

Bibliography of Research on Endocrine Disruptors Conducted or Supported by the US Environmental Protection Agency's Office of Research and Development

Long Term Goal 1: Reduction in Uncertainty Regarding the Effects Exposure, Assessment, and Management of Endocrine Disruptors so That EPA Has a Sound Scientific Foundation For Environmental Decision-Making

- Abdelnabi MA, Bakst MR, Woods JE, Ottinger MA. 2000. Plasma 17-β estradiol levels and ovarian interstitial cell structure in embryonic Japanese quail. *Poultry Sci* 79:564-567 (NCER – R826134).
- Abdelnabi MA, Ottinger MA. 2003. Hypothalamic indolamines during embryonic development and effects of steroid exposure. *Gen Comp Endocrinol* 130(1):13-19 (NCER – R826134).
- Abdelnabi MA, Richards MP, Ottinger MA. 2001. Comparison of gonadal hormone levels in turkey embryos incubated in long-term shell less culture and *in ovo*. *Poultry Sci* 80:666-669.76 (NCER – R826134).
- Acheson CM, Zhou Q, Shan Y, Sayles GD, Kupferle MJ. 2003. Comparing the solid phase and saline extract microtox(r) assays for two PAH contaminated soils. *Environ Toxicol* 23(2):245-251 (NRMRL).
- Akingbemi BT, Ge R, Klinefelter GR, Zirkin BR, Hardy MP. 2004. Phthalate-induced Leydig cell hyperplasia is associated with multiple endocrine disturbances. *PNAS (Proceedings of the National Academy of Sciences)* 101(3):775-780 (NHEERL).
- Akingbemi BT, Sottas CM, Koulova AI, Klinefelter GR, Hardy MP. 2004. Inhibition of testicular steroidogenesis by the xenoestrogen bisphenol A is associated with reduced pituitary LH secretion and decreased steroidogenic enzyme gene expression in rat Leydig cells. *Endocrinology* 145(2):592-603 (NHEERL).
- Almekinder TL, Campbell J, Muralidhara S, Bruckner JV, Ferguson D, Mumtaz M, Harmon B, Hedge J, Crofton KM, Kim H, Fisher JW. 2006. Temporal- and dose- dependent effects of PCB 126 on hepatic enzymes and the hypothalamo-pituitary-thyroid axis in the rat. *Toxicol Sci*. Epub Ahead of Print, PMID:16339789 (NHEERL).
- Ankley GT, DeFoe DL, Kahl MD, Jensen KM, Makynen EA, Miracle A, Hartig P, Gray Jr LE, Cardon M, Wilson V. 2004. Evaluation of the model anti-androgen flutamide for assessing the mechanistic basis of responses to an androgen in the fathead minnow (*Pimephales promelas*). *Environ Sci Technol* 38:6322-6327 (NHEERL, NERL).
- Ankley GT, Jensen KM, Durhan EJ, Makynen EA, Butterworth BC, Kahl MD, Villeneuve DL, Linnum A, Gray Jr LE, Cardon M, Wilson VS. 2005. Effects of two fungicides with multiple modes of action on reproductive endocrine function in the fathead minnow (*Pimephales promelas*). *Toxicol Sci* 86:300-308 (NHEERL).
- Ankley GT, Jensen KM, Kahl MD, Makynen EA, Blake LS, Greene KJ, Johnson RD, Villeneuve

- DL. 2007. Ketoconazole in the fathead minnow (*pimephales promelas*): Reproductive toxicity and biological compensation. Envir Tox Chem 26:1214-1223 (NHEERL).
- Ankley GT, Kuehl DW, Kahl, MD, Jensen KM, Linnum A, Leino RL, Villeneuve DA. 2005. Reproductive and developmental toxicity and bioconcentration of perfluorooctanesulfonate (PFOS) in a partial-life cycle test with the fathead minnow (*Pimephales promelas*). Environ Toxicol Chem 24:2316-2324 (NHEERL).
- Anway M, Cupp AS, Uzumcu M, Skinner MK. 2005. Epigenetic transgenerational actions of endocrine disruptors and male fertility. Science 308:1466-1469 (NCER-R827405).
- Anway MD, Memon M, Uzumcu M, Skinner MK. 2006. Transgenerational effect of the endocrine disruptor vinclozolin on male spermatogenesis. Journal of Andrology 27(6):868-879 (NCER-R827405).
- Anway MD, Skinner MK. 2006. Epigenetic Transgenerational Actions of Endocrine Disruptors. Endocrinology 147(6 Suppl):S43-49 (NCER-R827405).
- Barth EF, Cicmanec JL, Goetz J, Hantush MM, Herrmann RF, McCauley PT, McClellan KA, Mills MA, Richardson TL, Rock S, Stoll S, Sayles G, Smith JE, Wright S. 2004. Risk management evaluation for concentrated animal feeding operations. US Environ Protect Agency, Washington, DC, EPA/600/R-04/042 (NRMRL).
- Barton HA, Deisinger PJ, English JC, Gearhart JM, Faber WD, Tyler TR, Banton MI, Teeguarden J, Andersen ME. 2000. Risk assessment-family approach for estimating reference concentrations/doses for series of related organic chemicals. Toxicol Sci 54(1):251-261 (NCER - R828610).
- Benninghoff AD, Thomas P. 2006. Gonadotropin regulation of testosterone production by primary cultured theca and granulosa cells of Atlantic croaker. Novel role of CaMKs and interactions between calcium- and adenylyl cyclase-dependent pathways. Gen Comp Endocrinology 147(3):276-287 (NCER -Graduate Fellowship 91573101, R827399).
- Bethea DM, Hale L, Carlson JK, Cortés E, Manire CA, Gelsleichter J. Latitudinal variation in the diet, daily ration of the bonnethead shark, *Sphyrna tiburo*, from the eastern Gulf of Mexico. in review. Marine Biology. (NCER-R826128).
- Biales AD, Bencic DC, Flick RW, Lazorchak JM, Lattier DL. 2007. Quantification and associated variability of induced vitellogenin gene transcripts in fathead minnow (*pimephales promelas*) by quantitative real-time polymerase chain reaction assay. Environ Toxicol and Chem 26(2):287-296 (NERL).
- Blystone C, Furr JR, Lambright CR, Ryan BC, Howdeshell K, Wilson VS, Leblanc GA, Gray Jr LE. 2007. Prochloraz inhibits testosterone production at dosage below those that affect androgen-dependent organ weights or the onset of puberty in the male Sprague Dawley rat. Toxicol Sci 97(1):65-74 (NHEERL).
- Blystone C, Lambright CR, Howdeshell K, Furr JR, Sternberg RM, Butterworth BC, Durhan EJ, Makynen EA, Ankley GT, Wilson VS, Leblanc GA, Gray Jr LE. 2007. Sensitivity of fetal rat testicular steroidogenesis to maternal prochloraz exposure and the underlying mechanism of inhibition. Toxicol Sci 97:512-519 (NHEERL).
- Bogdanffy MS, Sarangapani R, Plowchalk DR, Jarabek A, Andersen ME. 1999. A biologically based risk assessment for vinyl acetate-induced cancer and non-cancer inhalation toxicity. Toxicol Sci 51(1):19-35 (NCER - R828610).
- Brzezicki JM, Tessari JD, Andersen ME, Cranmer BK. 2003. Quantitative identification of atrazine and its chlorinated metabolites in plasma. J of Analyt Toxicol 27(8):569-73. (NCER -

- R828610).
- Burgin DE, Dilberto JJ, Derr-Yellin EC, Kannan N, Kodavanti PRS, Birnbaum LS. 2001. Differential effects of two lots of Aroclor 1254: hepatic enzyme induction, thyroid hormones, and oxidative stress. *Environ. Health Perspect.* 109:1163-1168 (NHEERL).
- Bushnell PJ, Moser VC, MacPhail RC, Oshiro WM, Derr-Yellin EC, Phillips PM, Kodavanti, PRS. 2002. Neurobehavioral assessments of rats exposed perinatally to a commercial mixture of polychlorinated biphenyls. *Toxicol Sci* 68:109-120 (NHEERL).
- Carr RL, Richardson JR, Guarisco JA, Kachroo A, Chambers JE, Couch TA, Durunna GC, Meek EC. 2002. Effects of PCB exposure on the toxic impact of organophosphorus insecticides. *Toxicol Sci* 67:311-321. (NCER – R825296).
- Celius T, Matthews JB, Villaboois SA, Giesy JP, Zacharewski TR. 2000. Quantification of rainbow trout (*oncorhynchus mykiss*) zona radiata and vitellogenin messenger ribonucleic acid (mRNA) levels using real-time polymerase chain reaction (PCR) after in vivo treatment with 17a-estradiol and a-zearalenol. *J Steroid Biochem Molecular Biol* 75(2-3):109-119 (NCER - R826301).
- Chang LW, Toth GP, Gordon DA, Graham DW, Meier JR, Knapp CW, Denoyelles FJ, Campbell S, Lattier DL.** 2005. Responses of molecular indicators of exposure in mesocosms: common carp (*cyprinus carpio*) exposed to the herbicides alachlor and atrazine. *Envir Tox Chem* 24(1):190-197 (NERL).
- Chapman DD, Prodöhl PA, Gelsleichter J, Manire CA, Shivji MS. 2004. Predominance of genetic monogamy by females in a hammerhead shark, *Sphyrna tiburo*: implications for shark conservation. *Molecular Ecology* 13(7):1965-1974 (NCER-R826128).
- Chen CY, Hamm JT, Hass JR, Albro P, Birnbaum LS. 2002. A mixture of polychlorinated dibenzo-p-dioxins (PCDDs), dibenzofurans (PCDFs), and non-ortho polychlorinated biphenyls (PCBs) changed the lipid content of pregnant long-evans rats. *Chemosphere* 46:1501-1504 (NHEERL).
- Chen CY, Hamm JT, Hass JR, Birnbaum LS. 2001. Disposition of polychlorinated and non-ortho polychlorinated biphenyls in pregnant long evans rats and the transfer to the offspring. *Toxicol Appl Pharmacol* 173:65-88 (NHEERL).
- Cooper RL, Laws SC, Das PC, Wong JS, Narotsky MG, Goldman JM, Stoker TE.** 2007. Atrazine and reproductive function: Mode and mechanism of action studies. *Birth Defects Res B Dev Reprod Toxicol* 0:98-112 (NHEERL).
- Cooper RL, Laws SC, Narotsky MG, Goldman JM, Stoker TE.** In press. Hormonal control of ovarian function following chlorotriazine exposure: Effect on reproductive function and mammary gland tumor development. In P. Hoyer, (ed) *Ovarian Toxicology* (NHEERL).
- Cooper RL, Stoker TE, Tyrey L, Goldman JM, McElroy WK. 2000. Atrazine disrupts hypothalamic control of pituitary-ovarian function. *Toxicol Sci* 53:297-307 (NHEERL).
- Cory-Slechta DA, Crofton KM, Sheets LP, Ross JF, Weiss B, Foran JA. 2001. Methods to identify and characterize developmental neurotoxicity for human health risk assessment I: Behavioral effects. *Environ Hlth Perspect* 109(Suppl. 1):79-92 (NHEERL).
- Craft ES, Ross DG, DeVito MJ, Crofton KM. 2002. Comparative responsiveness of hypothyroxinemia and hepatic enzyme induction in long-evans rats versus C57BL/6J mice exposed to TCDD-like and phenobarbital-like polychlorinated biphenyl congeners. *Toxicol Sci* 68:372-380 (NHEERL).
- Crain, DA, Eriksen M, Iguchi T, Jobling S, Laufer H, LeBlanc GA, Guillette LJ Jr.** 2007. An

- ecological assessment of bisphenol-A: evidence from comparative biology. *Reprod Toxicol*, (In Press, Accepted Manuscript) Available online 18 May 2007 (NCER – R832739).
- Crofton KM, Craft E, Hedge MJ, Genning C, Simmons JE, Carchman RA, Carter WH, Devito MJ. 2005 . Thyroid hormone disrupting chemicals: evidence for dose-dependent additivity and synergism. *Environ Health Perspect* 113(11):1549-1554. (NHEERL)
- Crofton KM, Ding D, Padich R, Taylor M, Henderson D. 2000. Hearing loss following developmental exposure to polychlorinated biphenyls: A cochlear site of action. *Hearing Research* 144:196-204 (NHEERL).
- Crofton KM, Gennings C, Simmons JE, Fisher KC, DeVito MJ. 2005. Short-term exposure to an environmental mixture of PHAHs: Dose-additive effects on serum thyroxine. *Environ. Hlth Perspect.* (doi:10.1289/ehp.8195. [Online 21 July 2005]) (NHEERL).
- Crofton KM, Hedge J, Paul K, Devito M. 2007. Short-Term in vivo exposure to the water contaminant triclosan: Evidence for disruption of thyroxine. *Environmental Toxicology and Pharmacology* 10.1016/J.Etap.2007.04.0 (NHEERL).
- Crofton KM, Kodavanti PRS, Derr-Yellin EC, Casey AC, Kehn LS. 2000. Thyroid hormones and ototoxicity in rats: Cross-fostering experiments demonstrate the influence of postnatal lactational exposure. *Toxicol Sci* 57:131-140 (NHEERL).
- Crofton KM, Rice DC. 1999. Perinatal exposure to PCB126: Thyroid hormones and ototoxicity. *Neurotoxicol Teratol* 21:299-301. (NHEERL).
- Crofton KM, Zoeller RT. 2005. MOA: neurotoxicity induced by thyroid hormone disruption during development hearing loss resulting from exposure to PHAHs. *Crit Rev Toxicol* 35:757–769. (NHEERL, NCER -832137)
- Crofton KM. 1997. Polyhalogenated aromatic hydrocarbons and child development. *Hlth Environ. Digest* 10:57-60. (NHEERL).
- Crofton KM. 2004. Developmental disruption of thyroid hormone: Correlations with hearing dysfunction in rats. *Risk Anal* 24:1665-1671 (NHEERL).
- Cummings AM, Kavlock RJ. 2004. Function of sexual glands and mechanism of sex differentiation. *Toxicol Sci* 29(3):167-178 (NHEERL).
- Cummings AM, Rhodes BE, Cooper RL. 2000. Effect of atrazine on implantation and early pregnancy in four strains of rats. *Toxicol Sci* 58:135-143 (NHEERL).
- Cummings AM, Stoker TE, Kavlock RJ. 2007. Gender based differences in endocrine and reproductive toxicity. *Environ Res* 104:96-107 (NHEERL, NCCT).
- Cupp AS, Skinner MK. 2000. Effect of the endocrine disruptor methoxychlor and its metabolite HPTE on morphology and growth of the developing testis. *Biol Reprod* 1(62):286 (NCER - 827405).
- Cupp AS, Skinner MK. 2001. Actions of the endocrine disruptor methoxychlor and its estrogenic metabolite on in vitro embryonic rat seminiferous cord formation and perinatal testis growth. *Reproductive Toxicol* 15(3):317-326 (NCER - 827405).
- Cupp AS, Tessarollo L, Skinner MK. 2002. Testis development phenotypes in neurotropin receptor trkA and trkC null mutations: role in seminiferous cord formation and germ cell survival. *Biol Reprod* 66(6):1838-1845 (NCER - 827405).
- Cupp AS, Uzumcu M, Phillips B, Dirks K, Skinner MK. 2003. Effect of Transient Embryonic *in Vivo* Exposure of the Endocrine Disruptor Methoxychlor on Embryonic and Postnatal Testis Development and Function. *J Androl* 24(5):736-745 (NCER - 827405).

- Cupp AS, Uzumcu M, Skinner MK. 2003. Chemotactic Role of Neurotropin 3 in the embryonic testis that facilitates morphological male sex determination. *Biol Reprod* 68(6):2033-2037 (NCER - 827405).
- Das BS, Lee LS, Rao PSC, Hultgren RP. 2004. Sorption and degradation of steroid hormones in soils during transport: column studies and model evaluation. *Environ Sci Technol* 38(5):1460-1470 (NRMRL).
- Das PC, McElroy WK, Cooper RL. 2000. Differential modulation of catecholamines by chlorotriazine herbicides in pheochromocytoma (PC12) cells *in vitro*. *Toxicol Sci* 56:324-331 (NHEERL).
- Das PC, McElroy WK, Cooper RL. 2001. Alteration of catecholamines in pheochromocytoma (PC12) cells *in vitro* by the metabolites of chlorotriazine herbicide. *Toxicol Sci* 59:127-137 (NHEERL).
- Das PC, McElroy WK, Cooper RL. 2003. Potential mechanisms responsible for chlorotriazine-induced changes in catecholamine metabolism in pheochromocytoma cells. *Life Sci* 73: 3123-3138 (NHEERL).
- Das SK, Taylor JA, Korach KS, Paria BC, Dey SK, & Lubahn DB. 1997. Estrogenic responses in estrogen receptor-alpha deficient mice reveal a novel estrogen-signaling pathway. *Proc Nat Acad Sci* 94:12786-12791 (NCER - R825295).
- Denny JS, Tapper MA, Schmieder PK, Hornung MW, Jensen KM, Ankley GT, Henry TR. 2005. Comparison of relative binding affinities of xenobiotics to fathead minnow and rainbow trout estrogen receptors. *Environ Toxicol Chem* 24:2948-2953 (NHEERL).
- Denslow ND, Knoebel I, Larkin P. 2005. Approaches in proteomics and genomics for eco-toxicology. In Biochemistry and Molecular Biology of Fishes - Environmental Toxicology. Vol. 6. (NERL)
- DeVito M, Biegel L, Brouwer B, Brown S, Brucker-Davis F, Cheek O, Christensen R, Colborn T, Cooke P, Crissman J, Crofton K, Doerge D, Gray E, Hauser P, Hurley P, Kohn M, Lazar J, McMaster S, McClain M, McConnell E, Meier C, Miller R, Tietge J, Tyl R. 1999. Screening methods for chemicals that alter thyroid hormone action, function and homeostasis workshop. *Environ Health Perspect* 107:407-415 (NHEERL).
- Eighmy TT, Spear JC, Case J, Marbet H, Casas J, Bothner W, Coulburn J, Tisa LS, Majko M, Sullivan ER, Gonsoulin ME, Mills M, Newman K, Kinner N. 2007. Microfracture surface geochemistry and adherent microbial population metabolism in TCE-contaminated competent bedrock (Submitted) (NRMRL).
- Esperanza M, Suidan MT, Nishimura F, Wang Z-M, Sorial GA, Zaffiro A, McCauley P, Brenner R, Sayles G. 2004. Determination of sex hormones and nonylphenol ethoxylates in the aqueous matrixes of two pilot-scale municipal wastewater treatment plants. *Environ Sci Technol* 38(11):3028-3035 (NRMRL).
- Euling S. 2005. A cross-species mode of action information assessment: a case study of bisphenol A. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-05/044A. (NCEA).
- Fenton SE, Hamm JT, Birnbaum LS, Youngblood GL. 2002. Persistent abnormalities in the rat mammary gland following gestational and lactational exposure to 2,3,7,8-tetrachlorodienzo-p-dioxin (TCDD). *Toxicol Sci* 7:63-74 (NHEERL).
- Fertuck K, Matthews JB, Zacharewski TR. 2001. Hydroxylated benzo[a]pyrene metabolites are responsible for *in vitro* estrogen receptor-mediated gene expression induced by benzo[a]pyrene, but do not elicit uterotrophic effects *in vivo*. *Toxicol Sci* 59(2): 231-240

- (NCER - R826301).
- Fertuck KC, Kumar S, Sikka HC, Matthews JB, Zacharewski T. 2001. Interaction of polyaromatic hydrocarbons (PAH)-related compounds with the alpha and beta isoforms of the estrogen receptor. *Toxicol Letters* 121(3):167-177 (NCER - R826301).
- Foran CM, Bennett ER, Benson WH. 2000. Developmental evaluation of a potential non-steroidal estrogen: triclosan. Marine Environ Res* 50(1-5):153-156 (NCER - R827098).
- Foran CM, Bennett ER, Benson WH. 2000. Exposure to environmentally relevant concentrations of different nonylphenol formulations in Japanese medaka. Marine Environ Res* 50(1-5):135-139 (NCER - R827098).
- Foran CM, Peterson BN, Benson WH. Effects of ethinylestradiol on reproduction and endocrine function in Japanese medaka (*Oryzias latipes*): I. Developmental exposure. *Toxicol Sci* (NCER - R827098).**
- Foran CM, Peterson BN, Benson WH. Effects of ethinylestradiol on reproduction and endocrine function in Japanese medaka (*Oryzias latipes*): II. Transgenerational exposure. *Toxicol Sci* (NCER - R827098).**
- Foran CM, Peterson BN, Benson WH. Influences of cadmium exposure on endocrine and reproductive function in Japanese medaka (*Oryzias latipes*): transgenerational and developmental effects. *Comp Biochem Physiol C-Pharmacol Toxicol Endocrinology* (NCER - R827098).
- Fort DJ, S J Degitz, JE Tietge, LW Touart. 2007. The hypothalamic-pituitary-thyroid (HPT) axis in frogs and its role in frog development and reproduction. *Crit Rev Toxicol* 37:117-161 (NHEERL).
- Geller AM, Oshiro W, Haykal-Coates N, Kodavanti PRS, Bushnell PJ. 2001. Gender-dependent behavioral and sensory effects of a commercial mixture of polychlorinated biphenyls (Aroclor 1254) in rats. *Toxicol Sci* 59:268-277 (NHEERL).
- Gelsleichter J, Manire CA, Szabo NJ, Cortés E, Carlson J, Lombardi-Carlson L. 2005. Organochlorine concentrations in bonnethead sharks (*Sphyrna tiburo*) from four Florida estuaries. *Arch Environ Contam Toxicol* 48:474-483 (NCER-R826128).
- Gennings C, Carter WH, Carchman RA, Devito MJ, Simmons JE, Crofton KM. 2006. The impact of exposure to a mixture of eighteen PHAHs on thyroid function: Estimation of an interaction threshold. *J Agr Biol Environ Stat* 12:96-111 (NHEERL).
- Ghosh D, Taylor JA, Green JA, Lubahn DB. 1999. Methoxychlor stimulates estrogen-responsive mRNAs in mouse uterus through a non-estrogen receptor-a and non-estrogen receptor-b mechanism. *Endocrinology* 140(8):3526-3533 (NCER - R825295).
- Gilbert ME, Lasley SM. 2002. Developmental exposure to lead or polychlorinated biphenyls impairs synaptic transmission and plasticity in the rodent CNS. *Environ Toxicol Pharmacol* 12:105-117 (NHEERL).
- Gilbert ME, Liang D. 1998. Alterations in synaptic transmission and plasticity in hippocampus by a complex PCB mixture, Aroclor 1254. *Neurotoxicol Teratol* 20:383-389 (NHEERL).
- Gilbert ME, Mack CM. 1999. Field potential recordings in dentate gyrus of urethane anesthetized rats: Stability of baseline. *Hippocampus* 9:277-287 (NHEERL).
- Gilbert ME, Mundy W, Crofton KM. 2000 Spatial learning and long-term potentiation in the dentate gyrus of the hippocampus in animals developmentally exposed to A1254. *Toxicol Sci* 57:102-111 (NHEERL).
- Gilbert ME, Paczkowski C. 2003. Propylthiouracil (PTU)-induced hypothyroidism in the

