmahapatra, AK, Weber DN, Heimler I, Chaffin CL. Differential modulation by aromatic hydrocarbon receptor agonist of circulating estradiol-17beta and estrogen-receptor DNA-binding capability in female rainbow trout (*O. mykiss*). Zool. Sci. 16:161-166, 1999.
  73. Heimler I, Trewin AL, Chaffin CL, Rawlins RG, Hutz RJ. Modulation of folliculogenesis and effects on ovarian apoptotic cell death in Holtzman rats exposed to

- 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in utero and lactationally. Reprod Toxicol . 12:69-73, 1998.
74. Ho Y-S, Gargano M, Cao J, Bronson T, Heimler I, Hutz RJ. Reduced fertility in female mice lacking copper-zinc superoxide dismutase. J. Biol. Chem. 273:7765-7769, 1998.
75. Shi FX, Ozawa M, Komura H, Watanabe G, Taya K, Trewin AL, Hutz RJ. Changes in the plasma concentrations of inhibin, estradiol and progesterone during the estrous cycle of the female guinea pig. In: Advances in Comparative Endocrinology, Eds. S. Kawashima and S.K. Kuyama Monduzzi Editore, 1997.
76. Heimler I, Rawlins RG, Owen H, Hutz RJ. Dioxin perturbs in a dose- and time-dependent fashion steroid secretion and induces apoptosis of human luteinizing granulosa cells. Endocrinology, 139: 4373-4379, 1998.
77. Shi FX, Ozawa M, Komura H, Yang P, Trewin AL, Hutz RJ, Watanabe G, Taya K. Secretion of ovarian inhibin and its physiologic roles in the regulation of FSH secretion during the estrous cycle of the female guinea pig. Biol. Reprod. 60:78-84, 1999.
78. Trewin, AL, Chaffin, CL, Watanabe G, Taya K, and Hutz RJ. Cyclic changes in serum FSH, LH and inhibin during the guinea pig estrous cycle. J. Reprod. Develop. 44:353-357, 1998.
79. Gerstenberger SL, Heimler I, Smies R, Hutz RJ, Dasmahapatra AK, Dellinger JA, Tripoli V. Minimal endocrine alterations in rodents after consumption of lake trout (*Salvelinus namaycush*). Arch Environ. Contam. Toxicol.38:371-376, 2000.
80. Matthews M, Heimler I, Fahy M, Radwanska E, Hutz R, Trewin A, Rawlins R. Effects of TCDD, an environmental pollutant, on mouse blastocyst development and apoptosis. Fertil. Steril. 75:1159-1162, 2001.
81. Shi FX, Ozawa M, Watanabe G, Trewin AL, Hutz RJ, Taya K. Immunohistochemical localization of ovarian inhibin/activin subunits in follicular dominance during the estrous cycle of guinea pigs. Zool. Sci. 17:1311-1320, 2000.
82. Dasmahapatra AK, Wimpee BAB, Budsberg KJ, Dorschner M, Phillips R, Hutz RJ. Lack of effect of beta-naphthoflavone on NRAMP genes in adult rainbow trout. Marine Env. Res. 50:147-151, 2000.
83. Dasmahapatra AK, Wimpee BAB, Trewin AL, Wimpee C, Ghorai J, Hutz RJ. Demonstration of TCDD-attenuated P450 steroidogenic enzyme mRNA levels in rat granulosa cells in vitro using competitive RT-PCR. Mol Cell Endocrinol 164:5-18, 2000.
84. Shi FX, Mochida K, Ogura A, Matsuda J, Suzuki O, Watanabe G, Hutz RJ, Tsonis CG, Suzuki AK, Taya K. Follicle selection in cyclic guinea pigs with active immunization against inhibin alpha-subunit. Life Sciences 66:2489-2497, 2000.
85. Dasmahapatra AK, Wimpee BAB, Trewin AL, Hutz RJ. 2,3,7,8-tetrachlorodibenzo-p-dioxin

- increases steady-state ERbeta mRNA levels after CYP1A1 and CYP1B1 induction in rat granulosa cells *in vitro*. Mol Cell Endocrinol 182:39-48, 2001.
86. Dasmahapatra AK, Trewin AL, Hutz RJ. Estrous cycle-regulated expression of CYP1B1 mRNA in the rat ovary. Comp. Bioch. Physiol. Part B, Bioch Molec Biol. 133:127-134, 2002.
87. Baldrige MG, Stahl RL, Gerstenberger SL, Tripoli V, Hutz RJ. Modulation of ovarian follicle maturation in Long-Evans rats exposed to polychlorinated biphenyls *in utero* and lactationally. Reprod Toxicol 17:567-573, 2003.
88. Baldrige MG, Gerstenberger SL, Tripoli V, Stahl R, Hutz RJ. Modulation of ovarian follicle maturation in Long-Evans rats exposed to ammonium perchlorate in utero and lactationally. Reprod Toxicol 19:155-161, 2004.
89. Baldrige MG, Hutz RJ. Autoradiographic localization of aromatic hydrocarbon receptor (AHR) in rhesus monkey ovary. Amer J Primatol 69:681-691, 2007.
90. Trewin AL, Woller M, Wimpee BA, Conley LK, Baldrige MG, Hutz RJ. Short-term hormone release from adult female rat hypothalamic and pituitary explants is not altered by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. J Reprod Develop 53:765-775, 2007.
91. Ho HM, Ohshima K, Watanabe G, Taya K, Strawn EY, Hutz RJ. TCDD increases inhibin A production by human luteinized granulosa cells *in vitro*. J Reprod Develop 52:523-528, 2006 (also NIH PubMed Central).
92. Li X, Jiang Y, Wang Z, Kiu G, Hutz RJ, Xie Z, Shi FX. Regulation of FoxO1 transcription factor by nitric oxide and cyclic GMP in cultured rat granulosa cells. Zoolog Sci, 22:1339-1346, 2005 (retracted, 2007).
93. Wang T, Huo YJ, Shi FX, Xu RJ, Hutz RJ. Effects of Intrauterine Growth Retardation on Development of the Gastrointestinal Tract in Neonatal Pigs. Biol Neonate 88:66-72, 2005.
94. King Heiden T, Hutz RJ, Carvan III MJ. Accumulation, tissue distribution, and maternal transfer of dietary 2,3,7,8-tetrachlorodibenzo-*p*-dioxin: impacts on reproductive success of zebrafish. Toxicol Sci 87:497-507, 2005.
95. Li X, Zhou Z, Jiang Y, Hutz RJ, Xie Z, Shi F. Regulation of phosphorylated FoxO1 protein levels by gonadotropin, nitric oxide and cyclic GMP in the ovary and cultured granulosa cells of the rat. Chinese Journal of Cell Biology, submitted, 2008.
96. Baldrige MG, Hutz RJ. Femtomolar TCDD reduces estrogen secretion *in vitro* in human luteinizing granulosa cells. Human Reproduction (in preparation).
97. King Heiden T, Carvan MJ III, Hutz RJ. Inhibition of follicular development, vitellogenesis, and serum 17beta estradiol concentrations in zebrafish following chronic, sublethal dietary exposure to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. Toxicol Sci 90:490-499, 2006.
98. Conley LK, Hutz RJ. Diet and the rat growth hormone axis Endocrine (in preparation).

