

Curriculum Vitae
Roxanne L. Reger

Education:

MS Psychology, 1986, Tulane University, New Orleans, LA
BA Psychology, 1981, State University of New York, Buffalo, NY

Thesis Topic:

The effects of neonatal androgen on receptivity and neural LHRH pathways in the female prairie vole, *Microtus ochrogaster*. Directed by Arnold A. Gerall, Department of Psychology, Tulane University.

Preliminary Exams for the Ph.D.:

Major: Physiological Psychology, passed 1987
Minor: Comparative Psychology, passed 1987
Minor: Sensory Processes and Perception, passed 1987
Minor: Statistics, passed 1984

Honors and Awards:

Teaching Assistantship, Department of Psychology, Tulane University, 1982 – 1989.
Research Clerkship, Alton Ochsner Medical Foundation, Research Division, Summer, 1988.
Advanced training in immunocytochemistry with Dr. Zsolt Liposits, University of Missouri at Columbia, Summer, 1985.
Edward Bilodeau Summer Research Stipendship, Tulane University, Summer, 1984.

Technical Experience:

Isolation, purification and analyses of E. coli, yeast and mammalian nuclei acids including analytical and preparative agarose and polyacrylamide gel electrophoresis, enzymatic manipulations and DNA sequencing.
RNA and DNA slot blots, Northern blots, and Southern blots including preparation of ³²P-labeled RNA probes.
RNase protection assays.
PCR and RT-PCR, including design and end-labeling of primers.
Cloning and sub-cloning using traditional and PCR-based cloning techniques.
PCR-based site-directed mutagenesis.
Cell fractionation and organelle isolation by differential centrifugation.

Protein isolation, fractionation, and analyses utilizing Western blots, chemiluminescent detection and immunoprecipitation.

Microinjection of cRNA into *Xenopus* oocytes.

Cell culture including MCF-7 cells, rat mesenchymal stromal cells, Swiss albino 3T3, Balb-C and K-Balb fibroblasts, CHO cells, A6 amphibian cells and *Xenopus* oocytes.

Establishment and maintenance of breeding colonies of rats and prairie voles in accordance with AALAC and USDA standards.

Quantification of male and female sexual behaviors and maternal behaviors in various rodent species.

Design and implementation of tools for the study of social behaviors in captive colonies of Ring-tailed lemurs, *Lemur catta*.

General small animal surgery.

Stereotaxic surgery including ablation of tissue, infusion of cells, and placement of indwelling cannulae and electrodes in rat brains.

Administration of sex hormones to rodents both neonatally and as replacement therapy in adults.

Basic and pressure-controlled rodent perfusion.

Tissue and cell-smear histology including various sectioning and staining protocols.

Immunocytochemical processing of neural tissue, including modifications of the Sternberger PAP method, ABC, silver enhancement and immunofluorescence protocols.

Photomicrography and black and white print developing.

Deconvolution microscopy for immunofluorescence.

Computerized image analysis and 3D reconstruction of immunocytochemically-processed neural tissue.

Biostatistical analyses; Sigma Plot; Prism; BMD statistical package.

MAC and PC-based word processing and graphics.

Oracle-based TAMS requisitioning.

Related Work Experience:

1982 – 1989: Teaching Assistant, Department of Psychology, Tulane University. Lecture classes: Introductory Psychology, Adolescent Psychology, Developmental Psychology, and Physiological Psychology. Laboratory classes: Physiological Psychology, Comparative Psychology, Experimental Psychology.

Summer, 1988: Research Clerkship at Alton Ochsner Medical Foundation, Research Division. Duties included immunocytochemical processing of neural tissue and testing newly-developed antibodies. Supervisor: Allan MacPhee, Ph.D.

February 1, 1993 – July 31, 1994: Medical Research Technician, Department of Pathology, Tulane University Medical School. Characterization of lysosomal biogenesis and its involvement in tumor metastasis in normal and K-ras-transformed fibroblast cell lines. Supervisor: Russell B. Wilson, Ph.D.

August 1, 1994 – October 10, 1997: Medical Research Specialist, Department of Biochemistry, Tulane University Medical School. Investigation into the mechanisms of transcription termination and 3' end formation in the yeast, *Saccharomyces cerevisiae*. Supervisor: Linda E. Hyman, Ph.D.

October 13, 1997 – October 31, 2000: Laboratory Supervisor/Teacher, Department of Medicine, Section of Gastroenterology, Tulane University Health Sciences Center. Characterization and regulation of the epithelial sodium channel (ENaC) in A6 amphibian renal cells and as a cloned channel expressed in *Xenopus* oocytes. Supervisor: Mouhamed S. Awayda, Ph.D.