- developing rat impairs synaptic transmission and plasticity in the dentate gyrus of the adult hippocampus. *Develop Brain Res* 145:19-29 (NHEERL).
- Gilbert ME, Sui L. 2006. Dose-dependent reductions in spatial learning and synaptic function in the dentate gyrus of adult rats following developmental thyroid hormone insufficiency. *Brain Res* 1069:10-22 (NHEERL).
- Gilbert ME, Sui M, Walker MJ, Anderson WI, Thomas S, Smoller SN, Schon JP, Phani S, Goodman JH. 2007. Thyroid hormone insufficiency during brain development reduces parvalbumin immunoreactivity and inhibitory function in the hippocampus. *J Endocrinol* 148(1):92-102 (NHEERL).
- Gilbert ME. 2000. *In vitro* systems as simulations of *in vivo* conditions: Cognition and synaptic plasticity. *Annals of New York Academy of Science* 919:119-132 (NHEERL).
- Gilbert ME. 2003. Excitatory and inhibitory synaptic transmission the hippocampus of animals developmentally exposed to A1254. *Neurotoxicology* 23:851-860 (NHEERL).
- Gilbert ME. 2004. Propylthiouracil-induced hypothyroidism and synaptic transmission in area CA1 of hippocampus. *Dev Brain Res* 148:11-18 (NHEERL).
- Gilbert, ME, Crofton KM. 1999. Developmental exposure to a complex PCB mixture (Aroclor 1254) produces a persistent impairment in long-term potentiation in the dentate gyrus *in vivo*. *Brain Res* 850:87-95 (NHEERL).
- Gilleran JP, Putz O, DeJong M, DeJong S, Birch L, Pu YB, Huang L, Prins GS. 2003. The role of prolactin in the prostatic inflammatory response to neonatal estrogen. *Endocrinology* 144:2046-2054 (NCER – R826299).
- Goldey ES, Kehn LS, Lau C, Rhenberg GL, Crofton KM. 1995. Developmental exposure to polychlorinated biphenyls (*arochlor* 1254) reduces circulating thyroid hormone concentrations and causes hearing deficits in rats. *Toxicol Appl Pharmacol* 135:77-88 (NHEERL).
- Goldey ES, Kehn LS, Lau C, Rhenberg GL, Crofton KM. 1998. Thyroxine replacement therapy attenuates hypothyroxenemia, hearing loss, and motor deficits following developmental exposure to Aroclor 1254 in rats. *Toxicol Sci* 45:1-12 (NHEERL).
- Goldey ES, Kehn LS, Rhenberg GL, Crofton KM. 1995. Effects of developmental hypothyroidism on auditory and motor function in the rat. *Toxicol Appl Pharmacol* 135:67-76 (NHEERL).
- Goldman JM, Cooper RL, Murr AE. 2007. Reproductive functions and hypothalamic catecholamines in response to the soil fumigant metam sodium: Adaptations to extended exposures. *Neurotoxicol Teratol* 29:368-376 (NHEERL).
- Goldman JM, Laws SC, Cooper RL. In Press. Assessment of Toxicant-induced alterations in ovarian steroidogenesis: A methodological overview. in P. Hoyer, *Ovarian Toxicology* (NHEERL).
- Golub MS, Germann SL, Hogrefe CE. 2004. Endocrine disruption and cognitive function in adolescent female rhesus monkeys. *Neurotoxicol Teratol* 26(6):799-809 (NCER – R827404)
- Golub MS, Hogrefe CE, Germann SL, Jerome CP. 2004. Endocrine disruption in adolescence: immunologic, hematologic and bone effects in monkeys. *Toxicol Sci* 82(2):598-607 (NCER-R827404).
- Golub MS, Hogrefe CE, Germann SL, Lasley BL, Natarajan K, Tarantal AF. 2003 Effects of exogenous estrogenic agents on pubertal growth and reproductive system maturation in female rhesus monkeys. *Toxicol Sci*. 74(1):103-13 (NCER – R827404).
- Golub MS. 2002. Cognitive testing (delayed non-match to sample) during oral treatment of female

- adolescent monkeys with the estrogenic pesticide methoxychlor. *Neurotoxicol Teratol* 24(1):87-92 (NCER – R827404)
- Goodman JH, Gilbert ME. 2007. Modest thyroid hormone insufficiency during development induces a cellular malformation in the corpus callosum: A model of cortical dysplasia. *Endocrinology* 148:2593-2597 (NHEERL).
- Gorr TA, Rider CV, Wang HY, Olmstead AW, LeBlanc GA. 2006. A candidate juvenoid hormone receptor cis-element in the *Daphnia magna* hb2 hemoglobin gene promoter. *Molec Cell Endocrin* 247:91-102 (NCER- R831300, R832739).
- Gray Jr LE, Laskey JW, Ostby J. 2006. Chronic di(n)butyl phthalate (DBP) exposure reduces fertility and alters ovarian function during pregnancy in female Long Evans hooded rats. *Toxicol Sci* 93(1):189-195 (NHEERL).
- Gray Jr LE, Ostby J, Furr JR, Price M, Veeramachaneni DNR, Parks L. 2000. Perinatal exposure to the phthalates DEHP, BBP, and DINP, but not DEP, DMP, or DOTP, alters sexual differentiation of the male rat. *Toxicol Sci* 58:350-365 (NHEERL).
- Gray Jr LE, Ostby J, Furr JR, Wolf CJ, Lambright CR, Parks L, Veeramachaneni DNR, Wilson VS, Price M., Hotchkiss A, Orlando E, Guillette L. 2001. Effects of environmental antiandrogens on reproductive development in experimental animals. *Human Repro Update* 7:248-264 (NHEERL).
- Gray Jr LE, Ostby J, Wolf CR, Lambright CR, Wilson VS, Noriega NC 2004. Toxicant-induced hypospadias in the male rat. *Adv Exp Med Biol* 545:217-241 (NHEERL).
- Gray Jr LE, Wilson VS, Noriega NC, Lambright CR, Furr JR, Stoker TE, Laws SC, Goldman J, Cooper RL, Foster PM. 2004. Use of the laboratory rat as a model in endocrine disruptor screening and testing. *ILAR J* 45(4):423-37 (NHEERL).
- Gray Jr LE, Wilson VS, Stoker TE, Lambright CR, Furr JR, Noriega NC, Howdeshell K, Ankley GT, Guillette L. 2006. Adverse effects of environmental antiandrogens and androgens on reproductive development in mammals. *Int J Androl* 29:96-104 (NHEERL).
- Gray Jr LE, Wilson VS, Stoker TE, Lambright CR, Furr JR, Noriega NC, Howdeshell K, Ankley GT, Guillette L. 2006. Adverse effects of environmental antiandrogens and androgens on reproductive development in mammals. *Int J Andrology* 29:96-104 (NHEERL).
- Gray Jr LE, Wilson VS, Stoker TE, Lambright CR, Furr JR, Noriega NC, Hartig PC, Cardon MC, Rosen MB, Ankley GT, Hotchkiss AK, Orlando EF, Guillette Jr LJ, Kelce WR. 2004. Environmental androgens and antiandrogens: An expanding chemical universe. In Endocrine Disruptors. 2nd edition. CRC Press (NHEERL).
- Gutjahr-Gobell RE, Black DE, Mills LJ, Pruell RJ, Taplin BK, Jayaraman S. 1999. Feeding the mummichog (*fundulus heteroclitus*) a diet spiked with non-ortho- and mono-ortho-substituted polychlorinated biphenyls: accumulation and effects. *Envir Tox Chem*. 18(4):699-707. 600/J-99/163, AED Contribution No. 1862 (NHEERL).
- Gutjahr-Gobell, RE, Huber M, Borsay Horowitz DJ, Zarogian GE, Mills LJ. 2002. A temperate reef fish, *tautogolabrus adspersus*, (Eelbaum) as a potential model species for laboratory studies evaluating reproductive effects of chemical exposure. *Envir Tox Chem*. 21(2):380-389. Contribution No. AED-00-044 (NHEERL).
- Hamm JT, Chen CY, Birnbaum LS. 2003. A mixture of dioxins, furans, and non-ortho PCBs based upon consensus toxic equivalency factors produces dioxin-like reproductive effects. *Toxicol Sci* 74:182-191 (NHEERL).
- Hamm JT, Sparrow BR, Wolf D, Birnbaum LS. 2000. in utero and lactational exposure to 2,3,7,8-

- tetrachlorodibenzo-p-dioxin alters postnatal development of seminal vesicle epithelium. Toxicol Sci 54:424-430 (NHEERL).
- Hecker M, Murphy MB, Coady KK, Villeneuve DL, Jones PD, Carr JA, Solomon KR, Smith EE, Van Der Kraak G, Gross T, Du Preez L, Kendall RJ, Giesy JP. 2006. Terminology of gonadal anomalies in fish and amphibians resulting from chemical exposures. Rev Environ Contam Toxicol 187:103-131 (NHEERL).
- Herr DW, Goldey ES, Crofton KM. 1996. Developmental exposure to Arochlor 1254 produces low frequency alterations in adult rat brainstem auditory evoked responses (BAERs). Fundam Appl Toxicol 33:120-128 (NHEERL).
- Herr DW, Graff JE, Derr-Yellin EC, Crofton KM, Kodavanti PR. 2001. Flash-, somatosensory-, and peripheral nerve-evoked potentials in rats perinatally exposed to Aroclor 1254. Neurotoxicol Teratol 23:591-601 (NHEERL).
- Higuchi TT, Palmer JS, Gray LE Jr, Veeramachaneni DNR. 2003. Effects of dibutyl phthalate in male rabbits following in utero, adolescent, or post-pubertal exposure. Toxicol Sci 72(2):301-313 (NHEERL; NCER - R829429).
- Hornung MW, Jensen KM, Korte JJ, Kahl MD, Durhan EJ, Denny JS, Henry TR, Ankley GT. 2004. Mechanistic basis for estrogenic effects in fathead minnow (*Pimephales promelas*) following exposure to the androgen methyltestosterone: conversion of methyltestosterone to methylestradiol. Aquat Toxicol 66:15-23 (NHEERL).
- Hotchkiss AK, Lambright CR, Ostby JS, Parks-Salducci LG, Vandenberg JG, Gray Jr LE. 2007. Prenatal androgen exposure permanently masculinizes anogenital distance, nipple development and reproductive tract morphology in female Sprague-Dawley rats. Toxicol Sci 96(2):335-345 (NHEERL).
- Hotchkiss AK, Parks LG, Ostby JS, Lambright CR, Furr JR, Vandenberg JJ, Gray Jr LE. 2004. A mixture of the "antiandrogens" linuron and butyl benzyl phthalate alters sexual differentiation of the male rat in a cumulative fashion. Biol Reprod 71:1852-1861 (NHEERL).
- Howdeshell K, Furr JR, Lambright JR, Wilson VS, Gray Jr LE. 2007. Cumulative effects of di(n-butyl) phthalate and diethylhexyl phthalate on male rat reproductive tract development: Altered fetal hormones and genes. Biol Reprod (Forthcoming).
- Huang YW, Matthews JB, Fertuck KC, Zacharewski T. 2005. Use of *Xenopus laevis* as a model for investigating *in vitro* and *in vivo* endocrine disruption in amphibians. Environ Tox Chem 24(8):2002-2009. (NCER-R826301).
- Huggett DB, Benson WH, Chipman K, Cook JC, Gray Jr LE, Kinter LB, Meyerhoff RD, Trudeau VL. 2005. Role of mammalian data in determining pharmaceutical responses in aquatic species. In Richard T. Williams (Ed.), Science for Assessing the Impacts of Human Pharmaceuticals on Aquatic Ecosystems. Society of Environmental Toxicological Chemistry, Pensacola, FL, 149-181 (NHEERL).
- Hughes C, Foster W, Chan S, Platt L, Thompson S, Hubbard S, DuBose A, Tyrey L. 2001. Extrapolation of rodent studies on amniotic fluid contaminants to human populations. Human and Ecological Risk Assessment 7(5):979-1002 (NCER- R825299).
- Hurst CH, Abbott BA, DeVito MJ, Birnbaum LS. 1998. 2,3,7,8-tetrachlorodibenzo-p-dioxin in pregnant long evans rats: disposition to maternal and embryo/fetal tissues. Toxicol Sci 45:129-136 (NHEERL).
- Jensen KM, Kahl MD, Makynen EA, Korte JJ, Leino RL, Butterworth BC, Ankley GT. 2004. Characterization of responses to the anti-androgen flutamide in a short-term reproduction

- assay with the fathead minnow. *Aquat Toxicol* 70:99-110 (NHEERL).
- Kavlock, RJ, Cummings AM. 2005. Mode of action: Inhibition of androgen receptor function-- vinclozolin-induced malformations in reproductive development. *Crit Rev Toxicol* 35:721-726 (NHEERL, NCCT).
- Kavlock, RJ, Cummings AM. 2005. Mode of action: Reduction of testosterone availability-- molinate-induced inhibition of spermatogenesis. *Crit Rev Toxicol* 35:685-690 (NHEERL, NCCT).
- Knoebl I, Blum JL, Hemmer MJ, Denslow ND. 2006. Temporal gene induction patterns in sheepshead minnows exposed to 17*i*-estradiol. *J Exp Zool Part A Ecol Genet Physiol* (Forthcoming) (NERL, NHEERL, NCER – R831848).
- Knoebl I, Blume JL, Hemmer MJ, Denslow ND. 2007. Temporal gene induction patterns in sheepshead minnows exposed to 17*B*-estradiol. *J Exp Zool* 305A(9):707-719. (NERL, NHEERL, NCER – R831848).
- Knoebl I, Hemmer MJ, Denslow ND. 2004. Induction of choriogenins and vitellogenins in E2 and nonylphenol exposed male sheepshead minnows (*Cyprinodon variegatus*). *Marine Environ Res.* 58:547-551 (NERL, NHEERL, NCER – R831848)
- Korte, JJ, Mylchreest E, Ankley GT. 2004. Comparative evaluation of ELISAs for detecting vitellogenin in the fathead minnow (*Pimephales promelas*). *Comp Biochem Physiol* 138C:533-536 (NHEERL).
- Lambright C, Ostby J, Bobseine K, Wilson V, Hotchkiss AK, Mann PC, Gray JR LE. 2000. Cellular and molecular mechanisms of action of linuron: an antiandrogenic herbicide that produces reproductive malformations in male rats. *Toxicol Sci* 56:389-399 (NHEERL).
- Lasky RE, Widholm JJ, Crofton KM, Schantz SL. 2002. Perinatal exposure to Aroclor 1254 impairs distortion product otoacoustic emissions (DPOAEs) in rats. *Toxicol Sci* 68(2):458-64 (NHEERL).
- Lattier DL, Gordon DA, Burks DJ, Toth GP. 2001. Vitellogenin gene transcription: a relative quantitative exposure indicator of environmental estrogens. *Envir Tox Chem* 20(9):1979-1985 (NERL).
- Lattier DL, Reddy TV, Gordon DA, Lazorchak JM, Smith ME, Williams DE, Wiechman BE, Flick R, Miracle AL, Toth GP. 2002. 17*A*-ethynodiol-induced vitellogenin gene transcription quantified in livers of adult males, larvae, and gills of fathead minnow (*pimephales promelas*). *Envir Tox Chem* 21(11):2385-2393 (NERL).
- Laws SC, Carey SA, Ferrell JM, Bodman GJ, Cooper RL. 2000. Estrogenic activity of octylphenol, nonylphenol, bisphenol A and methoxychlor in rats. *Toxicol Sci* 54:154-1667 (NHEERL).
- Laws SC, Ferrell JM, Stoker TE, Cooper RL. 2003. Pubertal development in female Wistar rats following exposure to propazine and atrazine metabolites, diamino-s-chlorotriazine and hydroxyatrazine. *Toxicol Sci* 76:190-200 (NHEERL).
- Laws SC, Yavanhxay S, Cooper RL, Eldridge J. 2006. Nature of the binding interaction of selected chemicals with rat estrogen receptors. *Toxicol Sci* 94(1):46-56 (NHEERL).
- Lee SK, Owens GA, Veeramachaneni DNR. 2005. Exposure to low concentrations of di-n-butyl phthalate during embryogenesis reduces the survivability and impairs development of *Xenopus laevis* frogs. *J Toxicol Environ Health Part A* 68:763-772 (NCER - R829429).

- Lee SK, Veeramachaneni DNR 2005. Sub-chronic exposure to low concentrations of di-n-butyl phthalate disrupts spermatogenesis in *Xenopus laevis* frogs. *Toxicol Sci* 84:394-407. (NCER - R829429).
- Leino RL, Jensen KM, Ankley GT. 2005. Gonadal histology and characteristic histopathology associated with endocrine disruption in the fathead minnow (*Pimephales promelas*). *Environ Toxicol Pharmacol* 19:85-98 (NHEERL).
- Levine E, Cupp AS, Skinner MK. 2000. Role of neurotropins in rat embryonic testis morphogenesis (cord formation). *Biol Reprod* 62(1):132-142. (NCER - R827405).
- Levine E, Cupp AS, Skinner MK. 2000. Role of transforming growth factor- and the epidermal growth factor receptor in embryonic rat testis development. *Biol Reprod* 62(3):477-490 (NCER - R827405).
- Lin F, Wu J, Abdelnabi MA, Ottinger MA, Guisti MM. 2004. Effects of dose and glycosylation on the transfer of genistein into the eggs of Japanese quail (*Coturnix japonica*). *J of Agricult Chem* 52(8):2397-2403 (NCER – R826134).
- Manire CA, Rasmussen LEL, Gelsleichter J, Hess DL. 2004. Maternal serum and yolk hormone concentration in the bonnethead shark, *Sphyrna tiburo*. *Gen Comp Endocrinol* 136:241-247 (NCER-R826128).
- Matthews JB, Zacharewski TR. 2000. Differential binding affinities of polychlorinated biphenyls (PCBs), pentachloro-4-biphenyls (HO-PCBs) and aroclors with recombinant human, reptilian (*Anolis carolinensis*), and rainbow trout (*Onchorhynchus mykiss*) estrogen receptors using a semi-high throughput competitive receptor binding assay. *Toxicol Sci* 53(2):326-339 (NCER - R826301).
- Matthews JB, Celius T, Halgren R, Zacharewski TR. 2000. Differential estrogen receptor binding of estrogenic substances: a comparison across species. *J Steroid Biochem Molecular Biol* 74(4):223-234 (NCER - R826301).
- Matthews JB, Clemons JH, Zacharewski T. 2001. Reciprocal mutagenesis between human α (L349, M528) and rainbow trout (M317, I496) estrogen receptor residues demonstrates their importance in ligand binding and gene expression at different temperatures. *Molecular Cellular Endocrinol* 183(1-2):167-177 (NCER - R826301).
- Matthews JB, Fertuck K, Celius T, Huang YW, Zacharewski T. 2002. Ability of structurally diverse natural products and synthetic chemicals to induce gene expression mediated by estrogen receptors from various species. *J Steroid Biochem & Molecular Biol* 82:181-194 (NCER - R826301).
- Matthews JB, Twomey K, Zacharewski TR. 2001. In vitro and in vivo interactions of bisphenol A and bisphenol A glucuronide, with estrogen receptors alpha and beta. *Chem Res in Toxicol* 14(2), 149-157 (NCER - R826301).
- Matthews JB, Zacharewski TR. 2000. Differential binding affinities of PCBs, HO-PCBs, and aroclors with recombinant human, rainbow trout (*Onchorhynkiss mykiss*), and green anole (*Anolis carolinensis*) estrogen receptors, using a semi-high throughput competitive binding assay. *Toxicol Sci* 53(2):326-339 (NCER - R826301).
- McComb DM, Gelsleichter J, Manire CA, Brinn R, Brown CL. 2005. Comparative thyroid hormone concentration in maternal serum and yolk of the bonnethead shark (*Sphyrna tiburo*) from two sites along the coast of Florida. *Gen Comp Endocrinol* 144(2):167-173 (NCER- R826128).
- McGary S, Henry PFP, Ottinger MA. 2001. Impact of vinclozolin exposure on Japanese quail

- reproduction. Environ Toxicol Chem 20(11):2487-2493 (NCER – R826134).
- McKenney Jr CL. 2005. Influence of insect juvenile hormone agonists on metamorphosis and reproduction in estuarine crustaceans. Integrative and comparative biology. Integr Comp Biol 45(1):97-105 (NHEERL).
- McLanahan ED, Campbell Jr JL, Ferguson DC, Harmon B, Hedge JM, Crofton KM, Mattie DR, Braverman L, Keys DA, Mumtaz M, Fisher JW. 2007. Low-dose effects of ammonium perchlorate on the hypothalamic-pituitary-thyroid axis of adult male rats pretreated with PCB126. Toxicol Sci 97:308-17 (NHEERL).
- McMullin TS, Brzezick JM, Cranmer BK, Tessari JD, Andersen ME. 2003. Pharmacokinetic modeling of disposition and time-course studies with [C-14]atrazine. J Toxicol Environ Hlth-Part A 66(10):941-964 (NCER - R828610).
- Meacham CS, Freudenrich TM, Anderson WL, Sui L, Lyons-Darden T, Barone S, Gilbert ME, Mundy WR, and Shafer T. Accumulation of methylmercury or polychlorinated biphenyls in *in vitro* models of rat neuronal tissue. Toxicol Appl Pharmacol (Forthcoming) (NHEERL).**
- Metcalfe TL, Metcalfe CD, Kiparissis Y, Niimi AJ, Foran CM, Benson WH. 1999. Effects of o,p'-DDT on gonadal development and endocrine responses in Japanese medaka (*Oryzias latipes*). Environ Toxicol Chem 19:1893-1900 (NCER - R827098).
- Millam JR, Craig-Veit CB, Quaglino AE, Erichsen AL, Famula TR, Fry DM. 2001. Post-hatch oral estrogen exposure impairs adult reproductive performance of Zebra Finch in a sex-specific manner. Hormones and Behavior 40(4):542-549 (NCER - R825294).
- Mills LJ, Gutjahr-Gobell RE, Haebler RJ, Borsay Horowitz DJ, Jayaraman S, Pruell RJ, McKinney RA, Gardner GR, Zaroogian GE. 2001. Effects of estrogenic (o,p'-DDT; octylphenol) and anti-androgenic (p,p'-DDE) chemicals on indicators of endocrine status in juvenile male summer flounder (*Paralichthys dentatus*). Aquat Toxicol 52:157-176 Contribution No. AED-99-2074 (NHEERL).
- Miracle AL, Ankley GT, Lattier D. 2006. Expression of two vitellogenin genes (VG1 and VG3) in fathead minnow (*Pimephales promelas*) liver in response to exposure to steroid estrogens and androgens. Ecotoxicol Environ Saf 63:337-342 (NHEERL, NERL).
- Miracle AL, Ankley GT. 2005. Ecotoxicogenomics: Linkages between exposure and effects in assessing risks of aquatic contaminants to fish. Reprod Toxicol 19:321-326 (NERL, NHEERL).
- Miracle AL, Toth GP, Lattier DL. 2003. The path from molecular indicators of exposure to describing dynamic biological systems in an aquatic organism: microarrays and the fathead minnow. Ecotoxicology 12(6):457-462 (NERL).
- Mu X, Rider CV, Hwang G, Hoy H, LeBlanc GA. 2005. Covert signal disruption: anti-ecdysteroidal activity of bisphenol A involves cross-talk between signaling pathways. Environ Toxicol Chem 24:146-152 (NCER – R831300, R832739).*
- Mundy WR, Freudenrich TM, Crofton KM, DeVito MJ. 2004. Accumulation of PBDE-47 in primary cultures of rat neocortical cells. Toxicol Sci 82:164-169 (NHEERL).
- Narotsky MG, Best DS, Guidici DL, Cooper RL. 2001. Strain comparisons of atrazine-induced pregnancy loss in the rat. Repro Toxicol 15:61-69 (NHEERL).
- Noriega NC, Ostby JS, Lambright CR, Wilson VS, Gray Jr LE. 2005. Late gestational exposure to the fungicide prochloraz delays the onset of parturition and causes reproductive malformations in male rat offspring. Biology of Reprod 72(6):1324-1335 (NHEERL).