99. T. King Heiden, C. Struble, M. Hessner, R.J. Hutz, and M.J. Carvan, III. Molecular targets of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) within the zebrafish ovary: Insights into TCDD's reproductive toxicity. Reprod Toxicol 25:47-57, 2008.
100. Stelzer RV, Owen HA, Hutz RJ. Gold nanoparticles alter ultrastructure and estrogen accumulation of rat ovarian granulosa cells *in vitro*. Reprod Toxicol (in preparation).

#### LAY PRESS ARTICLES:

1. Lenon J. Unlocking the secrets of TCDD. Centerline, Winter/Spring 2007, publication of the Wisconsin National Primate Research Center.

#### ABSTRACTS:

1. Peluso, J.J., Hutz, R., and England-Charlesworth, C. In-vitro maturation of preovulatory oocytes collected from mature and aged proestrous rats. Ovarian workshop on "Cessation of ovarian function". Ann Arbor, Michigan, 1980.
2. Asakawa, T., Ghosh, M., DeMayo, F.J., Chan, P.J., Ridha, M.T., Hutz, R.J., Dooley, V.D., and Dukelow, W.R. Reproductive test systems involving in-vitro and xenogenous fertilization. Proc. Center for Environmental Toxicology. East Lansing, Michigan, 1981.
3. Chan, P.J., Hutz, R.J., and Dukelow, W.R. In-vitro maturation and fertilization effects on primate embryonic normality. Fertil. Steril. 37:298, 1982.
4. Ghosh, M., Hutz, R.J., and Dukelow, W.R. Effect of laparoscopy on estradiol, progesterone, LH and FSH levels in squirrel monkey serum. Proc. Endocrine Society, San Francisco, 1982.
5. Hutz, R.J. and Dukelow, W.R. Macromolecular synthesis and steroid uptake during early embryonic development in the hamster and squirrel monkey. Proc. Soc. Study Reprod., Madison, Wisconsin, 1982.
6. Dukelow, W.R., Yorozu, Y., Chan, P.J., and Hutz, R.J. Biochemical normality of squirrel monkey embryos produced by in-vitro fertilization. Annual Session of the Am. Assoc. Lab Animal Science, Washington, D.C., 1982.
7. DeMayo, R.J., Hutz, R.J., and Dukelow, W.R. Cryopreservation of squirrel monkey (Saimiri sciureus) oocytes. Proc. 9th Cong. Intl. Primatol. Soc., Atlanta, GA, 1982.
8. Hutz, R.J., Chan, P.J., and Dukelow, W.R. Primate in-vitro fertilization: Biochemical changes associated with embryonic development. Annual Meeting of the American Fertility Society, San Francisco, 1983.
9. Hutz, R.J. and Dukelow, W.R. "Spartan Speakers", a statewide cooperative training program for graduate and senior undergraduate students. Michigan Academy of Sciences, Ypsilanti,

Michigan, 1983.

10. Dooley, V.D., Hutz, R.J., Chan, P.J., DeMayo, F.J., and Dukelow, W.R. Biochemical evaluation of ovum and embryo viability. Annual Meeting of the American Association for the Advancement of Science, Detroit, Michigan, 1983.
11. Hutz, R.J., DeMayo, F.J., Chan, P.J., and Dukelow, W.R. Glucose utilization by early primate embryos fertilized in vitro. Proc. Soc. Study Reprod., Cleveland, Ohio, 1983.
12. Dierschke, D.J., Hutz, R.J., and Wolf, R.C. Effect of estradiol-17 $\beta$  (E<sub>2</sub>) on folliculogenesis in rhesus monkeys: Dose-duration relationships. Proc. 7th Int'l. Cong. of Endocrinology, Quebec City, Quebec, 1984.
13. Hutz, R.J., Dierschke, D.J., Krueger, G.S., and Wolf, R.C. Effect of season on folliculogenesis in rhesus monkeys. Proc. Soc. Study Reprod., Laramie, Wyoming, 1984.
14. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Markers of atresia in ovarian follicular components from rhesus monkeys treated with estrogen: A new model for atresia. Proc. Endocrine Society, Baltimore, Maryland, 1985.
15. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Sequelae of follicle aspiration in rhesus monkeys. Proc. Soc. Study Reprod., Montreal, Canada, 1985.
16. Morgan, P.M., Hutz, R.J., Kraus, E.M., and Cormie, J., Ultrasonographic assessments of ovarian folliculogenesis and ovulation in rhesus monkeys. Proc. Soc. Study Reprod., Montreal, Canada, 1985.
17. Dierschke, D.J., Hutz, R.J., and Wolf, R.C. Atretogenic action of estrogen in rhesus monkeys: Effects of repeated treatment. Proc. Laurentian Hormone Conf., Banff, Canada, 1985.
18. Dierschke, D.J., Hutz, R.J., and Wolf, R.C. Effect of exogenous gonadotropins upon estradiol-induced follicular atresia in rhesus monkeys. Proc. Endocrine Society, Anaheim, California, 1986.
19. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Role of estradiol in regulating ovarian folliculogenesis in rhesus monkeys. Primate Report 14:200, 1986 (IPS, Goettingen, FRG).
20. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Morphologic and endocrine aberrations in menstrual cycles of rhesus monkeys resulting from aspiration of ovarian follicular contents and treatment with estradiol-17 $\beta$  (E<sub>2</sub>). Primate Report 14:191, 1986.
21. Hutz, R.J., Dierschke, D.J., and Wolf, R.C. Induction of ovarian follicular atresia in rhesus monkeys by estradiol-17 $\beta$  injected directly into ovaries. Proc. Soc. Study Reprod., Ithaca, New York, 1986.
22. Hutz, R.J., Krueger, G.S., Meller, P.A., Sholl, S.A., and Dierschke, D.J. FSH-induced aromatase activity of hamster granulosa cells: Effect of estradiol-17 $\beta$  in vitro. 6th Biennial Ovary Workshop, Ithaca, New York, 1986.