November 1, 2000 – Present: Research Instructor, Center for Gene Therapy, Tulane University Health Sciences Center. Characterization of adult bone marrow stromal cells from several species and investigations into their potential therapeutic use in the treatment of neurodegenerative disease. Supervisor: Darwin J. Prockop, M.D., Ph.D.

Publications:

Chen, S., **Reger, R.**, Miller, C. & Hyman, L. Transcriptional terminators of RNA polymerase II are associated with yeast replication origins. *Nucleic Acids Research* 24(15): 2885-2893, 1996.

Magrath, C., Chen, S., Lund, K., Jackson, T., **Reger, R.**, Leung, W.-C., & Hyman, L.E. Messenger RNA 3'-end formation: Dissection of a yeast terminator sequence. *SAAS Bulletin. Society for Biochemistry and Biotechnology*, 11: 33-40, 1998.

Awayda, M.S., Boudreaux, M.J., **Reger, R.L.**, & Hamm, L.L. Regulation of the epithelial Na⁺ channel by extracellular acidification. *Amer. J. of Physiol., Cell*, 279(6): C1896-905, 2000.

Schwarz, E.J., **Reger, R.L.**, Alexander, G.M., Class, R., Azizi, S.A., & Prockop, D.J. Rat marrow stromal cells rapidly transduced with a self-inactivating retrovirus synthesize L-DOPA in vitro. *Gene Therapy*, 8: 1214 – 1223, 2001.

Posters and Presentations:

Hoffman, N., **Reger, R.L.**, & Gerall, A.A. Immunocytochemical localization of LHRH and other peptides. New Orleans Neuroscience Minisymposium, New Orleans, LA, 1984.

Gerall, A.A., **Reger, R.L.**, & Kruger, E. An animal model for studying aging in reproductive processes; its use in examining whether brain tissue transplants can restore

reproductive competence. The Gerontology Society of America, New Orleans, LA, 1985.

Gerall, A.A., & **Reger, R.L.** Effects of neonatal androgen on fertility and LHRH neurons in the vole, *Microtus ochrogaster*. Annual Conference on Reproductive Behavior, Asilomar, CA, 1985.

Reger, R.L. & Gerall, A.A. Immunocytochemical localization of LHRH neurons in the accessory olfactory bulb of *Microtus ochrogaster*. Annual Meeting of the Neuroscience Society of Birmingham, Birmingham, AL, 1985.

Reger, R.L., Wysocki, C.J., Carter, C.S., & Gerall, A.A. Luteinizing hormone releasing hormone in the accessory olfactory bulb of the prairie vole. Annual Conference on Reproductive Behavior, Montreal, Canada, 1986.

Gerall, A.A., & **Reger, R.L.** Neonatal androgen effects on reproduction of female prairie voles, *Microtus ochrogaster*, throughout their lifespan. Annual Conference on Reproductive Behavior, Mexico City, Mexico, 1987.

Reger, R.L., Gerall, A.A., Wysocki, C.J., & Carter, C.S. LHRH neuronal system in the accessory olfactory bulb of the prairie vole, *Microtus ochrogaster*. Society for Neuroscience, New Orleans, LA, 1987.

Reger, R.L., Hsieh, W.-S., & Gerall, A.A. Effect of neonatal and adult estrogen on hypothalamic LHRH and CA neurons in the female vole (*Microtus ochrogaster*). Annual Conference on Reproductive Behavior, Omaha, NE, 1988.

Reger, R.L., Gerall, A.A., & Givon, L. Distribution and hormonal alterations of immunoreactive estrogen receptors in the brain of prairie voles. Annual Conference on Reproductive Behavior, Saratoga Springs, NY, 1989.

Chen, S., **Reger, R.L.**, & Hyman, L.E. Mutagenic analysis of the *cis*-acting sequences involved in transcription termination in yeast. Southern Regional Yeast Meeting, 1995.

Chen, S., **Reger, R.L.**, & Hyman, L.E. Dissecting *cis*-acting sequences involved in RNA polymerase II transcription termination in yeast. Southern Regional Yeast Meeting, 1996.

Hyman, L.E., Chen, S., Magrath, C., **Reger, R.L.**, & Miller, C. Termination of transcription of RNA polymerase II in yeast: Role for *cis*-acting sequences and *trans*-acting factors. Joint Meeting of the American Society for Biochemistry and Molecular Biology and American Society for Investigative Pathology, 1996.

Awayda, M.S., Tobey, N.A., **Reger, R.L.**, & Orlando, R.C. ENaC participates in the formation of a non-selective cation channel in rabbit esophageal epithelia. FASEB Meeting, San Diego, CA, 2000.