- Oberdorster E, McClellan-Green P. 2000. The neuropeptide APGWamide induces imposex induction in the mud snail, *Ilyanassa obsoleta*. *Peptides* 21(9):1323-1330 (NCER - 827401).
- Oberdorster E, McClellan-Green P. 2002. Mechanisms of imposex induction in the mud snail, *Ilyanassa obsoleta*: TBT as a neurotoxin and aromatase inhibitor. *Marine Environ Res* 54(3-5), SI:715-718 (NCER - 827401).
- Ottinger MA Rattner B. 1999. Husbandry and care of quail. *Poultry and Avian Biology Reviews* 10(2):117-120 (NCER – R826134).
- Ottinger MA, Abdnabi MA, Henry PFP, McGary S, Thompson N, Wu J. 2001. Neuroendocrine and behavioral implications of endocrine disrupting chemicals in quail. *Hormones Behavior* 40:234-247 (NCER – R826134).
- Ottinger MA, Abdnabi MA, Quinn M, Golden N, Wu J, Thompson N. 2002. Reproductive consequences of EDCs in birds: What do laboratory effects mean in field species? *Neurotoxicol Teratol.* 24(1):17-29 (NCER – R826134).
- Ottinger MA, Kubakawa K, Kikuchi M, Thompson N, Ishii S. 2002. Effects of exogenous testosterone on testicular LH and FSH receptors during aging. *Exper Biol Medicine* 227(9):830-836 (NCER – R826134).
- Ottinger MA, Pitts S, Abdnabi MA. 2001. Steroid hormones during embryonic development in Japanese quail: Plasma, gonadal, and adrenal levels. *Poultry Sci* 80:795-799 (NCER – R826134).
- Ottinger MA, vom Saal FS. 2002. Impact of environmental endocrine disruptors on sexual differentiation in birds and mammals. In *Hormones and Behavior in Higher Vertebrates*. Editors: Pfaff DW, Arnold AP, Fahrbach SE, Etgen AM, Rubin RT (NCER – R826134).
- Ottinger MA, Wu JM, Hazelton JL, Abdnabi MA, Thompson Jr N, Quinn ML, Donoghue D, Schenck F, Ruscio M, Beavers J, et al. 2005. Assessing the consequences of the pesticide methoxychlor: neuroendocrine and behavioral measures as indicators of biological impact of an estrogenic environmental chemical. *Brain Res Bull.* 65(3):199-209 (NCER- R8261340, R2877801).
- Ottinger MA. 2001. Quail and other short-lived birds. *Experim Gerontology* 36(4-6):859-868 (NCER – R826134).
- Owens CV, Lambright CR, Cardon MC, Gray Jr LE, Gullett BK, Wilson VS. 2006. Detection of androgenic activity in emissions from diesel fuel and biomass combustion. *Envir Tox Chem* 25(8):2123-2131 (NRMRL, NHEERL).
- Patterson ML, Porter TE, McNabb FMA, Ottinger MA. 2003. Cloning of a partial cDNA for Japanese quail thyroid stimulating hormone beta (TSHE) and effects of methimazole on the thyroid and reproductive axes. *Poultry Sci* 82:381-387 (NCER – R826134; also supported by NCER - 827400).
- Pinnella KD, Tessari JD, Crammer BK, Cosma GN, Veeramachaneni DNR. 2001. Gas chromatographic determination of catecholestrogens following isolation by solid-phase extraction. J Chromatog B* 758(2):145-152 (NCER - R828610).
- Pollack SJ, Ottinger MA, Sullivan CV, Woods III LC. 2003. The effects of the soy isoflavone genistein on the reproductive development of striped bass. *N American J Aquaculture* 65:226-234 (NCER – R826134).
- Prins GS, Birch L, Habermann H, Chang WC, Tebeau C, Putz O, Bieberich C. 2001. Influence of neonatal estrogens on rat prostate development. *Reprod Fertil Dev* 13:241-252 (NCER – R826299).

- Putz O, Prins GS. 2002. Prostate gland development and estrogenic imprinting. In: Steroid Hormones and Cell Cycle Regulation. Ed: K Burnstein, Kluwer Academic Publishers, Norwell, MA, 73-89 (NCER – R826299).
- Putz O, Schwartz CB, Kim S, LeBlanc GA, Cooper RL, Prins GS. 2001. Neonatal low- and high dose exposure to estradiol benzoate in the male rat: I. Effects on the prostate gland. *Biol Repro* 65: 1496-1505 (NHEERL; NCER – R826299).
- Putz, O, Schwartz, CB, LeBlanc, GA, Cooper, RL, Prins, GS. 2001. Neonatal low- and high-dose exposure to estradiol benzoate in the male rat: II. Effects on male puberty and the reproductive tract. *Biol Repro* 65:1506-1517 (NHEERL; NCER – R826299).
- Quaglino AE, Craig-Veit CB, Viant MR, Erichsen AL, Fry DM, Millam JR. 2002. Oral estrogen masculinizes female Zebra Finch song system. *Hormones and Behavior* 41(2):236-241 (NCER - R825294).
- Quinn Jr MJ, Ottinger MA, McNabb FMA, French Jr JB. The roles of estrogen and thyroxine on the production of plumage in the American kestrel (*Falco sparverius*). Submitted (NCER – R826134).**
- Quinn M, French JB, McNabb AF, Ottinger MA. 2002. The effects of polychlorinated biphenyls (Aroclor 1242) on thyroxine, estradiol, molt, and plumage characteristics in the American Kestrel (*Falco sparverius*). *Envir Tox Chem* 21(7):1417-1422 (NCER – R826134; also supported by NCER 827400).
- Raimondo S, McKenney Jr CL. 2005. Projected effects of thiobencarb exposure on the populations of the mysid, *Americanysis bahia*, and extinction probability in a dose-decay exposure system. *Envir Tox Chem* 24:564-572 (NHEERL).
- Rawe J, Hodge V, Acheson CM, Lutes C, Liles D. 2006. In situ and ex situ biodegradation technologies for remediation of contaminated sites. US Environ Protect Agency, Washington, DC, EPA/625/R-06/015 (NRMRL).
- Rider CV, Gorr TA, Olmstead AW, Wasilak BA, LeBlanc GA. 2005. Stress Signaling: Co-regulation of hemoglobin and male sex determination through a terpenoid signaling pathway in a crustacean. J Exp Biol* 208:15-23 (NCER – R831300, R832739).
- Roegge CS, Medora K, Seo BW, Crofton KM, Schantz SL. 2000. A comparison of maternal steady-state and gestation-lactation only exposure to Aroclor 1254 on radial-arm maze performance. *Toxicol Sci* 57:121-130 (NHEERL).
- Rogers J M. 2006. The Barker Hypothesis: Implications for future directions in toxicology research. *Curr Opin Endocrinol Diabetes* 13(6):536-540 (NHEERL).
- Rong-Lin W, Bencic D, Biales A, Lattier D, Kostich M, Villeneuve D, Ankley GT, Lazorchak J, Toth G. 2007 (March). Dna microarray-based ecotoxicological biomarker discovery in a small fish model species. Submitted: *Envir Tox Chem* (NERL, NHEERL).
- Rong-Lin W, Bencic D, Biales A, Lattier D, Kostich M, Villeneuve D, Ankley GT, Lazorchak J, Toth G. 2007 (March). Dna microarray application in ecotoxicology: experimental design, microarray scanning, and factors impacting transcriptional profiles in a small fish species. Submitted: *Envir Tox Chem* (NERL, NHEERL).
- Rooney AA, Matulka RA, Luebke RW. 2003. Developmental atrazine exposure suppresses immune function in male, but not female Sprague-Dawley rats. *Toxicol Sci* (NHEERL).**
- Rosen G, O'Bryant E, Matthews JB, Zacharewski T, Wade J. 2002. Distribution of androgen receptor messenger ribonucleic acid (mRNA) expression and immunoreactivity in the brain of the green anole lizard. *J Neuroendocrinol* 14(1):19-28 (NCER - R826301).

- Rosen MB, Wilson VS Schmid JE, Gray Jr LE. 2005. Gene expression analysis in the ventral prostate of rats exposed to vinclozolin and procyomidone. *Reprod Toxicol* 19(3):367-379 (NHEERL).
- Ryan BC, Crofton KM, Vandenberg J, Gray Jr LE. Developmental exposure to low doses of ethinyl estradiol, but not bisphenol A, alters reproductive morphology and defeminizes lordosis behavior and saccharin preference in the Long Evans rat. Biol Reprod. (Forthcoming) (NHEERL).**
- Sayles GD. 2002. Environmental engineering and endocrine disrupting chemicals. *J Environ Engineering* 128:1-2 (NRMRL).
- Schoff PK, Ankley GT. 2004. Effects of methoprene, its metabolites, and breakdown products on retinoid activated pathways in transfected cell lines. *Environ Toxicol Chem* 23:1305-1310 (NHEERL).
- Seed J, Carney E, Corley R, Crofton KM, DeSesso JM, Foster PMD, Kavlock R, Kimmel G, Klaunig J, Meek ME, Preston RJ, Slikker Jr W, Tabacova S, Williams GW, Wiltse J, Zoeller RT, Fenner-Crisp P, Patton DE. 2005. Overview: Using mode of action and life stage information to evaluate the human relevance of animal toxicity data. *Crit Rev Toxicol* 35:663-672 (NHEERL).
- Setzer Jr RW, Kimmel C. 2003. Use of NOAEL, benchmark dose, and other models for human risk assessment of hormonally active substances. *Pure Appl Chem* 75:2151-2158.
- Sharlin DS, Bansal R, Zoeller RT. Site-specific compensatory responses to developmental hypothyroidism in the rat hippocampus. Endocrinology. In Review (NCER-R832137).**
- Sharlin DS, Bansal R, Zoeller RT. 2006. Polychlorinated biphenyls exert selective effects on cellular composition of white matter in a manner inconsistent with thyroid hormone insufficiency. *Endocrinol*. 147(2):846-858 (NCER- FP916424, R832137).
- Sidhu S, Gullett BK, Striebich R, Klosterman J, Contreras J, Devito MJ. 2005. Endocrine disrupting chemical emissions from combustion sources: Diesel particulate emissions and domestic waste open burn emissions. *Atmosphere Environ* 39(5):801-811 (NHEERL, NRMRL)
- Sierra-Santoyo A, Barton HA, Hughes MF. 2004. Liquid chromatography determination of the anti-androgen vinclozolin and its metabolites in rat serum. *J Chromat B* 809:105-110 (NHEERL, NCCT).
- Silva MJ, Kato K, Gray Jr LE, Wolf CJ, Needham LL, Calafat AM. 2005. Urinary metabolites of di-n-octyl phthalate in rats. *Toxicology*. 210:123-133 (NHEERL).
- Silva MJ, Kato K, Wolf CJ, Samandar E, Silva SS, Gray Jr LE, Needham LL, Calafat AM. 2006. Urinary biomarkers of di-isobutyl phthalate in rats. *Toxicology* 223:101-112 (NHEERL).
- Skinner MK, Anway MD. 2006. Seminiferous cord formation and germ cell programming: epigenetic transgenerational actions of endocrine disruptors. *Annals New York Academy of Science* 1061:18-32 (NCER-R827405).
- Skinner MK. 2006 Epigenetic transgenerational actions of endocrine disruptors through the male germ-line. *Male Mediated Development Toxicity*. Royal Society of Chemistry 1061:18-32 (NCER-R827405).
- Stoker TE, Cooper RL, Lambright CS, Furr JR, Wilson VS, Gray Jr LE. 2005. *In vivo and in vitro* anti-androgenic effects of DE-71, a commercial polybrominated diphenyl ether (PBDE) Mixture. *Toxicol Appl Pharmacol* 207(1):78-88 (NHEERL).
- Stoker TE, Goldman JM, Cooper RL. 2001. Delayed ovulation and pregnancy outcome: Effect of

- environmental toxicants on the neuroendocrine control of the ovary. Environ Toxicol Pharmacol 9:117-129 (NHEERL).
- Stoker TE, Guidici DL, Laws SC, Cooper RL. 2002. The effects of atrazine metabolites on puberty and thyroid function in the male Wistar rat: An evaluation in the male pubertal protocol. Toxicol Sci 67:198-206. (NHEERL).
- Stoker TE, Jeffay SC, Zucker RM, Cooper RL, Perreault SD. 2003. Abnormal fertilization is responsible for reduced fecundity following thiram-induced ovulatory delay in the rat. Biol Repro 68:2142-2149. (NHEERL)
- Stoker TE, Laws SC, Crofton KM, Hedge JM, Ferrell JM, Cooper RL. 2004. Assessment of DE-71, a commercial polybrominated diphenyl ether (PBDE) mixture, in the EDSP male and female pubertal protocols. Toxicol Sci 78(1):144-155 (NHEERL)
- Stoker TE, Perreault SD, Bremser K, Marshall RS, Murr AS, Cooper RL. 2005. Acute exposure to molinate alters neuroendocrine control of ovulation in the rat. Toxicol Sci 84(1):38-48 (NHEERL).
- Sui L, Anderson WA, Gilbert, ME. 2005. Impairment in short-term but enhanced long-term synaptic potentiation and erk activation in adult hippocampal area ca1 following developmental thyroid hormone insufficiency. Toxicol Sci 85:647-656 (NHEERL).
- Sui L, Gilbert ME. 2003. Pre- and postnatal propylthiouracil (PTU)-induced hypothyroidism impairs synaptic transmission and plasticity in area CA1 of the neonatal rat hippocampus. Endocrinology 144:4195-4203 (NHEERL).
- Tamura H, Maness SC, Reischmann K, Dorman DC, Gray LE, Gaido KW. 2001. Androgen receptor antagonism by the organophosphate insecticide fenitrothion. Toxicol Sci 60:56-62 (NHEERL).
- Taylor MM, Crofton KM, MacPhail RC. 2002. Schedule-controlled behavior in rats exposed perinatally to the PCB mixture Aroclor 1254. Neurotoxicol Teratol 24: 511-518 (NHEERL).
- Tietge JE, Holcombe GW, Flynn KM, Kosian PA, Korte JJ, Anderson LE, Wolf D, Degitz SJ. 2005. Metamorphic inhibition of *xenopus laevis* by sodium perchlorate: Effects on development and thyroid histology. Envir Tox Chem. 24:926-933 (NHEERL).
- Uzumcu M, Dirks K, Skinner M.K. 2002. Inhibition of platelet-derived growth factor (PDGF) actions in the embryonic testis influences normal cord development and morphology. Biol Reprod 66:7445-753 (NCER-R827405).
- Uzumcu M, Suzuki H, Skinner MK. 2004. Effect of the Anti-Androgenic Endocrine Disruptor Vinclozolin on Embryonic Testis Cord Formation and Postnatal Testis Development and Function. Reprod Toxicol 18(6):765-774 (NCER – 827405).
- Uzumcu M, Westfall S, Dirks K, Skinner MK. 2002. Embryonic Testis Cord formation and mesonephric cell migration requires the phosphotidylinositol 3-kinase (PI3K) Signaling Pathway. Biol Reprod 67(6):1927-1935 (NCER - 827405).
- VandeWoude S, Palmer JS, Veeramachaneni DNR. 1999. Surgical induction of cryptorchidism in rabbit pups. Lab Anim Sci 49:110-113 130 (NCER - R826131).
- Vann SL, Sparling DW, Ottinger MA. 2000. The effects of white phosphorus on Mallard reproduction. Environ Toxicol Chem 19:2525-2531 (NCER – R826134).
- Veeramachaneni DNR. 2000. Deteriorating trends in male reproduction: Idiopathic or environmental? Anim Reprod Sci 60-61:121-130 (NCER - R826131).

- Veeramachaneni DNR. 2006. Germ cell atypia in undescended testes hinges on the aetiology of cryptorchidism but not the abdominal location per se. *Int J Androl* 29:235-240 (NCER-R826131).
- Veeramachaneni DNR, Palmer JS, Amann RP, Kane CM, Higuchi TT, Pau K-YF. 2006. Disruption of sexual function, FSH secretion, and spermiogenesis in rabbits following developmental exposure to vinclozolin, a fungicide. *Reproduction* 131:805-816 (NCER-R826131).
- Veeramachaneni DNR, Palmer JS, Tessari JD, Awoniyi CA. 2001. Cellular manifestations of undescended testes depend upon the etiology of cryptorchidism but not the abdominal location per se. *J Androl* 22(Supp. 168):P5/6-059 (NCER - R826131).
- Veeramachaneni DNR, VandeWoude S. 1999. Interstitial cell tumour and germ cell tumour with carcinoma in situ in rabbit testes. *Int J Androl* 22:97-101 (NCER - R826131).
- Viant MR, Millam JR, Delany ME, Fry DM. 2000. Regulation of brain-derived neurotrophic factor messenger RNA levels in avian hypothalamic slice cultures. *Neuroscience* 99(2):373-380 (NCER - R825294).
- Villeneuve DL, Blake LS, Brodin JD, Greene KJ, Knoebl I, Miracle AL, Martinovic D, Ankley GT. 2007. Transcription of key genes regulating gonadal steroidogenesis in control and ketoconazole- or vinclozolin-exposed fathead minnows. *Toxicol Sci.* 2007 May 21 (NHEERL, NHEERL).**
- Villeneuve DL, Knoebl I, Kahl MD, Jensen KM, Hammermeister DE, Greene KJ, Blake LS, Ankley GT. 2006. Relationship between brain and ovary aromatase activity and isoform-specific aromatase mRNA expression in the fathead minnow (*pimephales promelas*). *Aquat Toxicol* 76:353-368 (NHEERL, NERL).
- Villeneuve DL, Miracle AL, Jensen KM, Degitz SJ, Kahl MD, Korte JJ, Greene KJ, Blake LS, Linnum AL, Ankley GT. 2007. Development of quantitative real-time PCR assays for fathead minnow (*pimephales promelas*) gonadotropin beta subunit mRNAs to support endocrine disruptor research. *Comp Biochem Physiol Part C* 145:171-183 (NHEERL, NERL).
- Villeneuve DL, Murphy MB, Kahl MD, Jensen KM, Butterworth BC, Makynen EA, Durhan EJ, Linnum AL, Leino RL, Curtis LR, Giesy J, Ankley GT. 2006. Evaluation of the methoxytriazine herbicide prometon, using a short-term fathead minnow reproduction test and a suite of in vitro bioassays. *Envir Tox Chem* 25:2143-2153 (NHEERL).
- Walker CC, Salinas KA, Harris PS, Wilkinson SS, Watts JD, Hemmer MJ. 2007. A proteomic (seldi-tof-ms) approach to estrogenic activity screening. *Toxicol Sci* 95(1):74-81 (NHEERL).
- Wang HY, Olmstead AW, Li H, LeBlanc GA. 2005. *The screening of chemicals for juvenoid-related endocrine activity using the water flea Daphnia magna. Aquatic Toxicol* 74:193-204 (NCER – R831300, R832739).
- Wang X, Bartolucci-Page E, Fenton SE, You L. 2006. Altered mammary gland development in male rats exposed to genistein and methoxychlor. *Toxicol Sci* 91(1):93-103. (NHEERL)**
- Welman AD, Sepaniak MJ. 2006. Development of magnetically-assisted transport evanescent field fluoroimmunoassays. *Analyt Chem* 78:4450-4456 (NCER – R832742).**
- Widholm JJ, Clarkson GB, Strupp BS, Crofton KM, SeegalRF, Schantz SL. 2001. Spatial reversal learning in Aroclor 1254-exposed rats: Sex-specific deficits in associative ability and inhibitory control. *Toxicol Appl Pharmacol* 174:188-98 (NHEERL).
- Widholm J, Villareal S, Seegal R, Schantz S. 2002. Impaired spatial alternation following developmental exposure to PCBs and methylmercury in rats. *Toxicology* 66(1S):LB128**