23. Hutz, R.J., Krueger, G.S., Dierschke, D.J., and Wolf, R.C. Menstrual cycle characteristics are unaffected by the combined use of the anesthetics ketamine and xylazine in rhesus monkeys. Proc. Soc. Study Reprod., Urbana, IL, 1987.
24. Hutz, R.J., Krueger, G.S., Morgan, P.M., Dierschke, D.J., and Wolf, R.C. Atresia of the dominant follicle (DF) in rhesus monkeys is detected by 24 hours of estradiol (E2) treatment. Proc. Amer. Soc. Primatol., Madison, WI, 1987.
25. Bejvan, S.M. and Hutz, R.J. Effect of estradiol on follicular explants. Proc. Eighth Annual Minisymposium on Reprod. Biol., Chicago, IL, 1987.
26. Hutz, R.J., Morgan, P.M., Krueger, G.S., Durning, M. and Dierschke, D.J. Direct effect of estradiol-17 $\beta$  on progesterone (P) accumulation by ovarian granulosa cells (GC) from rhesus monkeys. Proc. Amer. Soc. Primatol., New Orleans, LA, 1988.
27. Hutz, R.J., Bejvan, S.M., Durning, M., and Dierschke, D.J. Changes in follicular populations, in serum estrogen (E) and progesterone (P), and in ovarian steroid accumulation in vitro during the guinea pig estrous cycle. A novel model for the study of atresia. Proc. Endocrine Soc., New Orleans, LA, 1988.
28. Wehrenberg, W.B., Bejvan, S.M., Kurhajec, T., and Hutz, R.J. The role of pregnant mare serum gonadotropin in the practical management of non-breeding female mink. Proc. Int'l Scientific Cong. Fur Anim. Prod., Toronto, CN and Wisconsin, USA, 1988.
29. Blong, S. and Hutz, R.J. The effect of estradiol-17 $\beta$  and  $\beta$ -lipotropic hormone on hamster follicle viability in vitro. Poster Session Sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI, 1988.
30. Hutz, R.J., Bejvan, S.M., Zachow, R.J., Kiedrowski, B., and Schaller, M. Alterations in morphology, viability, and steroid accumulation of hamster ovarian follicles treated with estradiol-17 $\beta$  in vitro. Proc. Endocrine Society, Seattle, WA, 1989.
31. Dierschke, D.J., Hutz, R.J., and Durning, M. Luteinized unruptured follicle (LUF) syndrome induced in rhesus monkeys by 17 $\beta$ -estradiol. Proc. Endocrine Soc., Seattle, WA, 1989.
32. Hutz, R.J., Bejvan, S.M., Fischer, C.L., Zachow, R.J., Quandt, L., and Kitzman, P. Disparate effects of estrogens on in-vitro steroidogenesis by ovarian granulosa cells from four orders of mammals including primates. Proc. Amer. Soc. Primatol., Mobile, AL, 1989.
33. Dierschke, D.J., Golos, T.G., Durning, M., and Hutz, R.J. Atresia of the dominant follicle is induced by estrogen on day 8 of the menstrual cycle in rhesus monkeys. Proc. Soc. Study Reprod., Columbia, MO, 1989.
34. Kitzman, P. and Hutz, R.J. Estrogen-induced ultrastructural changes in ovarian thecal cells. Proc. South. Wisc. Chap. Amer. Assoc. Lab. Anim. Sci., Madison, WI, 1989.
35. Quandt, L. and Hutz, R.J. Ovarian cyst formation induced by estradiol-17 $\beta$  in guinea pigs.

- Proc. South. Wisc. Chap. Amer. Assoc. Lab. Anim. Sci., Madison, WI, 1989.
36. Zachow, R.J., Fischer, C.L., and Hutz, R.J. Enzymatic dispersal of hamster and guinea pig ovaries for follicle isolation. Proc. South. Wisc. Chap. Amer. Assoc. Lab. Anim. Sci., Madison, WI, 1989.
  37. Mankowski, S., Kitzman, P., and Hutz, R.J. Determination of protein content in hamster ovarian follicles. Poster Session sponsored by UWM Graduate School and NSF Young Scholars Program, Milwaukee, WI, 1989.
  38. Sayles, L.C., Zachow, R.J., and Hutz, R.J. Analysis of ovarian follicle development in mink stimulated with hormones. Poster Session sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI, 1989.
  39. Hutz, R.J., Quandt, L., Kitzman, P., Zachow, R.J., and Fischer, C.L. Role of estrogen in ovarian follicle function in vivo and in vitro, prior to IVF. Proc. XIIIth Cong. Intl. Primatol. Soc., Kyoto, Japan, 1990.
  40. Hutz, R.J. and Quandt, L.M. Induction by estrogen of atretic follicles and cysts in rhesus monkeys and rodents, Proc. XIIIth Cong. Intl. Primatol. Soc., Kyoto, Japan, 1990.
  41. Hutz, R.J. and Dierschke, D.J. Gonadotropins do not overcome estradiol (E<sub>2</sub>)-induced follicular atresia in rhesus monkeys. Proc. XIIIth Cong. Intl. Primatol. Soc., Nagoya, Japan, 1990.
  42. Hutz, R.J., Golos, T.G., Durning, M., and Dierschke, D.J. Degenerative changes in the ovarian intrafollicular environment of monkeys treated with estradiol (E<sub>2</sub>) on day 8 of the menstrual cycle. Proc. XIIIth Cong. Intl. Primatol. Soc., Nagoya, Japan, 1990.
  43. Hutz, R.J. and Dierschke, D.J. Effect of estrogen treatment and/or aspiration on site of ovulation in rhesus monkeys. Proc. Amer. Soc. Primatol., Davis, CA, 1990.
  44. Kitzman, P.H., O'Shaughnessy, I.M., and Hutz, R.J. Effects of estradiol-17 $\beta$  on ultrastructure of androstenedione secretion by ovarian theca from hamsters. Proc. Endocrine Soc., Atlanta, GA, 1990.
  45. Zachow, R.J. and Hutz, R.J. Effect of age on oxygen consumption by hamster ovarian follicles. Proc. Soc. Study Reprod., Knoxville, TN, 1990.
  46. Hutz, R.J., Sayles, L.C., and Wehrenberg, W.B. Effect of gonadotropin regimen on induction of follicular growth in mink. Proc. Soc. Study Reprod., Knoxville, TN, 1990.
  47. Zachow, R.J. and Hutz, R.J. Aging exerts deleterious effects on viability of hamster follicles in long-term culture. Proc. UWM Sigma Xi Club, Milwaukee, WI, 1990.
  48. Dierschke, D.J., Hutz, R.J., Golos, T.G., and Wolf, R.C. Regulation of ovarian folliculogenesis and atresia in rhesus monkeys: Role of Estrogen. Symposium on "Psychoneuroendocrinology of growth and development in animals and man". Rotterdam, Holland, 1990.

49. Eckford, R. and Hutz, R.J. Histologic evaluation of follicle size and number in ovaries from several mammalian species. Poster Session sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI, 1990.
50. Fischer, C.L., Dierschke, D.J., and Hutz, R.J. Preliminary evidence for autoradiographic localization of 16 $\alpha$ -iodo-[I-125]-and 3H-estradiol-17 $\beta$  binding to macaque ovaries. Proc. Amer. Soc. Primatol., Veracruz, Mexico, 1991.
51. Hutz, R.J., Fischer, C.L., and Syed, N. Specific binding of radiolabeled estradiol-17 $\beta$  to ovaries from rhesus monkeys. Proc. Chicago - Southern Wisconsin Interbranch Meeting of the Amer. Assoc. Lab Anim. Sci., Chicago IL, 1991.
52. Hutz, R.J., Quandt, L.M., Kitzman, P.H., Zachow, R.J., and Fischer, C.L. Estrogen exerts effects on ultrastructure, viability, and steroidogenesis of rodent ovarian follicles in vivo and in vitro. A model for atresia. Ibid., 1991.
53. Champion, C.E. and Hutz, R.J. Effect of follicle-stimulating hormone administration on estradiol-induced cyclic irregularities in guinea pigs. Ibid., 1991.
54. Gieryn, D. and Hutz, R.J. Effect of streptozotocin-induced diabetes mellitus on ovarian function in the golden Syrian hamster (Mesocricetus auratus). Ibid., 1991.
55. Quandt, L.M. and Hutz, R.J. Effect of prolactin on viability and steroid secretion by explanted hamster follicles in vitro. Ibid., 1991.
56. Ramirez, S., Champion, C.E., Plankenhorn, C. and Hutz, R.J. Histologic analyses of cystic ovaries from guinea pigs treated with estrogen, with or without follicle-stimulating hormone superimposition. Poster session sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI, 1991.
57. Champion, C.E., and Hutz, R.J. Effect of follicle-stimulating hormone administration on estradiol-induced cyclic irregularities in guinea pigs. Anim. Care Prog. News, UWM, V. II (1), 1991.
58. Hutz, R.J. et al. Recent studies detailing the imaging of ovarian follicles and hormone receptors, and their use in the elucidation of the regulation of folliculogenesis and atresia. Proc. XIVth Cong. Int'l. Primatol. Soc., Strasbourg, France, 1992.
59. Hutz, R.J., Dierschke, D.J., Fischer, C.L., Krause, P. and Tomanek, M. Specific binding of radiolabeled estradiol-17 $\beta$  to ovarian receptors in rhesus monkey ovaries. Proc. Amer. Soc. Primatol., Toronto, Canada, 1992.
60. Hutz, R.J. Symposium: New Directions in Primate Reproduction. Proc. XIVth Cong. Int'l Primatol. Soc., Strasbourg, France, 1992.
61. Stagg, L.C., Hutz, R.J., and Wehrenberg, W.B. Efficacy of pregnant mare serum gonadotropin (PMSG) in anestrus mink. Soc. Study Reproduction, Raleigh, North Carolina, 1992.