- (NCER - R829390C001).
- Wilson VS, Cardon MC, Thornton J, Korte JJ, Ankley GT, Welch J, Gray Jr LE, Hartig PC. 2004. Cloning, expression and characterization of the androgen receptor and isolation of the estrogen receptor alpha from the fathead minnow (*Pimephales promelas*). Environ Sci Technol 38:6314-6321 (NHEERL).
- Wolf CJ, Hotchkiss A, Ostby JS, LeBlanc GA, Gray Jr LE. 2002. Effects of prenatal testosterone propionate on the sexual development of male and female rats: a dose-response study. Toxicol Sci 65:71-86 (NHEERL).
- Wolf CJ, LeBlanc GA, Ostby JS, Gray Jr LE. 2000. Characterization of the period of sensitivity of fetal male sexual development to vinclozolin. Toxicol Sci 55:152-61 (NHEERL).
- Zacharewski T, Fertuck K, Fielden M, Matthews J. 2002. Mechanistically-based assays for the identification and characterization of endocrine disruptors. In: Comprehensive Toxicology XIV: Cellular and Molecular Toxicology. Vanden Heuvel JP, Greenlee WF, Perdew GH, Mattes W, eds. Elsevier Science B.V., Amsterdam, the Netherlands 559-582 (NCER - R826301).
- Zaroogian GE, Gardner G, Borsay Horowitz DJ, Gutjahr-Gobell RE, Haebler RJ, Mills LJ. 2001. Effect of 17beta-estradiol, o,p'-DDT, octylphenol and p,p'-DDE on gonadal development and liver and kidney pathology in juvenile male summer flounder (*Paralichthys dentatus*). Aquat Toxicol 54(1-2):101-112. Contribution No. AED-99-2168 (NHEERL).
- Zhou T, Ross DG, DeVito MJ, Crofton KM. 2001. Effects of short-term in vivo exposures to polybrominated diphenyl ethers on thyroid hormones and hepatic enzymatic activities in weanling rats. Toxicol Sci 61:76-82 (NHEERL).
- Zhou T, Taylor MM, DeVito MJ, Crofton KM. 2002. Developmental exposure to brominated diphenyl ethers results in thyroid hormone disruption. Toxicol Sci 66:105-116 (NHEERL).
- Zoeller RT, Crofton KM. 2000. Thyroid hormone action in fetal brain development and potential for disruption by environmental chemicals. Neurotoxicology 21:935-945 (NHEERL).
- Zoeller RT, Crofton KM. 2005. MOA:Developmental thyroid hormone insufficiency neurological abnormalities resulting from exposure to propylthiouracil. Crit Rev Toxicol 35:771-781 (NCER - R832137; NHEERL).

Long Term Goal 2: Determination of the Extent of the Impact of Endocrine Disruptors on Humans, Wildlife, and the Environment to Better Inform the Federal and Scientific Communities

- Angus RA, McNatt H, Howell WM, Peoples SD. 2001. Gonopodium development in normal and 11-ketotestosterone-treated mosquitofish (*Gambusia affinis*): a quantitative study using computer image analysis. Gen Comp Endocrinol 123:222-234 (NCER - R826130).
- Angus RA, Stanko JP, Jenkins RL, Watson RD. 2005. Effects of 17 α -ethynodiol on sexual development of male western mosquitofish (*Gambusia holbrooki*). Comparative Biochem Physiol Part C 140:330-339. (NCER-R826130).
- Angus RA, Weaver SA, Grizzle J, Watson RD. 2002. Reproductive characteristics of male mosquitofish (*Gambusia affinis*) inhabiting a small southeastern U.S. river receiving treated domestic sewage effluent. Environ Toxicol Chem 21:1404-1409 (NCER - R826130).

Ankley GT, Degitz SJ, Diamond SA, Tietge JE. 2004. Assessment of environmental stressors potentially responsible for malformations in North American amphibians (NHEERL).

Ankley GT, Giesy JP. 1998. Endocrine disruptors in wildlife: A weight-of-evidence perspective. In: Kendall RJ, Dickerson RI, Giesy JP, et al (eds.), Principles and Processes for Evaluating Endocrine Disruption in Wildlife, 349-367, SETAC Press, Pensacola, FL (NHEERL).

Ankley GT, Jensen K, Makynen EA, KahlMD, Korte JJ, Hornung MW, HenryTR, Denny JS, LeinoRL, Wilson VS, Cardon MC, Hartig PC, Gray LE. 2003. Effects of the androgenic growth promoter 17-B-trenbolone on fecundity and reproductive endocrinology of the fathead minnow (*Pimephales promelas*). Environ Toxicol Chem 22:1350-1360 (NHEERL).

Barr MB, DeSesso JM, La, CS, Osmond C, OxanneSE, Sadler TW, Simmons RA, Sonawane BR. 2000. Workshop to identify critical windows of exposure for children's health: cardiovascular and endocrine workgroup summary. Environ Health Perspect 108(Supplement 3):569-571 (NHEERL; NCEA).

Bejarano AC, Chandler GT. 2003. Reproductive and developmental effects of atrazine on the estuarine meiobenthic copepod, *Amphiascus tenuiremis*. Environ Toxicol Chem 22:3009-3016 (NCER - R827397).

Bejarano AC, Pennington PL, DeLorenzo ME, Chandler GT. 2005. Atrazine effects on meiobenthic assemblages of a modular estuarine mesocosm. Marine Pollution Bulletin 50:1398-1404 (NCER - R827397).

Bender S, Omowunmi A, SadikOA. 1998. Direct immunosensor for polychlorinated biphenyls. Environ Sci Technol 32(6):788-79 (NCER - R825324).

Biales AD, Bencic DC, Lazorchak JM, Lattier DL. 2007 A quantitative real-time PCR method for the analysis of Vtg transcripts in model and non-model fish species. Accepted Aquatic Toxicology (NERL).

Blanck HM, Marcus M, Hertzberg V, Tolbert P, Rubin C, Henderson A, Zhang R. 2000. Determinants of polybrominated biphenyl serum decay among women in the Michigan PBB cohort. Environ Hlth Perspect 108:147-152, (NCER - R825300).

Blanck HM, Marcus M, RubinC, Tolbert P, Hertzberg V, Henderson A, Zhang R. 2002. Growth in girls exposed to polybrominated biphenyls and polychlorinated biphenyls. Epidemiology_13:205-210. (NCER - R825300).

Blanck HM, Marcus M, Tolbert P, Schuch C, Rubin C, Henderson A, Zhang R, Hertzberg V. 2004. Age at menopause in relation to PBBs, PCBs, and smoking. Maturitas 49:97-106. (NCER - R825300).

Blanck HM, MarcusM, Tolbert PE, Rubin C, HendersonAK, Hertzberg V, Zhang RH, Cameron L. 2000. Age at menarche in girls exposed perinatally to PBB. Epidemiology 11:641-647 (NCER - R825300).

Block DS, BejaranoAC, Chandler GT. 2003. Ecdysteroid distribution through various life-stages of the meiobenthic harpacticoid copepod, *Amphiascus tenuiremis* and the benthic estuarine amphipod, *Leptocheirus plumulosus*. Gen Comp Endocrinol 132:151-160 (NCER - R827397).

Bofinger DP, FengL, ChiL-H, LoveJ, StephenFD, Jefcoate CR, Sutter TR, Walker NJ, Osteen KG, Costich TG, Batt RE, Koury ST, OlsonJR. 2001. Effect of dioxin exposure on CYP1A1 and CYP1B1 expression in explant cultures of human endometrium. Toxicol Sci 201:62: 229-314 (NCER - R826300).

Bostwick D, Burke H, Euling SY, Sonawane BR, Djakiew D, Ho S, Landolph J, MorrisonH, Shifflett T, Waters D, Timms B. 2004. Human prostate cancer risk factors. Cancer

- 101(Supplement 10):2371-490 (NCEA).
- Bowman CJ, Kroll KJ, Hemmer MJ, Folmar LC, Denslow ND. 2000. Estrogen-Induced Vitellogenin mRNA and Protein in Sheepshead Minnow (*Cyprinodon variegatus*). *Gen Comp Endocrinol* 120:300-313 (NHEERL).
- Braun A, Thomas P. 2003. Androgens inhibit estradiol-17 β synthesis in Atlantic croaker (*Micropogonias undulates*) ovaries by a nongenomic mechanism initiated at the cell surface. *Biol Reproduct* 69: 1642-1650 (NCER - R-82902401).
- Braun A, Thomas P. 2004. Characterization of a membrane androgen receptor in the ovary of the Atlantic croaker (*Micropogonias undulatus*). *Biology of Reprod* 71(1):146-155 (NCER - R826126, R82902401).
- Breen MS, Villeneuve DL, Breen M, Ankley GT, Conolly RB. 2007. Mechanistic computational model of ovarian steroidogenesis to predict biochemical responses to endocrine active compounds. *Annals of Biomedical Engineering*, DOI:10.1007/s10439-007-9309-7. (NHEERL, NCCT)
- Bridges C, Little E, Gardiner D, Petty J, Huckins J. 2004. Assessing the toxicity and teratogenicity of pond water in North-Central Minnesota to amphibians. *Environ Sci Pollution Res* 11:233-239 (NCER – R827398).
- Britton JA, Wolff MS, Lapinski R, Forman J, Hochman S, Kabat G, Godbold J, Larson S, Berkowitz G. 2002. Characteristics of pubertal development in a multi-racial/ethnic population of girls. *Am J Epidemiol* 155(11):S65 (NCER - R825816).
- Bruner KL, Gorstein F, Eisenberg E, Osteen KG. 1999. Progesterone and transforming growth factor- coordinate regulate suppression of matrix metalloproteinases and prevention of experimental endometriosis. *Steroids* 64:648-653 (NCER - R826300).
- Bruner KL, Keller NK, Osteen KG. 1999. Interleukin-1 opposes suppression of human endometrial matrix metalloproteinases by progesterone in a model of experimental endometriosis. In: Understanding and Managing Endometriosis: Advances in Research and Practice. Lemay A, Maheux R, eds. New York: Parthenon Publishing (NCER - R826300).
- Bruner-Tran KL, McBean J, Eisenberg E, Anderson TA, Osteen KG. 2002. Steroid and cytokine regulation of matrix metalloproteinase expression in endometriosis in nude mice. *J Clin Endocrinol Metab* 87:4782-4791 (NCER - R826300).
- Bruner-Tran KL, Rier SE, Eisenberg E, Osteen KG. 1999. The potential role of environmental toxins in the pathophysiology of endometriosis. *Obstetric and Gynecologic Investigation* 48:45-56. (NCER - R826300).
- Bruschweiler BJ, Wurgler FE, Fent K. 1996. Inhibition of cytochrome P4501A by organotins in fish hepatoma cells PLHC-1. *Environ Toxicol Chem* 15:728-735 (NCER - R823881).
- Burger J, Fossi C, McClellan-Green P, Orlando EF. Assessment of approaches and methodologies for gender-related differences in wildlife and the environment. Environ Res (submitted) (NCER-R827401)**
- Cary TL, Chandler GT, Volz DC, Walse SS, Ferry JL. 2004. Phenylpyrazole insecticide fipronil induces male infertility in the estuarine meiobenthic crustacean *Amphiascus tenuiremis*. *Environ Sci Technol* 39:522-528 (NCER – R827397).
- Chandler GT, Cary TL, Bejarano AC, Pender J, Ferry, JL. 2004. Population consequences of fipronil and degradates to copepods at field concentrations: An integration of lifecycle testing with Leslie-matrix population modeling. Environ Sci Technol, Special Issue on Ecotoxicology (in press). (NCER – R827397).**

- Chandler GT, Cary TL, Volz DC, Walse SS, Ferry JL, Klosterhaus SL. 2004. Fipronil (ICON) effects on copepod survival, development, and reproductive success in a microplate-based life-cycle screening assay. *Environ Toxicol Chem* 23:117-124 (NCER - R827397).
- Chandler GT, Green AS. 2001. Developmental stage-specific life-cycle bioassay for assessment of sediment-associated toxicant effects on benthic copepod production. *Environ Toxicol Chem* 20(1):171-178 (NCER - R827397).
- Chandler GT, Volz DC. 2004. Semi-quantitative confocal laser scanning microscopy applied to marine invertebrate ecotoxicology. *Marine Biotechnology* 6:128-137 (NCER - R827397).
- Chandler GT. Standard Guide for Conducting Renewal Microplate-Based Life-Cycle Toxicity Tests with a Marine Meiobenthic Copepod.** In: (S.J. Bailey et al., eds.) *ASTM E 2317-04, American Society for Testing and Materials, W. Conshohocken, PA, USA, 15 pp.* (NCER - R827397).
- Chapman PJ, Dutta P, Datskos PG, Devault GL, Sepaniak MJ, submitted Facile Hyphenation of gas Chromatography and Microcantilever Array Sensor for Enhanced Selectivity in VOC Mixture Analysis. Submitted. *Analytical Chemistry* (NCER - R832742).**
- Cleverly D, Ferrario J, Byrne C, Riggs K, Joseph D, Hartford P. 2007. A general indication of the contemporary background levels of PCDDs, PCDFs, and coplanar PCBs in the rural and remote areas of the United States. *Environ Sci Technol* 41(5):1537-1544 (NCEA).
- Cohen Hubal EA, Sheldon LS, Zufall MJ, Burke JM, Thomas KW. 2000. The challenge of assessing children's exposure to pesticides. *Journal of Exposure Analysis and Environmental Epidemiology* 10(6):638-649 (NERL).
- Connatser RM, Sepaniak MJ, submitted. Analytical Optimization of Microfluidic Separation Devices with Integrated Nanocomposite SERS Detection Regions. Submitted. *Electrophoresis.* (NCER - R832742).**
- Crain DA, Guillette Jr LJ, Rooney AA, Pickford DB. 1997. Alteration in steroidogenesis in alligators (*Alligator mississippiensis*) exposed naturally and experimentally to environmental contaminants. *Environ Health Perspect* 105:528-533 (NCER - R824760).
- Crain, DA, Guillette, LJ, Jr, Pickford, DB, Percival, HF, Woodward, AR. 1998. Sex-steroid and thyroid hormone concentrations in juvenile alligators (*Alligator mississippiensis*) from contaminated and reference lakes in Florida. *Environ Toxicol Chem* 17(3):446-452 (NCER - R824760).
- Crain, DA, Guillette, LJ, Jr. 1997. Endocrine-disrupting contaminants and reproduction in vertebrate wildlife. *Rev Toxicol* 1:47-70 (NCER - R824760).
- Crain, DA, Noriega, N, Vonier, PM, Arnold, SF, McLachlan, JA, Guillette, LJ, Jr. 1998. Cellular bioavailability of natural hormones and environmental contaminants as a function of serum and cytosolic binding factors. *Toxicol Indus Hlth* 14: 261-273 (NCER - R824760).
- Cripe, GM, McKenney, CL Jr., Hoglund, MD, Harris, PS 2003. Effects of fenoxy carb exposure on complete larval development of the xanthid crab *Rhithropanopeus harrisii*. *Environ Pollut* 125:295-299 (NHEERL).
- Crisp, TM, Clegg, ED, Cooper, RL, Wood, WP, Anderson, DG, Baetcke, KP, Hoffmann, JL, Morrow, MS, Rodier, DJ, Schaeffer, JE, Touart, LW, Zeeman, MG, Pate, YM. 1998. Environmental endocrine disruption: an effects assessment and analysis document. *Environmental Health Perspectives* 106(Supplement 1):11-56 (NHEERL).
- Curry, TE, Osteen, KG. 2001. Cyclic changes in the matrix metalloproteinase system in the ovary and uterus. *Biol Reproduct* 64:1285-1296 (NCER - R826300).

- DeFur PL, Crane, M Tattersfield, LJ, Ingersoll CG, Stahl Jr RG, Matthiessen P, et al. 1999. Workshop on Endocrine Disruption in Invertebrates: Endocrinology, Testing, and Assessment (EDIETA): Executive Summary. In: Endocrine Disruption in Invertebrates: Endocrinology, Testing, and Assessment. deFur PL, Crane M, Ingersoll C, Tattersfield L, eds. SETAC Press, Pensacola, FL, 1-6 (NCER - R826129).
- Degitz SJ, Durhan EJ, Tietge JE, Kosian PA, Holcombe GW, Ankley GT. 2003. Developmental toxicity of methoprene and several degradation products in *Xenopus laevis*. *Aquat Toxicol* 19:97-105 (NHEERL).
- Degitz SJ, Holcombe GW, Kosian PA, Tietge JE, Durhan EJ, Ankley GT. 2003. Comparing the effects of stage and duration of retinoic acid exposure on amphibian limb development: chronic exposure results in mortality, not limb malformations. *Toxicol Sci* 74:139-146, 2003 (NHEERL).
- Degitz SJ, Kosian PA, Makynen EA, Jensen KM, Ankley GT. 2000. State- and species-specific developmental toxicity of all-trans retinoic acid in four native North American ranids and *Xenopus laevis*. *Toxicol Sci* 57:264-274 (NHEERL).
- De Jesus MA, Giesfeldt KS, Oran JM, Hatab NA, Lavrik NV, Sepaniak MJ. 2005.**
Nanofabrication of densely packed polymer-polymer-metal arrays for surface enhanced raman spectrometry applied spectroscopy 59:1501-1508 (NCER – R832742).
- DeLong GT, Rice CD. 1997. Tributyltin potentiates 3,3',4,4',5-pentachlorobiphenyl-induced cytochrome P4501A activity. *J Toxicol Environ Hlth* 51:101-118 (NCER - R823881).**
- Denslow ND, Bowman CJ, Ferguson RJ, Lee S, Hemmer MJ, Folmar LC. 2001. Induction of gene expression in sheepshead minnows (*Cyprinodon variegatus*) treated with 17B-estradiol, diethylstilbestrol, or ethinylestradiol: the use of mRNA fingerprints as an indicator of gene regulation. *Gen Comp Endocrinol* 121:250-260 (NHEERL).
- de Vlaming V, Biales A, Riordan D, Markiewicz D, Holmes R, Otis P, Zander R, Lazorchak J. 2007. Screening California surface waters for estrogenic endocrine disrupting chemicals (eedc) with a juvenile rainbow trout liver vitellogenin mRNA procedure. Accepted. Science Total Environment (NERL).**
- Durhan E J, Lambright CR, Makynen EA, Lazorchak J, Hartig PC, Wilson VS, Gray Jr LE, Ankley GT. 2005 Identification of metabolites of trenbolone acetate in androgenic runoff from a beef feedlot. *Environ. Health Perspectives. in press.***
- Durhan EJ, Lambright CR, Wilson VS, Butterworth BC, Kuehl OW, Orlando EF, Guillette Jr LJ, Gray LE, Ankley GT. 2002. Evaluation of androstenedione as an androgenic component of river water downstream of a pulp and paper mill effluent. *Environ Toxicol Chem* 21:1973-1976 (NHEERL).**
- Durhan EJ, Lambright CS, Makynen EA, Lazorchak J, Hartig PC, Wilson VS, Gray LE, Ankley GT. 2006. Identification of metabolites of trenbolone acetate in androgenic runoff from a beef feedlot. *Environ. Health Perspect.* 114(1) 65-68 (NERL, NHEERL).**
- Dutta P, Chapman PJ, Datskos PG, Sepaniak MJ. 2005. Characterization of ligand-functionalized microcantilevers for metal ion sensing. *Analyt Chem* 77:6601-6608 (NCER – R832742).**
- Dutta P, Sanseverino J, Datskos PG, Sepaniak MJ., 2005. Detection of cytokine using a microcantilever biosensor. *Nanobiotechnology* 1(3):1-7 (NCER – R832742).**
- El-Sabeawy F, Enan E, Lasley B. 2001. Biochemical and toxic effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin in immature male and female chickens. *Comp Biochem Physiol C- Pharmacol Toxicol Endocrinol* 129(4):317-327 (NCER - R826298).**

- Eskcenazi B, Mocarelli P, Warner M, Samuels S, Needham L, Patterson D, Brambilla P, Gerthoux P, Turner W, Casalini S, Cazzaniga M. 2001. Seveso women's health study: does zone of residence predict individual TCDD exposure? Chemosphere 43(4-7):937-942 (NCER - R824761).*
- Eskcenazi B, Mocarelli P, Warner M, Samuels S, Vercellini P, Olive D, Needham L, Patterson D, Brambilla P. 2000. Seveso Women's Health Study: a study of the effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin on reproductive health. Chemosphere 40(9-11):1247-1253 (NCER - R824761).*
- Estes ECJ, Katholi CR, Angus RA. 2006. Elevated fluctuating asymmetry in eastern mosquitofish (*Gambusia holbrooki*) from a river receiving pulp mill effluent. Envir Tox Chem. 25(4):1026-1033 (NCER-R826130).*
- Fang H, Tong W, Welsh WJ, Sheehan. 2003. QSAR models in receptor-mediated effects: the nuclear receptor superfamily. J Molecular Struct (Theochem) 622:113-125 (NCER – R826133).
- Fenton SE. 2006 . Endocrine disrupting compounds (EDCS) and mammary gland development: Early exposure and later life consequences. Endocrinology. 147(6):S18-S24 (NHEERL).*
- Fielden MR, Fertuck KC, Matthews JB, Halgren R, Zacharewski T. 2002. in silico approaches to mechanistic and predictive toxicology: an introduction to bioinformatics for toxicologists. Crit Rev Toxicol 32(2):67-112 (NCER - R827402).
- Fielden MR, Fong C, Haslam S, Zacharewski T. 2002. Normal mammary gland morphology in pubertal female mice following *in utero* and lactational exposure to genistein at levels comparable to human dietary exposure. Toxicol Letters 133(2-3): 181-191 (NCER - R827402).
- Fielden MR, Halgren RG, Fong C, Staub C, Johnson L, Chou K, Zacharewski T. 2002. Gestational and lactational exposure of male mice to diethylstilbestrol causes long-term effects on the testis, sperm fertilizing ability *in vitro*, and testicular gene expression. Endocrinology 43(8):3044-3059 (NCER - R827402).
- Fielden MR, Halgren RH, Dere E, Zacharewski T. 2002. GP3: GenePix post-processing script for the automated analysis of raw microarray image output files. Bioinformatics 18(5):771-773 (NCER - R827402).
- Fielden MR, Samy S, Chou K, Zacharewski T. 2003. Effect of human exposure levels of genistein during gestation and lactation on reproductive development and sperm quality in mice. Food Chem and Toxicol 41:447-454 (NCER - R827402).
- Fielden MR, Zacharewski T. 2001. Challenges and limitations of gene expression profiling in mechanistic and predictive toxicology. Toxicol Sci 60(1):6-10 (NCER - 827402).
- Fine DD, Breidenbach GP, Price TL, Hutchins SR. 2003. Quantitation of estrogens in ground water and swine lagoon samples using solid-phase extraction, pentofluorobenzyl/trimethylsilyl derivatizations and gas chromatographyBnegative ion chemical ionization tandem mass spectrometry. J Chromatog 1017:167-185 (NRMRL).
- Folmar LC, Denslow ND, Kroll K, Orlando EF, Enblom J, Marcino J, Metcalfe C, Guillette Jr 2001. Altered serum sex steroids and vitellogenin induction in walleye (*stizostedion vitreum*) collected near a metropolitan sewage treatment plant. Arch. Environ. Contam. Toxicol 40:392-398 (NHEERL).
- Folmar LC, Denslow ND, Rao V, Chow M, Crain DA, Enblom J, Marcino J, Guillette Jr 1996. Vitellogenin induction and reduced serum testosterone concentrations in feral male carp*

- (Cyprinus carpio)* captured near a major metropolitan sewage treatment plant. *Environ Hlth Perspect* 104:1096-1101 (NCER - R824760).
- Folmar LC, Gardner GR, Schreibman MP, Magliulo-Cepriano L, Mill LJ, Zaroogian G, Gutjahr-Gobell RE, Haebler R, Horowitz DB, Denslow N.D. 2001. Vitellogenin-Induced pathology in male summer flounder (*paralichthys dentatus*). *Aquat Toxicol* 51:431-441 (NHEERL).
- Folmar LC, Hemmer M, Hemmer R, Bowman C, Kroll K, Denslow ND. 2000. Comparative estrogenicity of estradiol, ethynodiol diacetate and diethylstilbestrol in an in vivo, male sheepshead minnow (*cyprinodon variegatus*), vitellogenin bioassay. *Aqua Toxicol* 49:77-88 (NHEERL).
- Folmar LC, Hemmer MJ, Denslow ND, Kroll K, Chen J, Cheek J, Cheek A, Richman H, Meredith H, Gordon, E. 2002. Comparison of the estrogenic potencies of estradiol, ethynodiol diacetate, diethylstilbestrol, nonylphenol and methoxychlor in vivo and in vitro. *Aquat Toxicol* 60:101-110 (NHEERL).
- Folmar LC, Larkin P, Hemmer MJ, Poston AJ, Lee S, Denslow ND. 2000. Use of DNA Macroarrays to evaluate the effects of environmental estrogens on wildlife.** In: **Proceedings of the 2nd International Conference on Pharmaceuticals and Endocrine Disrupting Chemicals in Water, 9-11 October 2001, Minneapolis, MN. National Ground Water Association, Westerville, OH.** p. 9 (NHEERL).
- Fox LL, Grasman KA. 1999. Effects of PCB 126 on primary immune organ development in chicken embryos.* *J Toxicol Environ Hlth* 58(4):233-24 (NCER - R825216).
- Gao X, Petroff BK, Rozman KK, Terranova PF. 2000. Gonadotropin releasing hormone (GnRH) partially reverses the inhibitory effect of 2,3,7,8-tetrachlorodibenzo-p-dioxin on ovulation in the immature gonadotropin-treated rat. *Toxicol* 147(1):15-22 (NCER - R826132).
- Gao X, Terranova PF, Rozman KK. 2000. Effects of polychlorinated dibenzofurans, biphenyls, and their mixture with dibenzo-p-dioxins on ovulation in the gonadotropin-primed immature rat: Support for the toxic equivalency concept. *Toxicol Appl Pharmacol* 163(2):115-124 (NCER - R826132).
- Gao X, Terranova PF, Rozman KK. Blockage of ovulation by polychlorinated furans (PCDFs), biphenyls (PCBs) and their mixture with dibenzo-p-dioxins (PCDDs) supports the toxic equivalency (TEQ) concept.** *Toxicol Appl Pharmacol* (NCER - R826132).
- Gardiner DM, Ndayibagira A, Grun F and Blumberg, B 2003. Deformed frogs and environmental retinoids. *Pure Applied Chem.* 75:2263-2274.
- Girard JP, Ferrua C, Pesando D. 1997. Effects of tributyltin on Ca²⁺ homeostasis and mechanisms controlling cell cycling in sea urchin eggs.* *Aquat Toxicol* 38 (4):225-239 (NCER - R823881).
- Gleason TR, Nacci E. 2001. Risks of endocrine-disrupting compounds to wildlife: Extrapolating from effects on individuals to population response. *Human Eco Risk Assm* 7:1027-1042 (NHEERL).
- Gooding MP, LeBlanc GA. 2001. Biotransformation and disposition of testosterone in the eastern mud snail *Ilyanassa obsoleta*. *Gen Comp Endocrinol* 122(2):172-180 (NCER - R826129).
- Gooding MP, LeBlanc GA. 2004. Seasonal variation in the regulation of testosterone levels in the eastern mud snail (*Ilyanassa obsoleta*). *Invert Biol* (NCER - R826129) in press (NCER - R831300).**
- Gooding MP, Wilson VS, Folmar LC, Marcovich DT, LeBlanc GA. 2003. The biocide tributyltin reduces the accumulation of testosterone as fatty acid esters in the mud snail (*Ilyanassa*

- obsoleta*). Environ Health Perspect. 111:426-230 (NCER - R826129).
- Gordon DA, Toth GP, Lazorchak JM, Reddy TV, Graham DW, Knapp CW, deNoyelles F, Campbell S, Lattier DL. 2006. Effects of eutrophication on vitellogenin gene expression in male fathead minnows (*Pimephales promelas*) exposed to 17alpha ethynodiol in field mesocosms" accepted for publication in Environmental Pollution 142:559-566 (NERL).
- Grasman KA, Armstrong M, Hammersly DL, Scanlon PF, Fox GA. 2000. Geographic variation in blood plasma protein concentrations in young herring gulls (*Larus argentatus*) and Caspian terns (*Sterna caspia*) from the Great Lakes and Lake Winnipeg. Comp Biochem Physiol C - Pharmacol Toxicol Endocrinol 125:365-375 (NCER - R825216).
- Grasman KA, Fox GA. 2001. Associations between altered immune function and organochlorine contamination in young caspian terns (*Sterna caspia*) of the Great Lakes, 1997-1999. Ecotoxicol 10:101-114 (NCER - R825216).
- Grasman KA, Whitacre LA. 2001. Effects of 3,3',4,4',5-pentachlorobiphenyl (PCB 126) on thymocyte surface marker expression and immune organ development in chicken embryos. J Toxicol Environ Hlth 62:101-116 (NCER - R825216).
- Griffitt RJ, Chandler GT, Greig TW, Quattro JM. 2006. Cathepsin B and glutathione peroxidase show differing transcriptional responses in the grass shrimp *Palaeomonetes pugio* following exposure to three xenobiotics. Environ Sci Technol 40(11):3640-3645 (NCER- R827397).
- Guillette Jr LJ, Brock JW, Rooney AA, Woodward AR. 1998. Serum concentrations of various environmental contaminants and their relationship to sex steroid concentrations in the American alligator. Arch Environ Contam Toxicol (NCER - R824760).**
- Guillette Jr LJ, Crain DA, Rooney AA, Pickford DB, Orlando EF. 1997. Ecoestrogen- induced abnormalities of reptilian embryonic development. In: Advances in Comparative Endocrinology. Kawashima S, Kikuyama S, eds. Bologna: Monduzzi Editore 1997:1717-1721 (NCER - R824760).
- Guillette Jr LJ, Crain DA, Rooney AA, Woodward AR. 1997. Effect of acute stress on plasma testosterone, estradiol-17b and corticosterone concentrations in juvenile alligators living in control and contaminated lakes. J Herpetol 31:347-353 (NCER - R824760).
- Guillette Jr LJ, Rooney AA, Crain DA, Orlando EF, Galle A, Woodward AR. Altered sex determination and gonadal steroidogenesis of alligators exposed to environmental contaminants in ovo. Gen Comp Endocrinol (NCER - R824760).**
- Guillette Jr LJ, Woodward AR, Crain DA, Pickford DB, Rooney AA, Percival HF. 1999. Plasma steroid concentrations and male phallus size in juvenile alligators from seven Florida lakes. Gen Comp Endocrinol 116(3):356-372 (NCER - R824760).
- Guillette Jr LJ, Woodward AR, Crain AD, Masson GR, Palmer BD, Cox MC, Qui YX, Orlando EF. 1997. The reproductive cycle of the female American alligator (*Alligator mississippiensis*). Gen Comp Endocrinol 108:87-101 (NCER - R824760).
- Gunderson MP, LeBlanc GA, Guillette Jr LJ. 2002. Alterations in sexually dimorphic hepatic testosterone biotransformation in the American alligator (*Alligator mississippiensis*) from contaminated lakes. Environ Hlth Perspect 109:1257-1264 (NCER - R826129).
- Gutjahr-Gobell RE, Zaroogian GE, Borsay Horowitz DJ, Gleason TR, Mills LJ. 2006. Individual effects of estrogens on a marine fish, cunner (*Tautogolabrus adspersus*), extrapolated to the population level. Ecotoxicol Environ Saf 63:244-252 (NHEERL)
- Halgren RG, Fielden MR, Fong C, Zacharewski TR. 2001. Assessment of clone identity and sequence fidelity for 1189 IMAGE cDNA clones. Nucleic Acids Research 29(2):582-588

- (NCER - R827402).
- Hauser R, Williams P, Peebles, Altshul L, Korrick S, Revich B, Patterson DG Jr, Turner WE, Le MM, Sergeyev O. 2004. Characterization and predictors of serum dioxin levels among adolescent boys in Chapaevsk, Russia. *Organohalogen Compounds*. 66:3245-3251 (NCER-R829437)
- Hawkins MB, Thomas P. The unusual binding properties of the third distinct teleost estrogen receptor subtype ER β a are accompanied by highly conserved amino acid changes in the ligand binding domain, Endocrinol (NCER - R827399). in press.**
- Hawkins MB, Thornton Crews D, Skipper JK, Dotte A, Thomas P. 2000. Identification of a third distinct estrogen receptor and reclassification of estrogen receptors in teleosts. *Proceed Natl Acad Sci USA* 97(20):10751-10756 (NCER - R826125).
- Hemmer MJ, Bowman CJ, Hemmer BL, Friedman SD, Marcovich D, Kroll K, Denslow ND. 2002. vitellogenin mRNA regulation and plasma clearance in male sheepshead minnows, (*cyprinodon variegatus*) after cessation of exposure to 17b-estradiol and p-nonylphenol. *Aquat Toxicol* 58:99-112 (NHEERL).
- Hemmer MJ, Hemmer BL, Bowman CJ, Kroll KJ, Folmar LC, Marcovich D, Hoglund MD, Denslow ND. 2001. Effects of p-nonylphenol, methoxychlor and endosulfan on vitellogenin induction and expression in the sheepshead minnow, *cyprinodon variegatus*. *Environ Toxicol Chem* 20:336-343 (NHEERL).
- Hemming JM, Allen HJ, Thuesen KA, Turner PK, Waller WT, Lazorchak JM, Lattier DL, Chow M, Denslow N, Venables B. 2004. Temporal and spatial variability in the estrogenicity of a municipal wastewater effluent. *Ecotoxicology and Environmental Safety* 57(3):303-310 (NERL).
- Hornung MW, Ankley GT, Schmieder P. 2003. Induction of an estrogen-responsive reporter gene in rainbow trout hepatoma cells (RTH-149) at 11 or 18C. *Environ Toxicol Chem* 22:866-871 (NHEERL).
- Hotchkiss AK, Ostby JS, Vandenburg JG, Gray Jr LE. 2002. Androgens and environmental antiandrogens affect reproductive development and play behavior in the Sprague-Dawley rat. *Environ Health Persp* 110 Suppl 3:435-439 (NHEERL).
- Hutchins SR, White MV, Hudson F, Fine DD. 2007. Analysis of lagoon samples from different concentrated animal feeding operations (CAFOs) for estrogens and estrogen conjugates. *Environ Sci Technol* 41(3):738-744 (NRMRL).
- Igarashi TI, Bruner-Tran KL, Yeaman GR, Lessey BA, Edwards D, Eisenberg E, Osteen KG. Reduced Expression of Progesterone Receptor-B in Endometrium of Women with Endometriosis and in Co-cultures of Endometrial Cells Exposed to 2, 3, 7, 8-tetrachlorobenzo-p-dioxin. Fertil Steril (In Press) (NCER – R826300)**
- Imm P, Knobeloch L, Anderson HA. 2007. Maternal recall of children's consumption of commercial and sport-caught fish: Findings from a multi-state study. *Environ Res* 103(2):198-120 (NCER – R830254).
- Jenkins R, Angus RA, McNatt H, Howell WM, Kemppainen JA, Kirk M, Wilson EM. 2001. Identification of androstenedione in a river containing paper mill effluent. *Envir Tox Chem*. 20:1325-1331 (NCER – R826130).
- Jenkins RL, Wilson EM, Angus RA, Howell WM, Kirk M, Moore R, Nance M, Brown, A 2004 Production of androgens by microbial transformation of progesterone in vitro: a model for androgen production in rivers receiving paper mill effluent *Environmental Health Perspectives*

- 112:1508-1511 (NCER – R826130).
- Jenkins RL, Wilson EM, Angus RA, Howell WM, Kirk M. 2003. Androstenedione and progesterone in the sediment of a river receiving paper mill effluent. *Toxicol Sci*, 73:53-59 (NCER – R826130).
- Jensen KM, EA Makynen MD Kahl, GT Ankley. 2006. Effects of the feedlot contaminant 17 α -trenbolone on reproductive endocrinology of the fathead minnow. *Environmental Science & Technology* 40:3112-3117. (NHEERL)
- Kadlubar F, Bcrkowitz G, Delongchamp RR, Green BL, Wang C, Wolff MS. 2001. *The putative high activity variant Cyp3a4*1b predicts the onset of puberty in young girls. Science News* 159(14):216 (NCER - R825816).
- Kaiser R, Marcus M, Michels Blanck H, Naughton M, Zhang R, Henderson A, Tolbert P, Rubin C, Hertzberg V. PBB Exposure, Benign Breast Disease in a cohort of U.S. Women. *Annals of Epidemiology* 2002; 13:17-24 (NCER - R825300).
- Karrass GJ, Morris DL, Matulka RA, Kramer CM, Holsapple MP. 1996. *2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) elevates basal B-cell intracellular calcium concentration and suppresses surface Ig- but not CD40-induced antibody secretion. Toxicol Appl Pharmacol* 137:275-284 (NCER - R823881).
- Kast-Hucheson K, Rider CV, LeBlanc GA. 2001. The fungicide propiconazole interferes with embryonic development of the crustacean *Daphnia magna*. *Environ Toxicol Chem* 20(3):502-509 (NCER - R826129).
- Kast-Hucheson K, Rider CV, LeBlanc GA. 2001. The fungicide propiconazole interferes with embryonic development of the crustacean *Daphnia magna*. *Environ Toxicol Chem* 20(3):502-509 (NCER - R826129).
- Kidd KA, Blanchfield PJ, Mills KH, Palace VP, Evans RE, Lazorchak JM, Flick RW. 2007. Collapse of a fish population after exposure to a synthetic estrogen. *Proc National Acad Science* May 22, 2007 vol. 104 no. 21 8897-8901 (NERL).
- Kong L, Ferry JL. Photochemical oxidation of chrysene at the silica gel-water interface. 2004. *Journal of Photochemistry and Photobiology A: Chemistry* 2004; 415-421 (NCER - R827397).
- Kong L, Ferry JL. 2003. The effect of salinity on the photolysis of chrysene adsorbed to a smectite clay. *Environ Sci Technol* 37:4894-4900 (NCER - R827397).
- Korte JJ, Kahl MD, Jensen KM, Pasha MS, Parks LG, LeBlanc GA, Ankley GT. 2000. Fathead minnow vitellogenin: complementary DNA sequence and mRNA and protein expression after 17b-estradiol treatment. *Environ Toxicol Chem* 19:972-981 (NCER - R826129; NHEERL).
- Kosian PA, Makynen EA, Ankley GT, Degitz S.J. 2003. Uptake and metabolism of all-trans retinoic acid by three native North American ranids. *Toxicol Sci* 74:147-156 (NHEERL).
- Larsson DGJ, Sperry TS, Thomas P. 2002. Regulation of androgen receptors in Atlantic croaker brains by testosterone and estradiol. *Gen Comp Endocrinol* 128:224-230 (NCER -R826125).
- Laws SC, Stoker TE, Goldman JM, Wilson V, Gray Jr LE, Cooper RL. 2005. The US EPA Endocrine Disruptor Screening Program: *in Vitro* and *in Vivo* Mammalian Tier 1 Screening Assays. In: R. Hood (Ed.). *Developmental and Reproductive Toxicology, A Practical Approach*. CRC Press: Boca Raton, FL (NHEERL).
- Lazorchak JM, Hutchins SR, Ankley GT. 2005. Overview of field research on EDCs from concentrated animal feeding operations – NERL molecular diagnostics – NHEERL toxicity, analytical chemistry and effects measurements – NRMRL risk management characterization: US Environ Protect Agency, Washington, DC, EPA/600/R-05/155 (NERL, NHEERL,

- NRMRL).
- LeBlanc GA, McLachlan JB. 1999. Molt-independent growth inhibition of Daphnia magna by an anti-androgen. Environ Toxicol Chem 18:1450-1455 (NCER - R826129).
- LeBlanc GA, McLachlan JB. 2000. Changes in the metabolic elimination profile of testosterone following exposure of the crustacean Daphnia magna to tributyltin. Ecotoxicol Environ Safe 45:296-303 (NCER - R826129).
- LeBlanc GA, Mu X, Rider CV. 2000. Embryo toxicity of the alkylphenol degradation product 4-nonylphenol to the crustacean Daphnia magna. Environ Hlth Perspect 108:1133-1138 (NCER - R826129).
- LeBlanc GA. 1999. Screening approaches for the evaluation of endocrine disruption in invertebrates. In: Environmental Toxicology and Risk Assessment: Standardization of Biomarkers for Endocrine Disruption and Environmental Assessment. Henshel DS, Black MC, Harrass MC, eds. STP 1364. American Society of Testing and Materials, West Conshohocken, PA, 8:3-23 (NCER - R826129).
- LeBlanc GA. 2000. Steroid hormone-regulated processes in invertebrates and their susceptibility to environmental endocrine disruption. In: Environmental Endocrine Disruptors: An Evolutionary Perspective. Guillette Jr L, Crain DA, eds. London: Taylor and Francis Publishers 126-54 (NCER - R826129).
- LeBlanc GA. 2001. Conjugation and elimination of toxicants. In: Biochemical Toxicology. Hodgson E, Smart RC, eds. East Norwalk, CT: Appleton & Lange. 115-136. (NCER - R826129).
- LeBlanc GA. 2001. Immunochemical techniques in toxicology. In: Biochemical Toxicology. Hodgson E, Smart RC, eds . East Norwalk, CT: Appleton & Lange 33-50 (NCER R826129).
- LeBlanc GA. 2004. Acute Toxicity. In: A Textbook of Modern Toxicology, 3rd edition. Hodgson E, ed. Stamford, CT. Appleton & Lange 215-224 (NCER – R829358).
- LeBlanc GA. 2004. Elimination of Toxicants. In: A Textbook of Modern Toxicology, 3rd edition. Hodgson E, ed. Stamford, CT. Appleton & Lange 203-212 (NCER – R829358).
- LeBlanc GA. 2004. Endocrine Toxicology. In: A Textbook of Modern Toxicology, 3rd edition. Hodgson E, ed. Stamford, CT. Appleton & Lange 229-316 (NCER – R829358).
- LeBlanc GA. 2004. Environmental Toxicology. In: A Textbook of Modern Toxicology, 3rd edition. Hodgson E, ed. Stamford, CT. Appleton & Lange 463-478 (NCER – R829358).
- LeBlanc G.A. 2007. Crustacean endocrine toxicology: a review. Ecotoxicol (in press) (NCER - R831300, R832739).*
- Lee LS, Strock TJ, Sarmah AK, Rao PSC. 2003. Sorption and dissipation of testosterone, estrogens, and their primary transformation products in soils and sediment. Environ Sci Technol 37:4098-4105 (NRMRL).
- Lee MM, Sergeyev O, Williams P, Korrick S, Zeilert V, Revich B, Hauser R. 2003. Sexual and physical maturation of male adolescents in Chapaevsk, Russia. J Pediat Endocrinol Metabol 16:169-178 (NCER - R-82943701).
- Loomis AK, Thomas P. 1999. Binding characteristics of estrogen receptor (ER) in Atlantic croaker (*Micropogonias undulatus*) testes: different affinity for estrogens and xenobiotics from that of hepatic ER. Biol Reproduct 61:51-60 (NCER - R826125).
- Loomis AK, Thomas, P. 1999. Binding characteristics of estrogen receptor (ER) in Atlantic croaker (*Micropogonias undulatus*) testes: different affinity for estrogens and xenobiotics from that of hepatic ER. Biol Reproduct 61:51-60 (NCER - R826125).