62. Wehrenberg, W.B., Stagg, L.C., Voltz, D., Ellis, C., and Hutz, R.J. The Biological efficacy of pregnant mare serum gonadotropin to stimulate reproductive function in anestrus mink. Proc. Int'l. Scientific Cong. Fur Anim. Prod., Oslo, Norway, 1992.
63. Champion, C.E. and Hutz, R.J. Effect of follicle-stimulating hormone administration on estradiol-induced cyclic irregularities in guinea pigs. Proc. of the Wisconsin Academy of Sciences, Arts, and Letters, Eau Claire, WI, 1992.
64. Waraksa, J.A. and Hutz, R.J. Sterilization as a method of control of an urban white-tailed deer population. *Ibid.*, 1992.
65. Ramirez, S., Heimler, I., and Hutz, R.J. Normal ovarian follicular development in mink following breeding. Poster Session sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI 1992.
66. Wagner, N.G., Hutz, R.J., and Krause, P. Specific E<sub>2</sub>-binding receptors in the rhesus monkey ovary. Proc. Chicago - Southern Wisconsin Interbranch Meeting of the Amer. Assoc. Lab. Anim. Sci., Madison, WI, 1992.
67. Champion, C.E. and Hutz, R.J. Use of the guinea as a model for human polycystic ovarian syndrome. *Ibid.*, 1992.
68. Chaffin, C.L., Jaume, F., and Hutz, R.J. Slot-blot hybridization and northern analysis demonstrate the presence of the creatine kinase brain isoform message in the monkey ovary. Proc. Amer. Soc. Primatol., Sturbridge, MA, 1993.
69. Champion, C.E., Waraksa, J.A., and Hutz, R.J. Administration of follicle-stimulating hormone inhibits formation of estradiol-induced ovarian cysts and stimulates new follicle growth in guinea pigs. Proc. Soc. Study Reprod., Fort Collins, CO, 1993.
70. Holmes, S.S., Kunch, G., Heimler, I., Wehrenberg, W.B., and Hutz, R.J. Testosterone response to human chronic gonadotropin in rat. Poster Session sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI 1993.
71. Chaffin, C.L., Roman, B.L., Peterson, R.E., and Hutz, R.J. Prenatal exposure to low-dose TCDD alters levels of ovarian estrogen and dioxin-receptor mRNA in peri-pubertal rats. The Toxicologist 14:197, 1994 (abstract #730); Proc. Soc. Study. Toxicology, Dallas, TX.
72. Chaffin, C.L., Heimler, I., and Hutz, R.J. Demonstration of DNA-estrogen receptor and aryl hydrocarbon receptor interaction in stump-tail macaque (Macaca arctoides) ovaries. Proc. Amer. Soc. Primatol., Seattle, WA, 1994.
73. Waraksa, J.A. and Hutz, R.J. Neurotrophin-3 augments steroid secretion by hamster ovarian follicles in vitro. Proc. Soc. Study Reprod., Ann Arbor, MI, 1994.
74. Chaffin, C.L., Roman, B.L., Peterson, R.E., and Hutz, R.J. Prenatal exposure to low-dose TCDD augments levels of uterine estrogen receptor mRNA in peri-pubertal rats. Soc. Study Reproduction, Ann Arbor, MI, 1994.

75. Grabowski, L., Chaffin, C.L., and Hutz, R.J. Dioxins decrease the number of large, preovulatory follicles in the rat ovary. Proc. Wisc. Acad. Sciences, Arts and Letters, Waukesha, WI, 1994.
76. Heimler, I., Rawlins, R.G., Binor, Z., Aiman, J., Raff, H. and Hutz, R.J. Elevated angiotensin II is correlated with reduced follicular fluid progesterone and poor pregnancy outcome in women undergoing in-vitro fertilization procedures. Proc. Amer. Fertil. Soc., San Antonio, TX, 1994.
77. Hutz, R.J. and Chaffin, C.L. Molecular regulation of ovarian steroid receptors. Proc. XVth Cong. Int'l. Primatol. Soc., Bali, Indonesia, August 3-9, 1994.
78. Heimler, I., Chaffin, C.L., Rawlins, R.G., and Hutz, R.J. Apoptosis detection in cultured granulosa cells from women participating in an in-vitro fertilization program: effects of estrogen. Xth Ovarian Workshop, Ann Arbor, MI 1994.
79. Martorell, F., Trewin A., Chaffin, C., Heimler, I., and Hutz, R.J. Effect of TCDD on ovarian structure and function. Poster session sponsored by UWM Graduate School and NIH Minority High School Apprenticeship Program, Milwaukee, WI, 1994.
80. Chaffin, C.L., Brogan, R.S., Peterson, R.E., Wehrenberg, W.B., and Hutz, R.J. Molecular regulation of gonadotropin receptors by dioxin administered *in utero* and lactationally. 15th Annual Symposium on Reproductive Biology, Northwestern University, Evanston, IL, 1994.
81. Trewin, A. Chaffin, C.L., Martorell, F., Heimler, I., Hutz, R.J. Modulation of ovarian function by estrogen and estrogen-like compounds. 21st Annual Interbranch Meeting, American Assoc. Laboratory Animal Science, Milwaukee, WI, 1994.
82. Heimler, I., Hutz, R.J., Attaran, M., Mack, S.R., Chaffin, C.L., Hibner, M., Morrissey, W.G., and Rawlins, R.G. Ovarian follicular granulosa-lutein cells from IVF procedures demonstrate a very low incidence of apoptotic cell death post aspiration. Proc. 9th World Congress on In-vitro Fertilization and Alternate Assisted Reproduction, Vienna, Austria, 1995 (1<sup>st</sup> Place Poster Award).
83. Hibner, M., Heimler, I., Morrissey, W.A., Piekos, M., Hutz, R.J., Marianowski, L., Radwanska, E., Rawlins, R.G. A new method for the detection and localization of apoptosis in mouse blastocysts. *Ibid*, 1995.
84. Tomanek, M., Monniaux, D., Pisselet, C., Hutz, R.J. Estrogen receptor immunocytochemistry in ovary and granulosa cells *in vitro*. Int'l Symposium of the Czech Society for Histochemistry and Cytochemistry, Olomouc, Czech Republic, 1994.
85. Brogan, R., Chaffin, C.L., Peterson, R.E., Hutz, R.J., Wehrenberg, W.B. *In-utero* and lactational exposure to 2,3,7,8 -tetrachlorodibenzo-p-dioxin (TCDD) affects the growth axis in 21-day-old female rats. Proc. Society of Toxicology, Baltimore, MD, 1995.
86. Heimler, I., Chaffin, C.L., Rawlins, R.G., and Hutz, R.J. The presence of estrogen receptor message in human granulosa cells purified with anti-CD45 immunobeads. Proc. Endocrine