- Loomis AK, Thomas, P. 1999. Binding characteristics of estrogen receptor (ER) in Atlantic croaker (*Micropogonias undulatus*) testis: different affinity for estrogens and xenobiotics from that of hepatic ER. *Biol Reproduct* 61:51-60 (NCER – R826125).
- Loomis AK, Thomas, P. 2000. Effects of estrogens and xenoestrogens on androgen production by Atlantic croaker testes in vitro: evidence for a nongenomic action mediated by an estrogen membrane receptor. *Biol Reproduct* 62(4):995-1004 (NCER - R826125).
- Lorber M, Winter D, Ferrario J, Byrne C, Greene C. 2007. A survey of dioxin-like compounds in dairy feeds in the United States. *J Agricult Food Chem* 55(2):388-395 (NCEA).**
- Lorber M. 2007. Exposure of Americans to polybrominated diphenyl ethers. *J Expos Sci Environ Epidemiol* :1-18 (NCEA).**
- Luoma SN, Hogstrand C, Bell RA, Bielmyer GK, Galvez F., LeBlanc GA, Byeong-Gweon L, Purcell TW, Santore RC, Santschi PH, Shaw JR. 2002. Biological Processes, In: Silver in the Environment: Transport, Fate and Effects (Andren A.W. and Bober T.W. eds.) SETAC Press, Pensacola, FL. 65-96 (NCER - R826129).
- Makynen EA, Kahol MD, Jensen KM, Tietge JE, Wells KL, Van Der Kraak G. 2000. Effects of the mammalian antiandrogen vinclozolin on development and reproduction of the fathead minnow (*Pimephales promelas*). *Aquat Toxicol* 48:461-475 (NHEERL).
- Marcus M, Cheslack-Postava K, Michels Blanck H, Tolbert P, Thomas A, Hertzberg V, Henderson A, Rubin C, Small C. 2002. Breastfeeding and PBBs: Response to Rogan and Weil (letter). *Environ Health Perspect* 110(9):503-504 (NCER – R825300).
- Marsee K, Woodruff TJ, Axelrad D, Calafat AM, Swan SH. 2006. Estimated maternal daily phthalate intakes in a population mothers of male infants exhibiting reduced anogenital distance. *Environ Health Perspect* 114(6):805-809 (NCER-R823601).**
- Martin LA, Gallo MA, Klaassen CD. 2000. Differential effects of PCB congeners on rat thyroid function. *Toxicol Sci* 54:1644 (NCER - R826297).
- Martin LA, Gallo MA, Reuhl KR, Klaassen CD. Rapid disappearance of intravenously administered [125I]-thyroxine (T4) from serum following repeated administration of polychlorinated biphenyls (PCBs). *Toxicol* 60:1809 (NCER - R826297).**
- Martin LA, Gallo MA, Vansell NR, Klaassen CD. 1999. Effects of PCB mixtures and congeners on the biliary excretion of thyroxine. *Toxicol Sci* 38:1314 (NCER - R826297).
- Matter JM, Crain DA, Sills-McMurry C, Pickford DB, Rainwater TR, Reynolds KD, Rooney AA, Dickerson RL, Guillette Jr. LJ 1998. Effects of endocrine-disrupting contaminants in reptiles: Alligators. In: Principles and Processes for Evaluating Endocrine Disruption in Wildlife. R. Kendall RD, J. Giesy, W. Suk (eds.) SETAC Pr., Pensacola, FL, 267-289 (NCER - R824760).*
- McCleary RJR, McNabb FMA, Grasman KA. 2000. Effects of pollutant chemicals on thyroid hormone excretion in birds. *VA J Sci* 51:78 (NCER - 827400).
- McCleary RJR, McNabb FMA. 1999. Assay development for measuring pollutant effects on T4 excretion in birds. *Am Zool* 39:123A (NCER - 827400).
- McClellan-Green P, Romano J, Oberdörster E. 2007. Does gender really matter in contaminant exposure? A case for invertebrate assessment. *Ecotoxicol Environ Safe.* in review. *Environ Res* 104(1):183-191 (NCER – R827401).**
- McClellan-Green P, Romano J, Rittschof D. 2006. Imposex induction in the mud snail, *Ilyanassa obsoleta*, by three tin compounds. *Bull Environ Cont Toxicol* 76(4):581-8 (NCER-R824701).**
- McClellan-Green, P. 2003. Mechanisms of Endocrine Disruption in Invertebrates: Looking Beyond Steroid Hormones. *SETAC Globe* 4(4):37-38 (NCER – R827401).

- McKenney Jr CL, Cripe GM, Foss SS, Tuberty SR, Hoglund M. 2004. Comparative Embryonic and Larval Developmental Responses of Estuarine Shrimp (*Palaemonetes pugio*) to the Juvenile Hormone Agonist, Fenoxy carb. Archives of Environmental Contamination and Toxicology. 47(4):463-470 (NHEERL).
- McKenney Jr CL, Cripe, GM, Foss, SS, Hoglund, M. in Press. Comparative embryonic and larval developmental responses of an estuarine shrimp (*Palaemonetes pugio*) to the juvenile hormone agonist, fenoxy carb. Arch Environ Contam Toxicol (NHEERL).**
- McNabb, F M A. 2002. Maternal thyroid hormones in avian eggs: potential for pollutant disruption of thyroid hormone deposition and effects on embryonic development. Avian Endocrinology. (eds.) A. Dawson and C. M. Chaturvedi. pp. 219-230. Narosa Publishing House, New Delhi, India (NCER – 827400).
- McNabb, F. M A, R J R McCleary, L A Fowler, C M Parsons, K A Grasman, G A Fox. 2001. Thyroid function in polychlorinated biphenyl (PCB) exposed embryos and chicks. in Perspectives in Comparative Endocrinology: Unity and Diversity, (eds) H. J. Th. Goos, R. K. Rastogi, H. Vaudry, R. Pierantoni. pp. 275-280. Monduzzi Editore: Bologna, Italy. (NCER – 827400)
- McNabb, FMA, Fox, GA. 2003. Avian thyroid development in chemically contaminated environments: Is there evidence of alterations in thyroid function and development? Evol & Dev 5:76-82 (NCER – R827400).
- McNabb, FMA. 2005. Biomarkers for the assessment of avian thyroid disruption by chemical contaminants. Avian Poult Biol Reviews 16:3-10 (NCER - 827400).**
- Michels Blanck, H, Marcus, M, Cheslack-Postava K, DeGuire P, Rubin C, Tolbert P, Hertzberg V, Henderson A. 2002. Growth in girls exposed to PBBs and PCBs (letter). Epidemiology 13(5):604-605 (NCER - R825300).
- Michels Blanck H, Marcus M, Tolbert P, Schuch C, Rubin C, Henderson A, Zhang R, Hertzberg V. 2004. Age at menopause in relation to PBBs, PCBs, and smoking. Maturitas 49(2):97-106 (NCER - R825300).
- Miller, DH, GT Ankley. 2004. Modeling impacts on populations: fathead minnow (*Pimephales promelas*) exposure to the endocrine disruptor 17B-trenbolone as a case study. Ecotoxicol. Environ. Safety 59, 1-9.
- Miller, DH, KM Jensen, DL Villeneuve, MD Kahl, EA Makynen, EJ Durhan, GT Ankley. 2007. Linkage of biochemical responses to population-level effects: A case study with vitellogenin in the fathead minnow. Envir Tox Chem. 26:521-527. (NHEERL)
- Mills, L.J, C Chichester. 2005. Review of Evidence: Are Endocrine-Disrupting Chemicals in the Aquatic Environment Impacting Fish Populations? Science of the Total Environment 343(1-3):1-34. Contribution No. AED-04-076 (NHEERL)
- Mills, LJ, C Chichester. 2005. Review of Evidence: Are Endocrine-Disrupting Chemicals in the Aquatic Environment Impacting Fish Populations? Science of the Total Environment 343(1-3):1-34. (NHEERL).
- Mills, LJ, RE Gutjahr-Gobell, DB Horowitz, ND Denslow, MC Chow, GE Zaroogian. 2003. Relationship Between Reproductive Success and Male Plasma Vitellogenin Concentrations in Cunner, *Tautogolabrus adspersus*. Environmental Health Perspectives 111(1):93-99. Contribution No. AED-01-098.
- Milnes MR., Bryan TA, Medina JG, Gunderson MP, and Guillette LJ. 2005. Developmental alterations as a result of in ovo exposure to the pesticide metabolite p,p'-DDE in *Alligator*

- mississippiensis*. Gen Comp Endocrinol 44(3):257-263. (EPA- CR821437, R824760).
- Morgan, M K, L S Sheldon, C Croghan, J C Chuang, C Lyu, N K Wilson, R A Lordo, M C Brinkman, N Morse, Y L Chou, C Hamilton, J K Finegold, K Hand, S M Gordon. 2005. A pilot study of children's total exposure to persistent pesticides and other persistent organic pollutants (CTEPP). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-04/193 (NTIS PB2006-101286) (NERL).
- Morgan, M K, L Sheldon, C Croghan, P A Jones, G L Robertson, J C Chuang, N K Wilson, C Lyu. 2005. Exposure of preschool children to chlorpyrifos and its degradation product 3,5,6-trichloro-2-Pyridinol in their everyday environment. Journal of Exposure Analysis and Environmental Epidemiology 15:297-301 (NERL).
- Mu, X, LeBlanc, GA. 2001. Environmental antiecdysteroids alter embryo development in the crustacean *Daphnia magna*. J. Exp. Zoology. 292:287-292. (NCER – R826120).
- Mu, X, LeBlanc, GA. 2002. Developmental toxicity of testosterone in the crustacean *Daphnia magna* involves antiecdysteroidal activity. Gen Comp Endocrinol 129(2):127-133 (NCER - R826129).
- Mu, X, LeBlanc, GA. 2004. Synergistic interaction of endocrine disrupting chemicals: Model development using an ecdysone receptor antagonist and a hormone synthesis inhibitor. Environ Toxicol Chem 23:1085-1091(NCER – R826129).
- Mu, X., LeBlanc, GA. 2004. Cross communication between signaling pathways: juvenoid hormones modulate ecdysteroid activity in a crustacean. J. Exp. Zool. 301A:793-801 (NCER – R829358).
- Nates, SF, McKenney Jr CL. 2000. Growth, lipid class and fatty acid composition in juvenile mud crabs (*Rhithropanopeus harrisii*) following larval exposure to Fenoxy carb7, insect juvenile hormone analog. Compar Biochem Physiol- Part C. Toxicol Pharmacol 127:317-325 (NHEERL).
- Nates, SF, McKenney Jr CL. 2000. Ontogenetic changes in biochemical composition during larval and early postlarval development of *Lepidophthalmus louisianensis*, a ghost shrimp with abbreviated development. Compar Biochem Physiol- Part B Biochem Mol Biol 127:459-468 (NHEERL).
- Nates, SF, McKenney, Jr CL. 2000. Growth and variations in lipid class and fatty acid composition during larval development of the stone crab, *Menippe adina*. Invert Repro Develop 37:157-165 (NHEERL).
- Nimrod, AC, Benson WH. 1997. Xenobiotic-induced alterations in estrogen receptor function and characterization. Toxicol Appl Pharmacol 147:381-390 (NCER - R823450).
- Nimrod, AC, Benson, WH. 1996. Estrogenic responses to xenobiotics in channel catfish (*Ictalurus punctatus*). Marine Environ Res 42 (1-4):155-160 (NCER - R823450).
- Nimrod, AC, Benson, WH. 1997. Assessment of estrogenic activity in fish. In: Rolland RM, Gilbertson, M, Peterson, RE, eds. *Chemically-Induced Alterations in the Functional Development and Reproduction of Fishes*. Pensacola, FL: SETAC Press:87-100 (NCER - R823450).
- Nimrod, AC, Benson, WH. 1998. Reproduction and development of Japanese medaka following an early life stage exposure to xenoestrogens. Aquat Toxicol 44(1-2):141-156 (NCER - R823450).
- Oberdörster, E, McClellan-Green, P. 2002. Mechanisms of Imposex Induction in the Mud Snail, *Ilyanassa obsoleta*:TBT as a Neurotoxin and Aromatase Inhibitor. Marine Environ Res 54(3-5):715- 718 (NCER – R827401).

- Oberdörster, E. 2001. Peptide hormones vs. steroid hormones: Case studies from snail and turtle populations. Annals of the New York Academy of Sciences. Special Issue: Environmental Hormones: the Scientific Basis of Endocrine Disruption. 948:75-79 (NCER – R827401).
- Oberdörster, E., McClellan-Green, P. 2000. The neuropeptide APGWamide induces imposex induction in the mud snail, *Ilyanassa obsoleta*. Peptides 21:1323-1330 (NCER – R827401).
- Oberdörster E, Rittschof D, McClellan-Green, P. 1998. Testosterone metabolism in imposex and normal *I. obsoleta*: studies with field collected and TBT induced imposex snails. Mar Pollut Bull. 36(2):144-151 (NCER-R827401).
- Oberdörster E, Romano J, McClellan-Green P. 2005. The neuropeptide APGWamide as a penis morphogenic factor (PMF) in gastropod mollusks. Integrative and Comp Biology 45(1):28-32 (NCER-R827401).**
- Olmstead, AW, LeBlanc, GA. 2000. Effects of endocrine active chemicals on the development of sex characteristics of *Daphnia magna*. Environ Toxicol Chem 19:2107-2113 (NCER - R826129).
- Olmstead, AW, LeBlanc, GA. 2001. Low exposure concentration effects of methoprene on endocrine-regulated processes in the crustacean *Daphnia magna*. Toxicol Sci 62:268-273 (NCER - R826129).
- Olmstead, AW, LeBlanc, GA. 2001. Temporal and quantitative changes in sexual reproductive cycling of the cladoceran *Daphnia magna* by a juvenile hormone analog. J Zool 290(2):148-155 (NCER - R826129).
- Olmstead, AW, LeBlanc, GA. 2002. The juvenoid hormone methylfarnesoate is a sex determinant in the crustacean *Daphnia magna*. J Exper Zool 293(7):736-739 (NCER - R826129).
- Olmstead, AW, LeBlanc, GA. 2003. Insecticidal juvenile hormone analogs stimulate the production of male offspring in the crustacean, *Daphnia magna*. Environ Health Perspect. 111:919-924 (NCER - R826129).
- Olmstead AW, LeBlanc GA. 2007. The environmental-endocrine basis of gynandromorphism (intersex) in a crustacean. Int J Biol Sci 3(2): 77-84. (NCER- R831300, R832739).**
- Osteen, KG, Keller, NR, Feltus, FA, Melner, MH. 1999. Paracrine regulation of matrix metalloproteinase expression in the normal human endometrium. Obstet Gynecol Invest 48:2-13. (NCER - R826300).
- Owens CV, Lambright CR, Cardon MC, Gray Jr LE, Gullett BK, Wilson VS. 2006. Assessment of androgenic activity in emissions from diesel fuel and biomass combustion. Environ Toxicol Chem 25(8) (NHEERL).**
- Parks LG, Lambright CS, Orlando EF, Guillette Jr LJ., Ankley G, Gray Jr LE. 2001. Masculinization of female mosquitofish in Kraft mill effluent-contaminated Fenholloway River water is associated with androgen receptor agonist activity. Toxicol Sci 62:257-67 (NHEERL).
- Parks LG, Ostby JS, Lambright CR, Abbott BD, Klinefelter GR, Barlow NJ, Gray LE. 2000. The plasticizer diethylhexyl phthalate induces malformations by decreasing fetal synthesis during sexual differentiation in the male rat. Toxicol Sci 58:339-349 (NHEERL).
- Petroff BK, Gao X, Rozman KK, Terranova PF. 2000. Interaction of estradiol and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in an ovulation model: evidence for systemic potentiation and local ovarian effects. Reproduct Toxicol 14(3):247-255 (NCER - R826132).
- Petroff BK, Gao X, Rozman KK, Terranova PF. Estrogen increases the ovarian toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in hypophysectomized but not intact**

- Sprague-Dawley rats. Reproduct Toxicol (NCER - R826132).**
- Putz O, Schwartz C, LeBlanc GA, Cooper GL, Prins GS. 2001. Neonatal low- and high-dose exposure to estradiol benzoate in the male rat: II. Effects on male puberty and the reproductive tract. *Biol Reproduct* 65:1506-1517 (NCER - R826129).
- Putz O, Schwartz CB, Kim S, LeBlanc GA, Cooper RL, Prins GS. 2001. Neonatal low- and high-dose exposure to estradiol benzoate in the male rat: I. Effects on the prostate gland. *Biol Reproduct* 65:1496-1505 (NCER - R826129).
- Quinn Jr MJ, French Jr JB., McNabb FMA, Ottinger MA. 2002. The effects of polychlorinated biphenyls (Aroclor 1242) on thyroxine, estradiol, molt, and plumage characteristics in the American kestrel (*Falco sparverius*). *Envir Toxicol Chem* 21:1417-1422 (NCER – R827400; R826134).
- Raimondo S and MG Barron. In Press. Risk Assessment of Mercury Exposure on a Florida Panthr Metapopulation. In. R. Akcakaya (Ed.), Demographic Toxicity: Case Studies in Ecological Risk Assessment. (NHEERL)
- Raimondo S, McKenney CL. 2006. From individuals to populations: Modeling toxicity data across two levels of biological organization. Envir Tox Chem. in press. (NHEERL).**
- Raimondo S, McKenney Jr CL, Barron M. 2006. Application of Perturbation Simulations in Population Risk Assessment of Different Life History Strategies and Elasticity Patterns. *Hum. Ecol. Risk Assess.* 12(5):983-999 (NHEERL).
- Raimondo S, McKenney Jr CL. 2005. Projecting population-level response of mysids exposed to endocrine disrupting chemicals. *Integrative and Comparative Biology*. 45:151-157 (NHEERL).
- Raimondo S, McKenney Jr CL. 2006. From individuals to populations: Modeling toxicity data across two levels of biological organization. *Envir Tox Chem*. 25:589-596 (NHEERL).
- Rainwater, TR, Wu TH, Finger AG, Cañas JE, Yu L, Reynolds KD, Coimbatore G, Barr B, Platt SG, Cobb GP, et al. 2007. Metals and organochlorine pesticides in caudal scutes of crocodiles from Belize and Costa Rica. *SciTotal Environ* 373(1):146-156 (NCER- R826310 to McMurry).
- Rice CD, Roszell LE. 1998. Tributyltin (TBT) modulates 3,3'4,4',5-pentachlorobiphenyl (PCB-126)-induced hepatic CYP1A activity in channel catfish, Ictalurus punctatus. J Toxicol Environ Hlth* 55:101-116 (NCER - R823881).
- Rittschof D, McClellan-Green P. 2005. Mollusks as multidisciplinary models in environmental toxicology. Mar Pol Bull. 50(4):369-373 (NCER-R827401).**
- Rohr JR, Elskus AA, Shepherd BS, Crowley PH, McCarthy TM, Niedzwiecki JH, Sager T, Sih A, Palmer BD. 2003. Lethal and sublethal effects of atrazine, carbaryl, endosulfan, and octylphenol on the streamside salamander, Ambystoma barbouri. Environ Toxicol Chem* 22(10):2385-2392 (NCER - R829086).
- Rose KA, Murphy CA, Diamond SL, Fuiman LA, Thomas P. 2003. Using nested models and laboratory data for predicting population effects of contaminants on fish: A step toward a bottom-up approach for establishing causality in field studies. *Human and Ecological Risk Assessment* 9:231-257 (NCER - R827399).
- Scanes CG, McNabb FMA. 2003. Avian models for research in toxicology and endocrine disruption. *Poultry and Avian Biology Reviews* 14(1):21-52. (NCER – 827400)
- Schiestl RH, Aubrecht J, Yap WY, Kandikonda S, Sidhom S. 1997. Polychlorinated biphenyls and 2,3,7,8-tetrachlorodibenzo-p-dioxin induce intrachromosomal recombination in vitro and in*

- vivo*. *Cancer Res* 57(19):4378-4383 (NCER - R825359).
- Schizas NV, Chandler GT, Coull BC, Klosterhaus SL, Quattro JM. 2001. Differential survival of three mitochondrial lineages of a marine benthic copepod exposed to a pesticide mixture. *Environ Toxicol Chem* 35(3):535-538 (NCER - R827397).
- Schizas NV, Coull BC, Chandler GT, Quattro JM. 2002. Sympatry of distinct mitochondrial DNA lineages in a copepod inhabiting estuarine creeks in the southeastern United States. *Marine Biol* 140(3):585-594 (NCER - R827397).
- Schlenk D, Stresser DM, McCants JC, Nimrod AC, Benson WH. 1997. Influence of naphthoflavone and methoxychlor pretreatment on the biotransformation and estrogenic activity of methoxychlor in channel catfish (*Ictalurus punctatus*). *Toxicol Appl Pharmacol* 145:349-356 (NCER - R823450).*
- Schreinemachers DM. 2003. Birth malformations and other adverse perinatal outcomes in four U.S. wheat-producing states. *Environ Health Persp* 111:1259-1264 (NHEERL).
- Selevan SG, Rice DC, Hogan KA, Euling SY, Pfahles-Hutchens A, Bethel J. 2003. Blood lead concentration and delayed puberty in girls. *New England Journal of Medicine* 348(16):1527-1536.
- Senesac LR, Dutta P, Datskos PG, Sepaniak MJ, 2006. Analyte identification using differentially-functionalized microcantilever arrays and artificial neural nets. *Analyt Chim Acta* 558:94-101 (NCER – R832742).
- Semenza JC, Tolbert PE, Rubin CH, Guillette LJ, Jr, Jackson RJ. 1997. Reproductive toxins and alligator abnormalities at Lake Apopka, Florida. *Environ Hlth Perspect* 105:1030-1032 (NCER - R824760).*
- Sergeyev O, Revich B, Williams P, Korrick S, Zeilert V, Lee MM, Ushakova T, Saharov I, Altshul L, Hauser R. 2002. A case-cohort study of cryptorchidism, hypospadias and delayed sexual maturation in a dioxin contaminated region: Chapaevsk, Russia. *Organohalogen Compounds* 59:385-388 (NCER - R82943701).
- Sergeyev O, Zeilert V, Revich B, Ushakova T, Williams P, Korrick S, Lee MM, Altshul L, Adibi J, Hauser, R. 2000. Sexual and physical maturation of male adolescents in a dioxin contaminated region: Chapaevsk, Russia. *Organohalogen Compounds* 48:211-214 (NCER - R82943701).
- Son DS, Ushinohama K, Gao X, Taylor CC, Roby KF, Rozman KK, Terranova PF. 1999. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) blocks ovulation by a direct action on the ovary without alteration of ovarian steroidogenesis: lack of a direct effect on ovarian granulosa and thecal-interstitial cell steroidogenesis in vitro. *Reproduct Toxicol* 13(6):521-530 (NCER - R826132).
- Small CM., Cheslack-Postava K, Terrell M, Michels Blanck H, Tolbert P, Rubin C, Henderson A, Marcus M. 2007. Risk of spontaneous abortion among women exposed to polybrominated biphenyls. Environ Res. In Press, Corrected Proof, Available online 19 January 2007 (NCER- R825300).*
- Stanko JP, Angus RA. 2005. Paper manufacture and its impact on the aquatic environment. Reviews of Environmental Contamination and Toxicology 185:67-92 (NCER-R826130).*
- Stanton B, Watkins S, German B, Lasley BL. 2002. Interaction of estrogen and 2,3,7,8-tetrachlorodibenzo-p-benzene with plasma fatty acid concentrations of male chickens (*Gallus domesticus*). *Comp Biochem Physiol C- Pharmacol Toxicol Endocrinol* 132(2):129-142. (NCER - R826298).