- Society, Washington D.C., 1995.
87. Chaffin, C.L. and Hutz, R.J. The liganded state of the aromatic hydrocarbon receptor (AHR) affects its DNA-binding characteristics *in vitro*. Ibid.
  88. Chaffin, C.L. and Hutz, R.J. Tissue-specific regulation of the aromatic hydrocarbon receptor by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) in peripubertal female rats. Ibid.
  89. Chaffin, C.L. and Hutz, R.J. Ovarian physiology and toxicology in non-human primates. Proc. IPS/ASP Joint Congress, Madison, WI, 1996.
  90. Hutz, R.J., Heimler, I., Trewin, A., Wimpee, B., Ogie, R., Lentini, S., and Chaffin, C.L. Localization of estrogen receptor to macaque ovary. Ibid.
  91. Chaffin, C.L., Heimler, I., and Hutz, R.J. Aromatic hydrocarbon receptor in the primate ovary. Ibid.
  92. Hutz RJ, Wimpee BA, Heimler I, Chaffin CL. Regulation of the aromatic hydrocarbon receptor by dioxin and  $\beta$ -naphthoflavone in rat and rainbow trout. Proc Int'l Congress Endocrinology, San Francisco, CA, 1996.
  93. Chaffin CL, Wimpee BAB, Heimler I, Hutz RJ The effects of beta-naphthoflavone (BNF) on estrogen receptor mRNA levels of rainbow trout (*Oncorhynchus mykiss*). Proc Amer Soc Limnol Oceanography, Milwaukee, 1996.
  94. Wimpee BAB, Chaffin CL, Lentini ST, Hutz RJ Characterization of the aromatic hydrocarbon receptor (AHR), aromatic hydrocarbon receptor transforming protein (ART), and vitellogenin genes in fathead minnow (*Pimephales promelas*). Ibid.
  95. Heimler I, Chaffin CL, Rawlins RG, Hutz RJ. Evidence for the presence of estrogen receptor and aromatic hydrocarbon receptor in macaque and human ovarian tissues. Proc IPS/ASP Joint Congress, Madison, WI, 1996.
  96. Trewin AL, Chaffin CL, Kokanovic OS, Heimler I, Hutz RJ. Modulation of folliculogenesis in Holtzman rats exposed to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) *in utero* and lactationally. Proc Soc Study Reprod, London, Ontario, Canada, 1996.
  97. Kokanovic OS, Trewin AL, Chaffin CL, Heimler I, Hutz RJ. Effects of *in-utero* and lactational exposure to 2,3,7,8 tetrachlorodibenzo-*p*-dioxin on folliculogenesis. Proc. Chicago-Southern Wisconsin Interbranch Meeting of the Amer. Assoc. of Lab. Anim. Science, Madison, WI, 1996.
  98. Trewin AL, Watanabe G, Taya K, Heimler I, Hutz RJ. Cyclic changes in serum FSH, LH, and inhibin during the guinea pig estrous cycle. Symposium on Reproductive Biology, Northwestern University, Evanston, IL, 1996.
  99. Heimler I, Trewin AL, Hutz RJ. Effects of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin on apoptosis in ovarian cell paradigms: *in-vivo* and *in-vitro* exposure. Ibid.

100. Heimler I, Binor Z, Rawlins RG, Hutz RJ. Effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on estrogen secretion and apoptosis in human luteinized granulosa cells. Conference on Physiological and Molecular Processes Leading to Fertilization in Mammals, Zichron Ya'acov, Israel, April, 1997.
101. Heimler I, Rawlins RG, Trewin AL, Hutz RJ. Effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on steroid secretion and apoptosis in human luteinized granulosa cells. Proc. Endocrine Society, Minneapolis, MN, 1997.
102. Heimler I, Trewin AL, Hutz RJ. Dioxin modulates sex steroid secretion by explanted pre-ovulatory rat follicles in a dose- and time-dependent manner. Proc. Soc. Study Reproduction, Portland OR, 1997.
103. Trewin AL, Heimler, Hutz RJ. Modulation of ovarian steroidogenesis by TCDD in vitro. *Ibid.*
104. Hutz RJ. Modulation of ovarian steroidogenesis by TCDD in vitro. NIEHS Symposium on "Estrogens in the Environment", Arlington, VA, July, 1997.
105. Shi FX, Ozawa M, Komura H, Watanabe G, Taya K, Trewin AL, Hutz RJ. Changes in the plasma concentrations of inhibin, estradiol and progesterone during the estrous cycle of the female guinea pig. *Advances in Comparative Endocrinology, Proc XIIIth Int'l Cong. Comp. Endocrinol.*, Yokohama, Japan, 1997.
106. Hutz RJ, Heimler I, Trewin AL, Chaffin CL, Dasmahapatra A, Conley LK, Wimpee BAB. Environmental pollutants and reproductive function in primates. Proc. 17th International Primatological Society Congress, Antananarivo, Madagascar, August 10-14, 1998.
107. Conley LK, Giustina A, Hutz RJ, Wehrenberg WB. Neuroendocrine control of growth hormone release in the female rat. *Proc. Endocrine Society*, New Orleans, LA, June 24-27, 1998.
108. Dasmahapatra AK, Trewin AL, Heimler I, Hutz RJ. Modulation of steroidogenesis by tetrachlorodibenzo-p-dioxin (TCDD) in rat granulosa cells. *Ibid.*, 1998.
109. Lambert MB, Borkovec TM, Hoffman RG, Hutz RJ, Strawn EY, Schulz LO. Estrogen replacement therapy is associated with lower incidence of Type 2 diabetes in post-menopausal women. Meeting of the American Diabetes Association, Chicago, IL, June 13-16, 1998.
110. Hutz RJ, Perturbation of ovarian function by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) at environmentally relevant concentrations. Gordon Research Conference, Plymouth, NH, July 11-17, 1998.
111. Hutz RJ. Perturbation of ovarian function by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) at environmentally relevant concentrations. NIEHS/EPA Investigators Meeting, Research Triangle Park, Oct. 7-9, 1998.
112. Dasmahapatra A, Wimpee BAB, Trewin AL, Hutz RJ. Regulation by TCDD of steroidogenic

- enzyme mRNAs in rat granulosa cells in vitro. Proc. Endocrine Society, San Diego, CA, June, 1999.
113. Dasmahapatra AK, Wimpee BAB, Dorschner M, Hutz RJ. Lack of effect of beta-naphthoflavone on induction of NRAMP genes in adult rainbow trout (*Oncorhynchus mykiss*). Proc. PRIMO 10, Williamsburg, VA, May 1999.
114. Shi FX, Watanabe G, Trewin AL, Hutz RJ, Tsonis CG, Taya K. Follicle selection in guinea pigs with active immunization against inhibin alpha-subunit in ovulation rate. Proc Soc Study Reproduction, Pullman, WA, July 1999.
115. Conley LK, Smith CA, Hutz RJ. The effect of GHRH infusion on the ovaries of older female rats. 4th Annual meeting of the Midwest Physiological Society, University of Wisconsin-Madison, June 7-8, 1999.
116. Shi FX, Watanabe G, Taya K, Hutz RJ. Ovarian cysts in guinea pigs during the estrous cycle. 4th Annual meeting of the Japanese Reproductive Endocrine Soc, Folia Endocrinol Japonica, Santa, Japan, 1999.
117. Dasmahapatra AK, Wimpee BAB, Trewin AL, Gentile P, Hutz RJ. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) activates estrogen metabolism in rat ovarian follicle and granulosa cells via the aromatic hydrocarbon receptor (AHR)-signaling pathway. Proc. Endocrine Soc., Toronto, ON, CA, June 2000.
118. Trewin AL, Dasmahapatra AK, Wimpee BAB, Hutz RJ. Steady-state levels of aromatic hydrocarbon receptor (AHR) and AHR-nuclear translocator (ARNT) mRNAs in the rat ovary are not estrous cycle-dependent. Proc Soc Study Reprod, Madison, WI, July, 2000.
119. Conley LK, Kaul EJ, Trewin AL, Hutz RJ. Hexarelin given alone for three days does not affect follicular development, Proc. Soc Study Reprod, Ottawa, ON, Canada, 2001.
120. Trewin AL, Woller M, Ho HM, Hutz RJ. The pulsatile release of gonadotropin-releasing hormone from female rat hypothalamic explants is not altered by 2,3,7,8-tetrachlorodibenzo-p-dioxin. Proc Soc Study Reprod, Ottawa, ON, Canada, July/August 2001.
121. Baldrige MG, Stahl RL, Gerstenberger SL, Tripoli V, Johnson A, Words C, Hutz RJ. Modulation of ovarian follicle maturation in Long-Evans rats exposed to polychlorinated biphenyls in utero and lactationally. Proc. Soc Study Reproduction, Baltimore, July 28-31, 2002 (platform presentation by Baldrige).
122. Trewin AL, Conley LK, Woller M, Hutz RJ. The gonadotropin-releasing hormone-induced release of follicle-stimulating hormone and luteinizing hormone from female rat pituitary explants is not altered by 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Ibid.* (poster).
123. Ho HM, Oshima K, Tompa D, Watanabe G, Taya K, Stawn EY, Rawlins RG, Hutz RJ. TCDD increases inhibin A production by human luteinized granulosa cells in vitro. *Ibid.* (poster).
124. Conley LK, Trewin AL, Woller M, Hutz RJ. Pulsatile release of gonadotropin-releasing

- hormone from aged female rat hypothalamic explants is not altered by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. Proc. Soc Study Reproduction, Cincinnati, OH, July, 2003.
125. Baldrige MG, Stahl RL, Gerstenberger SL, Tripoli V, Hutz RJ. Modulation of ovarian follicle maturation in Long-Evans rats exposed to ammonium perchlorate (AP) *in utero* and lactationally. Proc. Soc Study Reproduction, Cincinnati, OH, July, 2003.
126. King Heiden T, Wimpee B, Hutz RJ, Carvan MJ III. Chronic exposure to low doses of TCDD alters reproductive success of zebrafish. Proc. Soc. of Toxicology, Baltimore, MD, March 2004.
127. King Heiden T, Wimpee B, Hutz RJ, Carvan MJ III. Accumulation and maternal transfer of TCDD: Effects on reproductive success of female zebrafish. 6<sup>th</sup> Int'l. Conf. on Zebrafish Development and Genetics, Madison, WI, 2004.
128. King Heiden T, Wimpee B, Hutz RJ, Carvan MJ III. Accumulation and maternal transfer of TCDD: Effects on reproductive success of female zebrafish. Soc. Env. Toxicol. Chem (SETAC), 4<sup>th</sup> World Congress, Portland, OR, 2004 (abstract #PW187).
129. Baldrige MG, Hutz RJ. Autoradiographic localization of aromatic hydrocarbon receptor (AHR) in rhesus monkey ovary. Proc. Amer. Soc. Primatologists, Madison, WI, July 2004.
130. Hutz RJ, Baldrige MG, Stahl RL, Hempeck N, Young C. Autoradiographic localization of dioxin in rhesus ovary. Proc. Congress Int'l. Primatol. Soc., Torino, Italy, August, 2004.
131. King Heiden T, Rise ML, Hutz RJ, Hessner M, Carvan III MJ. TCDD alters gene expression in zebrafish ovary: Insight into the mechanisms by which exposure to TCDD impacts reproduction in fish. Soc of Toxicology, New Orleans, March 2005 (abstract #2238).
132. Conley LK, White G, Hutz RJ. 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin alters estradiol release from monkey ovarian fragments *in vitro*. Proc Soc Study Reprod, Quebec City, Quebec, Canada, July 2005.
133. King Heiden T, Rise ML, Hutz RJ, Carvan III MJ. Zebrafish as a model to study reproductive toxicity of TCDD. Midwest Regional Meeting of SETAC, Madison WI, April 5-6, 2005.
134. King Heiden T, Grzybowski M, Carvan MJ III, Hutz RJ. Using zebrafish to investigate TCDD-induced reproductive toxicity. Proc Soc Study Reprod 38<sup>th</sup> Annual Meeting, Quebec City, Quebec, Canada, July 2005 (abstract #232).
135. Thomas M, Conley L, Hutz R. Effects of Hexarelin treatment on endometrium and myometrium thickness in rat uterus. Poster, Carroll College, 2005.
136. White G, Conley LK, Hutz RJ. Establishment of a non-human primate ovarian culture system to study effects of dioxin exposure on sex steroid production. Poster, Carroll College, 2005.
137. King Heiden, T., Hessner, M., Rise, M.L., Hutz, R.J., and Carvan III, M.J. Using the zebrafish to investigate the molecular mechanisms by which TCDD impacts reproductive success.