- Stanton BJ, El-Sabeawy F, Fang Yang X, Enan E, Lasley BL. 2001. Interaction of estrogen and 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in immature male chickens (*Gallus domesticus*). Comp Biochem Physiol C-Pharmacol Toxicol Endocrinol 129(1):35-47 (NCER - R826298).
- Stanton RJ, DeWitt J, Henshel D, Watkins S, Lasley B. 2003. Fatty acid metabolism in neonatal chicken (*Gallus domesticus*) treated with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) or 3,3',4,4',5 pentachlorobiphenol (PCP 126) in ovo. Pharmacol Toxicol, Part C Vol 136/1 pp 73-84 (NCER – R826298).
- Stanton RJ, El-Sebeawy F, Yang X, Enan EE, Lasley BL. 2001. Effect of estrogen pre-treatment on TCDD-induced wasting syndrome in young male chickens. Comp Pharmacol Toxicol Part C 129:35-47 (NCER – R826298).
- Stanton RJ, Watkins S, Ryan Lasley, BL. 2001. Interaction of estrogen and TCDD in hepatic fatty acid synthesis and metabolism in chickens. Comp Pharmacol Toxicol Part C 129:137-150 (NCER – R826298)..
- Staton JL, Schizas NV, Chandler GT, Coull BC, Quattro JM. 2001. Ecotoxicology and population genetics:the emergence of phylogeographic and evolutionary ecotoxicology. Ecotoxicol 10(4):217-222 (NCER - R827397).
- Staton JL, Schizas NV, Klosterhaus SL, Griffitt RJ, Chandler GT, Coull BC. 2002. Effect of salinity variation and pesticide exposure on an estuarine harpacticoid copepod, *Microarthridion littorale* (Poppe), in the southeastern US. Journal of Experimental Marine Biology and Ecology 278:101-110 (NCER - R827397).
- Swan SH, Main KM, Liu F, Stewart SL, Kruse RL, Calafat AM, Mao CS, Redmon JB, Ternand CL, Sullivan S, Teague JL, and the Study for Future Families Research Team. 2005. Decrease in anogenital distance among male infants with prenatal phthalate exposure. Environ Health Perspect. 113:1056–1061 (NCER-R823601).
- Swan SH. 2006. Conclusions of “Decrease in Anogenital Distance among Male Infants with Prenatal Phthalate Exposure” remain unchanged. (Letter to the Editor). Environ Health Perspect, 114 (2):A88-89 (NCER-R823601)
- Swan SH. 2006. Re:“Decrease in Anogenital Distance among Male Infants with Prenatal Phthalate Exposure” (Swan et al 2005. (Letter to the Editor). Environ Health Perspect, 114 (1):A20-21 (NCER-R823601).
- Teeguarden J, Barton HA. 2004. Computational Modeling of Serum Binding Proteins and Clearance in Extrapolations across Life-stages and Species for Endocrine Active Compounds. Risk Analysis 24 (3):751 (NCCT)
- Thomas A, Marcus M, Zhang R, Blanck HM, Tolbert P, Hertzberg V, Henderson A, Rubin C. 2001. Breast feeding among women exposed to PBBs in Michigan. Environ Health Perspect 109:1133-1137 (NCER - R825300).
- Thomas P, Doughty K. 2004. Disruption of rapid, nongenomic steroid actions by environmental chemicals: Interference with progestin stimulation of sperm motility in Atlantic croaker. Environ Sci & Technol 38(23):6328-6332 (NCER - R82902401).
- Thomas P, Khan IA. Disruption of nongenomic steroid actions on gametes and serotonergic pathways controlling reproductive neuroendocrine function by environmental chemicals. In: Endocrine disruptors: dffects on male and female reproductive systems. Naz, RK (ed.) CRC Press: Boca Raton (NCER - R82902401).
- Thomas P, Pang Y, Zhu Y, Detweiler C, Kelly D. 2004. Multiple rapid steroid actions and progestin membrane receptor subtypes in fish. Steroids 69(8-9):567-573 (NCER -

- R82902401).
- Thomas P. 2000. Chemical interference with genomic and nongenomic actions of steroids in fishes: role of receptor binding. *Marine Environ Res* 50(1-5):127-134 (NCER - R826125).
- Thomas P. 2000. Chemical interference with the genomic and nongenomic actions of steroids in fishes: role of receptor binding. *Marine Environ Res* 50:127-134 (NCER – R826125).
- Thomas P. 2004. Discovery of a new family of membrane progesterone receptors in vertebrates and tissue distribution of the β subtype in the mouse. *Medic Chem* 13(3-4):202-209 (NCER - R82902401).
- Thomas P. 2003. Rapid, nongenomic steroid actions initiated at the cell surface: lessons from studies in fish. *Fish Physiol Biochem* 28(1-4): 3-12 (NCER - R82902401).
- Thomas P. The endocrine system. In: Toxicology of Fishes. DiGiulio R, Hinton. D (eds). (NCER - R82945801)**
- Thomas P, Rahman S, Kummer JA, Lawson S. 2006. Reproductive endocrine dysfunction in Atlantic croaker exposed to hypoxia. *Mar Environ Res* 62, Suppl. 1, S249-S252. (NCER - R82945801).
- Tolar JF, Mehollin AR, Watson RD, Angus RA. 2001. Mosquitofish (*Gambusia affinis*) vitellogenin: identification, purification, and immunoassay. *Comp Biochem Physiol Part C* 128:237-245 (NCER – R826130).
- Tuberty SR, McKenney Jr CL. 2005 Ecdysteroid Responses of Estuarine Crustaceans Exposed Through Complete Larval Development to Juvenile Hormone Agonist Insecticides *Integ Comp Biol* (45 (1):106-117 (NHEERL).
- Tuberty SR, Nates S, Zhong H, McKenney Jr C. In Press Effects of the insect juvenile hormone agonist methoprene on female growth and reproduction in the Gulf sand fiddler crab, *Uca panacea* (Novak and Salmon, 1974) (Crustacea: Decapoda: Brachyura) *Marine Environ Res* (NHEERL).**
- Tuberty SR, Nates SF, McKenney Jr C. 2002 Polyclonal antisera against estuarine crustacean vitellins: A molecular approach to reproductive endocrinology and toxicology In: Modern Approaches to the Study of Crustacea Elva Escobar-Briones and Fernando Alvarez Eds, Kluwer Academic/Plenum Publishers, New York, NY, pp 29-37 (NHEERL).
- Villeneuve DL, Knoebl I, Kahl MD, Jensen KM, Hammermeister DE, Ankley GT. 2006 Relationship between brain and ovary aromatase activity and CYP19B expression in the fathead minnow. *Aquatic Toxicology* 76:353-368 (NHEERL, NERL).
- Villeneuve DL, Larkin P, Knoebl I, Miracle AL, Kahl MD, Jensen KM, Makynen EA, Durhan EJ, Carter BJ, Denslow ND, Ankley GT. 2007. A graphical systems model to facilitate hypothesis-driven ecotoxicogenomics research on the teleost brain-pituitary-gonadal axis. *Environ Sci Technol* 41:321-330 (NHEERL, NERL, NCER – R831848).
- Volz DC, Chandler GT. 2004 An enzyme-linked immunosorbent assay for lipovitellin quantification in copepods: a screening tool for endocrine and reproductive toxicity. *Envir Tox Chem* 23:298-305 (NCER - R827397).**
- Volz DC, Kawaguchi T, Chandler GT. 2002. Purification and characterization of the common yolk protein, vitellin, from the estuarine amphipod *Leptocheirus plumulosus*. *Prep Biochem Biotechnol* 32(2):103-119 (NCER - R827397).
- Volz DC, Wirth EW, Fulton MH, Scott GI, Block DS, Chandler GT. 2002. Endocrine- mediated effects of UV-A irradiation on grass shrimp (*Palaemonetes pugio*) reproduction. *Comp Physiol Ecol* 133:419-434 (NCER - R827397).

- Volz DC, Wirth EW, Fulton MH, Scott GI, Strozier E, Block DS, Ferry JL, Walse SS, Chandler GT. 2003. Effects of chlorpyrifos and fipronil on endocrine-related endpoints in female grass shrimp (*Palaemonetes pugio*). *Bull Environ Contam Toxicol* 71:497-503 (NCER - R827397).
- Vonier PM, Crain DA, McLachlan JA, Guillette LJ Jr., Arnold SF. 1996. Interaction of environmental chemicals with the estrogen and progesterone receptors from the oviduct of the American alligator. *Environ Hlth Perspect* 104:1318-1322 (NCER - R824760).
- Vonier PM, Guillette LJ Jr, McLachlan JA, Arnold SF. 1997. Identification and characterization of estrogen and progesterone receptors from the oviduct of the American alligator (*Alligator mississippiensis*). *Biochem Biophys Res Comm* 232:308-312 (NCER - R824760).
- Vorhees DV, Cullen AC, Altshul LM. 1999. Polychlorinated biphenyls in house dust and yard soil near a Superfund site. *Environ Sci Technol* 32:2151-2156 (NCER - R825173).**
- Walse SS, Morgan SL, Kong L, Ferry JL. 2004. The role of dissolved organic matter, nitrate, and bicarbonate in the photolysis of aqueous fipronil. *Environmental Science and Technology* 38:3908-3915 (NCER – R829397).**
- Walse SS, Pennington PL, Scott GI, Ferry JL. 2004. The loss of aqueous fipronil in modular estuarine mesocosms. *J Environ Monitor* 5:373-379 (NCER- R829397).**
- Walse SS, Scott GI, Ferry JL. 2003. Stereoselective degradation of aqueous endosulfan in modular estuarine mesocosms: formation of endosulfan γ -hydroxycarboxylate. *Journal of Environmental Monitoring* 5:373-379 (NCER – R829397).
- Walse SS, Shimizu KD, Ferry JL. 2002. Surface-catalyzed transformations of aqueous endosulfan. *Environ Sci Technol* 36:4846-4853 (NCER- R829397).
- Wilson NK, Chuang JC, Iachan R, Lyu C, Gordon SM, Morgan MK, Ozkaynak AH, Sheldon LS. 2004. Design and sampling methodology for a large study of preschool children's aggregate exposures to persistent organic pollutants in their everyday environments. *Journal of Exposure Analysis and Environmental Epidemiology* 14(3):260-274 (NERL).**
- Wilson NK, Chuang JC, Lyu C, Menton R, Morgan MK. 2003. Aggregate exposures of nine preschool children to persistent organic pollutants at day care and at home. *Journal of Exposure Analysis and Environmental Epidemiology* 13(3):187-202 (NERL)
- Wilson VJ, LeBlanc GA. 2000. Petroleum pollution. *Rev in Toxicol* 3:77-112 (NCER - R826129).
- Wilson VS, Cardon MC, Gray Jr LE, Hartig PC. Competitive binding comparison of environmental compounds to recombinant androgen receptor of three different species: fathead minnow, rainbow trout and human. *Envir Tox Chem (NHEERL)*.**
- Wilson VS, Lambright C, Ostby J, Gray LE Jr. 2002. *In vitro* and *in vivo* effects of 17 beta-trenbolone: a feedlot effluent contaminant. *Toxicol Sci* 70:202-11 (NHEERL).
- Wilson VS, LeBlanc GA. 2000. The contribution of hepatic inactivation of testosterone to the lowering of serum testosterone levels by ketoconazole. *Toxicol Sci* 54:128-137 (NCER - R826129).
- Wirth EF, Lund SA, Fulton MH, Scott GI. 2001. Determination of acute mortality in adults and sublethal embryo responses of *Palaemonetes pugio* to endosulfan and methoprene exposure. *Aquat Toxicol* 53(1):9-18 (NCER - R827397).
- Wirth EF, Lund SA, Fulton MH, Scott GI. 2002. Reproductive alterations in adult grass shrimp, *Palaemonetes pugio*, following sublethal, chronic endosulfan exposure. *Aquat Toxicol* 59:93-99 (NCER - R827397).
- Wirth EF, Pennington P, Lawton J, DeLorenzo M, Fulton MH. Marine mesocosm estimates**

- of toxicity using the insecticide fipronil and a typical southeastern salt marsh. Environ Toxicol Chem (in review) (NCER – R827397).**
- Wirth EF, Pennington P, Lawton J, DeLorenzo, Fulton MH. 2004. Effects of the contemporary-use insecticide fipronil in an estuarine mesocosm. *Environ Poll* 131(3):365-371 (NCER – R827397).
- Wolf CJ, Hotchkiss A, Ostby JS, LeBlanc GA, Gray Jr, LE. Effects of prenatal testosterone propionate on the sexual development of male and female rats: a dose-response study. Toxicol Sci (NCER - R826129, NHEERL).**
- Wolf CJ, LeBlanc GA, Ostby JS, Gray LE Jr. 2000. Characterization of the period of sensitivity of fetal male sexual development to vinclozolin. *Toxicol Sci* 55:152-161 (NCER - R826129; NHEERL).
- Wolff MS, Berkowitz GS, Brower S, Forman J, Godbold J, Kase N, Lapinski R, Larson S, Senie R, Tartter P.* 1999. Hormonally active environmental exposures and their relationship to risk for reproductive cancer among women. *Women and Cancer* 1:8-20 (NCER - R825816).
- Wolff MS, Berkowitz GS, Brower S, Forman J, Godbold J, Kase N, Lapinski R, Larson S, Senie R, Tartter P.* Hormonally active environmental exposures and their relationship to risk for reproductive cancer among women. 1998. *J Women's Cancer* 1(1):1-7 (NCER - R825816).
- Wu, TH, Cañas JE, Rainwater TR, Platt SG, McMurry ST, Anderson TA. 2006. Organochlorine contaminants in complete clutches of Morelet's crocodile (*Crocodylus moreletii*) eggs from Belize. *Environ. Poll.* 144(1):151-157 (NCER- R826310).
- Zacharewski T, Fertuck K, Fielden M, Matthews J. Mechanistically-based assays for the identification and characterization of endocrine disruptors. In: Comprehensive Toxicology XIV: Cellular and Molecular Toxicology. Vanden Heuvel JP, Greenlee WF, Perdew GH, Mattes W, eds. (NCER - R827402).**
- Zhu Y, Bond J, Thomas P. 2003. Identification, classification, and partial characterization of genes in humans and other vertebrates homologous to a fish membrane progestin receptor. *Proceed Natl Acad Sci USA* 100:2237-2242 (NCER - R82902401).
- Zhu Y, Rice CD, Pang Y, Pace M, Thomas P. 2003. Cloning, expression, and characterization of a membrane progestin receptor and evidence it is an intermediary in meiotic maturation of fish oocyte. *Proceed Natl Acad Sci USA* 100:2231-2236 (NCER - R82902401).

Long Term Goal 3: OPPTS Uses Endocrine Disruptor Screening and Testing Assays Developed by ORD to Create Validated Methods That Evaluate The Potential For Chemicals to Cause Endocrine-Mediated Effects in Order to Reduce or Prevent Risks to Humans and Wildlife From Exposure to Endocrine Disrupting Chemicals (EDCs)

- Ai N, DeLisle RK, Yu S, Welsh WJ. 2003. Computational models for predicting binding affinities of ligands for the wild-type androgen receptor and a mutated variant associated with prostate cancer. *Chem Res Toxicol* 16:1652-1660 (NCER – R826133).
- Ankley GT, Jensen KM, Kalh MD, Korte JJ, Makynen EA. 2001. Description and evaluation of a short-term reproduction test with the fathead minnow (*Pimephales promelas*). *Environ Toxicol Chem* 20:1276-1290 (NHEERL).
- Ankley GT, Kahl K, Jensen K, Hornung M, Korte JJ, Makynen EA, Leino RL. 2002. Evaluation of the aromatase inhibitor fadrozole in a short-term reproduction assay with the fathead minnow (*Pimephales promelas*). *Toxicol Sci* 67:121-130 (NHEERL).

- Ankley GT, Mekenyen OG, Kamenska VB, Schmieder PK, Bradbury SP. 2002. Reactivity profiles of ligands of mammalian retinoic acid receptors: A preliminary COREPA analysis. SAR/QSAR. Environ Res 13:365-377 (NHEERL).
- Ankley GT, RD Johnson. 2004. Small fish models for identifying and assessing the effects of endocrine-disrupting chemicals. Inst. Lab. Anim. Res. J. 45:469-483.**
- Arnold S, Robinson M K, Guillette LJ Jr., McLachlan JA. 1996. A yeast estrogen screen for examining the relative exposure of cells to natural and xeno estrogens. Environ Hlth Perspect 104:544-548 (NCER - R824760).*
- Arnold SF, Vonier PM, Collins BM, Klotz DM, Guillette LJ Jr., McLachlan JA. 1997. in vitro synergistic interaction of alligator and human estrogen receptors with combinations of environmental chemicals. Environ Hlth Perspect 105 (Suppl. 3):615-618 (NCER - R824760).*
- Betka M, Callard GV 1998. Cloning of an androgen receptor cDNA from *Squalus acanthias* testis. The Bulletin, Mount Desert Island Biological Laboratory 37:111.
- Betka M, Callard GV 1998. Negative feedback control of the spermatogenic progression by testicular estrogen synthesis: insights from the shark testis model. In: Neoplastic Transformation of Testicular Germ Cells, Rajpert-DeMeyts E, Grigor KM, and Skakkebaek NE, eds., Acta Physiologica, Microbiologica, Immunologica Scandinavica 106:252-258.
- Betka M, Callard GV. 1999. Stage-dependent accumulation of cadmium and induction of metallothionein-like binding activity in the testis of the dogfish shark *Squalus acanthias*. Biol Reprod 60:147-157. (NCER – R825434)
- Betka M, Welenc A, Franks DG, Hahn ME, Callard GV. 2000. Characterization of two aryl hydrocarbon receptor (AHR) mRNA forms in *Squalus acanthias* and stage-dependent expression during spermatogenesis. The Bulletin, Mount Desert Island Biological Laboratory 39:110-112. (NCER – R825434)
- Bradbury S, Kamenska V, Schmieder, P Ankley, G Mekenyen, O. 2000. A Computationally-Based Identification Algorithm for Estrogen Receptor Ligands. Part I. Predicting ER α Binding Affinity. Toxicol Sci 58:253-269 (NHEERL).
- Brown KW, Little SB, Rabinowitz JR. Submitted. The interaction of polycyclic aromatic hydrocarbons and their metabolites with the estrogen receptor: a computational docking study. Chem Res Toxicol (NHEERL).**
- Callard GV, Betka M, and Miller D. 1997. Unconventional models for toxicology research. In: Comprehensive Toxicology, Vol.10, Reproductive and Endocrine Toxicology, Section I. Male Reproductive Toxicology, K. Boekelheide, R. Chapin, P. Hoyer, C. Harris (eds), Elsevier, New York, pp. 235-247. (NCER – R825434)
- Callard GV, Callard IP 1999. Spermatogenesis in subavian vertebrates. In: Encyclopedia of Reproduction (eds., Knobil E., and Neill, J.), Vol 4, Academic Press, pp. 563-570. (NCER – R825434)
- Callard GV, McClusky L, Betka M. 1998 Apoptosis as a normal mechanism of growth control and target of toxicant actions during spermatogenesis: insights using the shark testis model. In: New Developments in Marine Biotechnology, LeGal Y, Halvorson H (eds), Plenum. pp. 125-128. (NCER – R825434)
- Carmichael NG, Barton H, Boobis AR, Cooper RL, Dellarco VL, Doerrer NG, Doe JE, Lamb JC, Pastoor TP. 2006. Agricultural chemical safety assessment: A multi-sector approach to the modernization of human safety requirements. Critical Reviews in Toxicology. 36:1-7.**
- Cooke JB, Hinton DE. 1999. Promotion by 17beta-estradiol and beta-hexachlorocyclohexane of

- hepatocellular tumors in medaka, *Oryzias latipes*. Aquatic Toxicol 45 (2-3):127-145 (NCER - R825298).
- Cooper RL, Lamb JC, Barlow SM, Bentley K, Brady AM, Doerrer NG, Eisenbrandt DL, Fenner-Crisp P, Hines RN, Irvine L, Kimmel CA, Koeter H, Li AA, Makris SL, Sheets L Speijers GJA, Witby K. 2006. A tiered approach to life stages testing for agricultural chemical safety assessment Critical Reviews in Toxicology. 36:69-98 (NHEERL).
- Cooper RL, Kavlock RJ. 2001. Endocrine disrupting chemicals (EDCs): session overview. Intl J Human Ecol Risk Assess 7:971-978 (NHEERL).
- Degitz SJ, Holcombe GW, Flynn KM, Kosian PA, Korte JJ, Tietge JE. 2005. Progress towards development of an amphibian-based thyroid screening assay using *Xenopus laevis*: Organismal and thyroidal responses to the model compounds 6-propylthiouracil, methimazole, and thyroxine. Toxicol Sci 87:353-364.
- Degitz SJ, Flynn KM, Holcombe GW, Korte JJ, Kosian PK, Tietge J. 2002. Development of an amphibian-based assay to screen for chemical effects on the thyroid axis. Toxicol Sci 66:276-275 (NHEERL).
- DeLisle RK, Yu S-J, Nair AC, Welsh WJ. 2001. Homology modeling of the estrogen receptor subtype Beta (ER-Beta) and calculation of ligand binding affinities. J Molecular Graphics and Modelling 20(2):155-167 (NCER - R826133).
- Engel KB, Callard GV. 2006. Endocrinology of Leydig cells in nonmammalian vertebrates. In: Payne A, Hardy M (eds). The Leydig cell in health and disease. Humana Press (in press). (NCER - R825434)**
- Engel, KB, Callard GV 2004. The testis and spermatogenesis. In: Jamieson B, Hamlett W (eds). Reproductive biology and phylogeny of chondrichthyes: sharks, skates and chimeras. Science Publishers, Inc., Enfield NH (in press, January '05) (NCER – R825434),
- Goldman JM, Laws SC, Balchak SK, Cooper RL, Kavlock RJ. 2000. Endocrine disrupting chemicals: Prepubertal exposures and effects on sexual maturation and thyroid activity in the female rat. A review of the EDSTAC recommendations. Crit Rev Toxicol 30:135-196 (NHEERL).
- Goldman JM, Murr AE, Cooper RL. 2007. The rodent estrous cycle: Characterization of vaginal cytology and its utility in toxicological studies. Birth Defects Res B Dev Reprod Toxicol. 80:84-97. (NHEERL).
- Gray Jr LE, Ostby J, Wilson VS, Lambright CR, Bobseine K, Hartig P, Hotchkiss A, Wolf CJ, Furr JR, Price M, Parks L, Cooper RL, Stoker TE, Laws SC, Degitz SJ, Jensen KM, Kahl MD, Korte JJ, Makynen EA, Tietge JE, Ankley GT. 2002. Xenoendocrine disruptors-tiered screening and testing: filling key data gaps. Toxicology 27:181-182:371-382 (NHEERL).
- Gray Jr LE, Owens JW, Timm G. Hershberger bioassay in rodents: 2006. OECD guideline for the testing of chemicals. U.S. Environmental Protection Agency, Washington, DC, EPA/630/R-06/009. (NHEERL)
- Gray Jr LE, Wilson VS, Noriega NC, Lambright CR, Furr JR, Stoker TE, Laws SC, Goldman J, Cooper RL, Foster PM. 2004 Use of the laboratory rat as a model in endocrine disruptor screening and testing. ILAR J. 45(4):425-37 (NHEERL).
- Greytak SR, Callard GV. 2007. Cloning of three estrogen receptors (ER) from killifish (*Fundulus heteroclitus*): Differences in populations from polluted and reference environments. Gen Comp Endocrinol 150(1):174-188 (NCER- R831301).
- Greytak SR, Champlin D, Callard GV. 2005. Isolation and characterization of two cytochrome

- P450 aromatase forms in killifish (*Fundulus heteroclitus*): Differential expression in fish from polluted and unpolluted environments.* *Aquatic Toxicol* 71(4):371-389 (NCER- R831301).
- Hartig PC, Bobseine KL, Britt BH, Cardon MC, Lambright CR, Wilson VS, Gray Jr LE. 2002. Development of two androgen receptor assays using adenoviral transduction of MMTV-luc reporter and/or hAR for endocrine screening. *Toxicol Sci* 66:82-90 (NHEERL).
- Helbing CC, Bailey CM, Ji L, Gunderson M, Zhang F, Veldhoen N, Skirrow RC, Mu R, Lesperance M, Holcombe GW, Kosian PA, Tietge JE, Degitz SJ. 2007. Identification of gene expression indicators for thyroid axis disruption in a *Xenopus laevis* metamorphosis screening assay: Part 1. Effects on the brain. *Aquatic Toxicology* 82:227-241. (NHEERL)
- Helbing, CC, Ji L, Bailey CM, Veldhoen N, Zhang F, Holcombe GW, Kosian PA, Tietge JE, Degitz SJ. 2007. Identification of gene expression indicators for thyroid axis disruption in a *Xenopus laevis* metamorphosis screening assay: Part II. Effects on the tail and hindlimb. *Aquatic Toxicology* 82:215–226. (NHEERL)
- Henry TR, Denny JD, Tapper MA, Sheedy BR, Schmieder P. in Press. A comparison of alkylphenol binding to fish and mammalian estrogen receptors with relevance to risk assessments. *Toxicol Sci* (NHEERL).**
- Hutchinson TH, Ankley GT, Segner H, Tyler CR. 2006. Screening and testing for endocrine disruption in fish – biomarkers as "signposts," not "traffic lights," in risk assessment. *Environmental Health Perspectives* 114:106-114 (NHEERL).
- Ingersoll CG, Hutchinson T, Crane M, Dodson S, DeWitt T, Gies A, Huet M, McKenney CL Jr., Oberdörster E, Pascoe D, Versteeg DJ, Warwick O. 1999. Laboratory toxicity tests for evaluating potential effects of endocrine-disrupting compounds. In: Endocrine Disruption in Invertebrates: Endocrinology, Testing, and Assessment, ed. by P.L. DeFur, M. Crane, C Ingersoll and L Tattersfield, Society of Envir Tox Chem, Pensacola, FL, Chapter 3, 107-197 (NHEERL)
- Jensen KM, GT. Ankley. 2006. Evaluation of a commercial kit for measuring vitellogenin in the fathead minnow (*Pimephales promelas*). *Ecotoxicology and Environmental Safety* 64:101-105. (NHEERL).
- Jensen KM, Korte JJ, Kahl MD, Ankley GT. 2001. Aspects of basic reproductive biology and endocrinology in the fathead minnow (*Pimephales promelas*). *Comp Biochem Physiol* 128C:127-141 (NHEERL).
- Kahl MD, Jensen KM, Korte JJ, Ankley GT. 2001. Effects of handling on endocrinology and reproductive performance of the fathead minnow (*Pimephales promelas*). *Fish Biol* 59:515-523 (NHEERL).
- Koger CS, The SJ, Hinton DE. 1999. Variations of light and temperature regimes and resulting effects on reproductive parameters in medaka (*Oryzias latipes*). *Biol Reproduct* 61:1287-1293 (NCER - R825298).
- Koger CS, The SJ, Hinton DE. 2000. Determining the sensitive developmental stages of intersex induction in medaka (*Oryzias latipes*) exposed to 17 beta-estradiol or testosterone. *Marine Environ Res* 50:201-206 (NCER - R825298).
- Korte J, Tietge JE, Degitz SJ. 2003. Development of a gene-expression array focusing on the hypothalamus-pituitary thyroid axis in *Xenopus laevis*. *Toxicol Sci* 72:262-273 (NHEERL).
- Korte JJ, Mylchreest E, Ankley GT. 2004. Comparative evaluation of ELISAs for detecting vitellogenin in the fathead minnow (*Pimephales promelas*) -- A response to Tyler et al. *Comparative Biochemistry and Physiology, Part C* 138:533-536 (NHEERL).

- Kullman SW, Hamm JT, Hinton DE. 2000. Identification and characterization of cDNA encoding Cytochrome P450 3A from the fresh water teleost medaka (*Oryzias latipes*). *Arch Biochem Biophys* 380:29-38 (NCER - R825298).
- Kullman SW, Hinton DE. 2001. Identification characterization and ontogeny of a second cytochrome P450 3A gene from the fresh water teleost medaka (*Oryzias latipes*). *Molecular Reproduct Develop* 58:149-158 (NCER - R825298).
- Larkin P, Folmar LC, Hemmer MJ, Poston AJ, Denslow ND. 2003. Expression profiling of estrogenic compounds using a sheepshead minnow cDNA macroarray. *Environ Health Perspect Toxicogen* 111:29-36 (NHEERL).
- Larkin P, Folmar LC, Hemmer MJ, Poston AJ, Lee S, Denslow ND. 2002. Array technology as a tool to monitor endocrine disruption in wild fish populations. *Marine Environ Res* 54:395-399 (NHEERL).
- Larkin, P, Villeneuve DL, Knoebl I, Miracle AL, Carter BJ, Liu L, Denslow ND, Ankley GT. 2007. Development and validation of a 2,000 gene microarray in the fathead minnow, *Pimephales promelas*. Envir Tox Chem. In press. (NHEERL).**
- Laws SC, Ferrell JM, Stoker TE, Schmid J, Cooper RL. 2000. The effect of atrazine on puberty in female wistar rats:an evaluation in the protocol for the assessment of pubertal development and thyroid function. *Toxicol Sci* 58:366-376 (NHEERL).
- Laws SC, Stoker TE, Goldman JM, Wilson V, Gray LE Jr., Cooper RL. in Press. The U.S. EPA's Endocrine Disruptor Screening Program: in Vitro and in vivo mammalian tier I screening assays. in Ron Hines (ed), Developmental Toxicology (NHEERL).**
- McClusky L, Callard GV. *In vitro* effects of serum and steroids on cell proliferation and death during spermatogonial stages of spermatogenesis in the dogfish shark (*Squalus acanthias*). *Gen Comp Endocrinol* (NCER - R825434).
- McClusky L, Callard GV. Stage-dependence, seasonal changes and effects of cadmium on cell cycle and apoptotic activities during the spermatogenic progression in the dogfish shark (*Squalus acanthias*). *Biol Reproduct* (NCER - R825434).
- McClusky LM, Callard GV. 1997. In situ end-labeling of fragmented DNA in apoptotic germ cells in the spiny dogfish (*Squalus acanthias*) testis. *The Bulletin, Mount Desert Island Biological Laboratory* 36:106-107 (NCER – R825434)
- McClusky LM. 2005. Stage and season effects on cell cycle and apoptotic activities of germ cells and Sertoli cells during spermatogenesis in the spiny dogfish (*Squalus acanthias*). Reproduction 129(1):89-102 (NCER - R825434).**
- McClusky LM. 2006. Stage-dependency of apoptosis and the blood-testis barrier in the dogfish shark (*Squalus acanthias*): cadmium-induced changes as assessed by vital fluorescence techniques. *Cell Tissue Res* 325(3):541-553 (NCER - R825434).
- McKenney CL Jr. 1999. Hormonal processes in decapod crustacean larvae as biomarkers of endocrine disrupting chemicals in the marine environment. In: Environmental Toxicology and Risk Assessment: Standardization of Biomarkers for Endocrine Disrupting Chemicals in the Marine Environment: Eighth Volume, ASTM STP 1364, ed. by DS Henshel, MC Black and MC Harrass, American Society for Testing and Materials, West Conshohocken, PA, pp. 119-135 (NHEERL).
- Mekenyana O, Kamenska V, Schmieder P, Ankley G, Bradbury S. 2000. A computationally-based identification algorithm for estrogen receptor ligands. Part II. Evaluation of a hER α binding affinity model. *Toxicol Sci* 58:270-281 (NHEERL).

- Mekenyany O, Nikolova N, Schmieder P. 2002. Dynamic 3D QSAR techniques: Applications in toxicology. *J Mol Structure (TheoChem)*. 622:147-165 (NHEERL).
- Ouyang M, Welsh WJ, Georgopoulos P. 2004. Gaussian mixture clustering and imputation of microarray data. *Bioinformatics*, 12, 917-23 (NCER – R826133).
- Owens W, Zeiger E, Walker M, Ashby J, Onyon L, Gray Jr LE. 2006. The OECD program to validate the rat Hershberger bioassay to screen compounds for in vivo androgen and antiandrogen responses: Phase 1. Use of a potent agonist and a potent antagonist to test the standardized protocol. *Environ Health Perspect.* 114(0):000-000 (NHEERL).
- Perkins R, Anson J, Branham W, Fang H, Tong W, Welsh WJ, Chen Y, Meehan J, Jackson M, Nossaman R, Shi L, Sheehan D. 2000. The Estrogen Knowledge Base (EKB), a Prototype Toxicological Knowledge Base for Endocrine Disrupting Compounds. In: QSARs for endocrine disruption, pollution prevention, toxicity screening and persistence prediction. Walker JD, ed. SETAC: Pensacola (NCER – R826133).
- Perkins R, Fang H, Tong W, Welsh WJ. 2003. Quantitative structure-activity relationship methods: perspectives on drug discovery and toxicology. *Environ Toxicol Chem* 22:1666-79 (NCER – R826133).
- Puri S, Chickos JS, Welsh WJ. 2001. Determination of vaporization enthalpies of polychlorinated biphenyls by correlation gas chromatography. *Analyt Chem* 73(7):1480-1484 (NCER - R826133).
- Puri S, Chickos JS, Welsh WJ. 2002. Three-dimensional quantitative structure-property relationship (3D-QSPR) models for prediction of thermodynamic properties of polychlorinated biphenyls (PCBs): enthalpy of sublimation. *J Chem Info Comput Sci* 42(1):109-116 (NCER - R826133).
- Puri S, Chickos JS, Welsh WJ. 2002. Three-dimensional quantitative structure-property relationship (3D-QSPR) models for prediction of thermodynamic properties of polychlorinated biphenyls (PCBs): enthalpy of vaporization. *J Chem Info Comput Sci* 42(2):299-304 (NCER - R826133).
- Puri S, Chickos JS, Welsh WJ. 2003. Three-dimensional quantitative structure-property relationship (3D-QSPR) models for prediction of thermodynamic properties of polychlorinated biphenyls (PCBs): enthalpies of fusion and their application to estimates of enthalpies of sublimation and aqueous solubilities. *J Chem Info Comput Sci* 43(1):55-62 (NCER - R826133).
- Schmieder P, Ankley G, Mekenyany O, Walker J, Bradbury S. 2003. QSAR models for predicting ER binding affinity of structurally diverse chemicals. *Environ Toxicol Chem-QSAR Review Issue* 22:1844-1854 (NHEERL).
- Schmieder P, Mekenyany O, Bradbury S, Veith G. in Press. QSAR prioritization of chemical inventories for endocrine disruptor testing. Pure Appl Chem (NHEERL).**
- Schmieder P, Tapper M, Linnum A, Denny J, Kolanczyk R, Johnson R. 2000. Optimization of a precision-cut trout liver tissue slice assay as a screen for vitellogenin induction: Comparison of slice incubation techniques. *Aquatic Toxicol* 49:251-268 (NHEERL).
- Schmieder PK, Aptula A, Routledge E, Sumpter J, Mekenyany O. 2000. Estrogenicity of alkylphenolic compounds: A 3-D structure activity evaluation of gene activation. *Environ Toxicol Chem* 19:1727-1740 (NHEERL).
- Schmieder PK, Koleva Y, Mekenyany O. 2002. A reactivity pattern for discrimination of ER agonism and antagonism based on 3-D molecular attributes. *SAR/QSAR. Environ Res*

- 13:353-364 (NHEERL).
- Sikora R, Betka M, Callard GV. Molecular cloning, stage-related differences, and effects of estrogen on expression of an estrogen receptor beta-subtype in the testis of the dogfish shark (*Squalus acanthias*). Gen Comp Endocrinol (NCER - R825434).**
- Stoker TE, Laws SC, Guidici D, Cooper RL. 2000. The effects of atrazine on puberty and thyroid function in the male Wistar rat: An evaluation of a protocol for the assessment of pubertal development and thyroid function. *Toxicol Sci* 58:50-59 (NHEERL).
- Stoker TE, Parks LG, Gray LE, Cooper RL. 2000. Endocrine-disrupting chemicals: prepubertal exposures and effects on sexual maturation and thyroid function in the male rats. A focus on the EDSTAC recommendations. *Crit Rev Toxicol* 30:197-252 (NHEERL).
- Tabb MM, Kholodovych V, Grun F, Zhou C, Welsh WJ, Blumberg B. 2004. Highly chlorinated PCBs inhibit the human xenobiotic response mediated by the steroid and xenobiotic receptor (SXR). Environ Health Perspect 112 (2):163-170 (NCER – R826-133).**
- Tamura H, Gaido KW, Dorman DC, Gray LE. 2001. Reply. *Toxicol Sci* 62:183-184 (NHEERL).
- Tamura H, Yoshikawa H, Richard AM, Ross SM, DeLisle R, Welsh WJ, Gaido KW. 2003. Interaction of organophosphate pesticides and related compounds with the androgen receptor. *Environ Health Perspect* 111:1-8 (NCER – R826133).
- The SJ, Hinton DE. 1998. Gender-specific growth and hepatic neoplasia in medaka (*Oryzias latipes*). *Aquat Toxicol* 41:141-159 (NCER - R825298).
- Tong W, Perkins R, Chen Y, Welsh WJ, Lowis D, Goddett DW, Heritage TW, Sheehan DM. 1998. Evaluation of QSAR methods for large-scale prediction of chemicals binding to the estrogen receptor. *J Chem Inf Comp Sci* 38:669-677 (NCER – R826133).
- Tong W, Perkins R, Strelitz R, Collantes ER, Gardiner S, Keenan S, Welsh WJ, Branham WS, Sheehan DM. 1997. Quantitative structure-activity relationships (QSARs) for estrogen binding to the estrogen receptor: predictions across species. *Environ Hlth Perspect* 105(10):1116-1124 (NCER - R826133).
- Tong W, Perkins R, Xing L, Welsh WJ, Sheehan DM. 1997. QSAR models for binding estrogenic compounds to the α and β estrogen receptors. *Endocrinol* 138:4022-4025 (1997) (NCER – R826133).
- Tong W, Welsh WJ, Shi L, Fang H, Perkins R. 2002. Structure-activity relationship approaches and applications. *Environ Toxicol Chem* 22(8):1680-95 (NCER – R826133).
- Tuberty SR McKenney CL Jr. 2005. Ecdysteroid responses of estuarine crustaceans exposed through complete larval development to juvenile hormone agonist insecticides. Integr Comp Biol . 45(1):106-117 (NHEERL).**
- Verslycke TA, Fockeley N, McKenney C Jr., Roast S, Jones M, Mees J, Janssen C. in Press. Mysids as potential test organisms for the evaluation of environmental endocrine disruption: a review. Environ Toxicol Chem (NHEERL).**
- Wang C, Bonner K, Callard GV. A homolog of the germ cell specific vasa-related genes is stage-related and germ cell specific in shark testis. Biol Reproduct (NCER - R825434).**
- Wang C, Callard GV 2001. Polymerase chain reaction (PCR)-differential display identifies a subset of stage-dependent and cadmium-regulated genes during spermatogenesis in *Squalus acanthias*. The Bulletin, Mount Desert Island Biological Laboratory 40:54-7. (NCER – R825434)
- Wang C, Callard GV. Molecular cloning and stage-dependence of an S-100 cDNA from the shark testis. Biol Reproduct (NCER - R825434).**

- Wang C, Callard GV. Molecular cloning of BRAP2 cDNA, a stage-dependent and cadmium-regulated gene in the shark testis model. Biochim Biophys Acta (BBA)-Bioenerget (NCER - R825434).**
- Wang C-H, Betka M, Callard GV. Molecular cloning and stage-dependent expression of a cytochrome P450 aromatase during spermatogenesis in shark (*Squalus acanthias*) testis. Biol of Reproduct (NCER - R825434).**
- Wilson VS, Bobseine K, Gray Jr LE. 2004. Development and characterization of a cell line that stably expresses an estrogen- responsive luciferase reporter for the detection of estrogen receptor agonist and antagonists. Toxicol. Sci., 81:69-77 (NHEERL).**
- Wilson VS, Bobseine K, Lambright CR, Gray LE Jr. 2002. A novel cell line, MDA-kb2, that stably expresses an androgen- and glucocorticoid-responsive reporter for the detection of hormone receptor agonists and antagonists. Toxicol Sci 66:69-81 (NHEERL)
- Wilson VS, Cardon MC, Thornton J, Korte J, Ankley GE, Welch J, Gray Jr LE, Hartig PC. 2004 Cloning, expression, and characterization of androgen receptor and isolation of estrogen receptor alpha from the fathead minnow (*Pimephales promelas*). Environ. Sci Tech., Dec 1;38(23):6314-21 (NHEERL).**
- Xing L, Welsh WJ, Tong W, Perkins R, Sheehan DM. 1999. Comparison of estrogen receptors α and β based on comparative molecular field analysis (CoMFA). SAR and QSAR in Environ Res 10, 215-237 (NCER – R826133).
- Yoon S, Welsh WJ. 2004. Identification of a minimal subset of receptor conformations for improved multiple conformation docking and two-step scoring. J Chem. Inf. Comp. Sci., 44(1):88-96 (NCER – R826133).**
- Yu SJ, Keenan SM, Tong W, Welsh WJ. 2002. Influence of the structural diversity of data sets on the statistical quality of three-dimensional quantitative structure-activity relationship (3D-QSAR) models: predicting the estrogenic activity of xenoestrogens. Chem Res Toxicol 15(10):1229-1234 (NCER – R826133).
- Zauhar RJ, Moyna G, Tian L, Li Z, Welsh WJ. 2003. Shape Signatures: A New Approach to Computer-Aided Ligand- and Receptor-Based Drug Design, J Med Chem. 46, 5674-5690 (NCER – R826133)

Citations in bold include incomplete citation information (e.g., in press, submitted, or may be abstracts)

Citations in italics are supported by resources from an extramural program other than endocrine disruptors but are related

Citations in red are those published in 2004-2007

NCER – National Center for Environmental Research – research conducted through the extramural grants program – R82- is the grant number

NHEERL – National Health and Environmental Effects Research Laboratory – research conducted intramurally

NRMRL – National Risk Management Research Laboratory – research conducted intramurally

NERL – National Exposure Research Laboratory – research conducted intramurally

NCEA- National Center for Environmental Assessment – research conducted intramurally

NCCT – National Center for Computational Toxicology – research conducted intramurally