Midwest SOT, Chicago, May, 2005.

138. Heiden TK, Grzybowski M, Carvan MJ III, Hutz RJ. Chronic dietary exposure to TCDD does not impact 11-ketotestosterone concentrations in male zebrafish. MSOT, Chicago, May, 2005.
139. King Heiden T, Hessner M, Hutz RJ, Carvan III MJ. 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD): Impacts of an endocrine disruptor on reproduction of fish. SETAC 26<sup>th</sup> Annual Meeting, Baltimore, MD, Nov. 13-17, 2005 (abstract #352).
140. Hutz RJ, Conley L, Baldrige M, King Heiden T. Dioxin binding and steroidogenic effects in monkey ovarian tissues. Proc 21st Congress of the International Primatol. Soc, Entebbe, Uganda, June 2006.
141. T. King Heiden, Struble CA, Hessner M, Hutz RJ, and Carvan MJ III. TCDD alters follicular development and steroidogenesis: Using the zebrafish to identify the molecular targets of TCDD's reproductive toxicity. Proc Soc of Toxicology 45<sup>th</sup> Annual Meeting, San Diego, CA, March, 2006 (abstract #394).
142. King Heiden T, Struble CA, Rise ML, Hessner M, Hutz RJ, Carvan MJ. Transcriptional changes in the zebrafish ovary provide insight into 2,3,7,8-TCDD's reproductive toxicity. 7<sup>th</sup> Int'l. Conference on Zebrafish Development and Genetics, Madison, WI, June 2006 (abstr. #368).
143. Veber-Stelzer R and Hutz RJ. Modulation of rat granulosa cell steroidogenesis and ultrastructure by nanogold particles. Dept. of Biological Sciences Research Symposium, UWM, May 2007.
144. Zhong L, Broomfield K, Conley LK, Shahnoor N, Hutz RJ. Histology of Rhesus monkey ovarian fragments treated with dioxin. The Bridges for the Future Program, UWM-MATC, July 2007 (presentation)
145. Estrada J, Hutz RJ, Carvan MJ III. Effects of ethanol on zebrafish development. McNair Program, UWM, July 2007 (presentation).
146. Broomfield K, Zhong L, Conley LK, Shahnoor N, Hutz RJ. Histology of Rhesus monkey ovarian fragments treated with dioxin. Annual Biomedical Research Conference for Minority Students (ABRCMS), Austin, Texas, November 8, 2007 (poster).
147. Shahnoor N, Conley LK, Broomfield K, Zhong L, Newburg, Kluever J, Hutz R. Culture of rhesus monkey ovarian fragments with 2,3,7,8-tetrachlorodibenzo-p-dioxin: effects on follicle number and size. Proc Int'l. Primatol. Soc. Congress, Edinburgh, UK, Aug 3-8, 2008.
148. Liu Q, Weber DN, Dellinger M, Dellinger J, Hutz RJ, Gerstenberger SL, Carvan MJ III. Maternal methylmercury from a wild-caught walleye diet induces developmental abnormalities in zebrafish. UWM Biological Sciences Research Symposium, April 24, 2008.

**PUBLICATIONS/ABSTRACTS/PRESENTATIONS DERIVED FROM P.I.'S**

**LABORATORY**

149. Kitzman, P.H. Angiotensin II alters ultrastructure of and steroid secretion by cultured ovarian follicles from hamsters. Proc. Soc. Study Reprod., Knoxville, TN, 1990.
150. Quandt, L. Induction by estradiol-17 $\beta$  of polycystic ovaries in the guinea pig. Proc. Soc. Study Reprod., Knoxville, TN, 1990.
151. Mankowski, S. The effects of estrogen on steroidogenic structures within ovarian follicles of hamsters. Proc. Junior Science and Engineering Symposium, Madison, WI, 1990 (First Runner-up); and Marquette University Science Fair, Milwaukee, WI (Second place).

**REFERENCES:**

Dr. W. Richard Dukelow  
Professor Emeritus, Depts. of Physiology and Animal Science and Director, Endocrine Research  
Center, Michigan State University  
High Meadows Enterprises  
325 Spring Creek Road  
Somers, MT 59932

Dr. John J. Peluso  
Co-Director, Reproductive Endocrine Laboratories  
Professor, Dept. of Obstetrics and Gynecology  
University of Connecticut Medical School.  
Farmington, CT 06032

Dr. Richard G. Rawlins  
Professor and Director, IVF Laboratories  
Rush-Presbyterian-St. Luke's Medical Center  
1653 W. Congress Parkway  
Chicago, IL 60612

Dr. Donald J. Dierschke  
Professor Emeritus, Departments of Meat and Animal Science; and Physiology  
Scientist, Wisconsin National Primate Research Center  
University of Wisconsin-Madison

d224