

Benson T. Akingbemi, DVM, PhD

Professor of Anatomy and Developmental Biology Department of Anatomy, Physiology and Pharmacology

Dr. Akingbemi joined the Auburn University College of Veterinary Medicine in August, 2004. He had his initial education in Nigeria where he received the D.V.M., M.S., and Ph.D. degrees from the University of Ibadan. With a Research Fellowship from the National Institutes of Health, Dr. Akingbemi came to the United States in 1997 for postdoctoral training. Between 1997 and 2004, he worked on environmental and molecular toxicology investigating the effects of environmental agents on testicular and Leydig cell function in Matthew Hardy's Laboratory, Center for Biomedical Research of the Population Council, Rockefeller University, New York.

Research Interests:

The laboratory has interests in male reproductive biology and toxicology. The male sex steroid hormone, testosterone, which maintains the male phenotype, is produced primarily by Leydig cells in the testis. However, the concept that 'androgen is male and estrogen is female' is no longer tenable because estrogen receptors (ESRs) and androgen receptors are both localized to the male reproductive tract, including Leydig cells. Data from transgenic mice lacking ESRs support the hypothesis that estrogen has a physiological role in male reproduction. However, there is growing public concern that chemicals in the environment (food, air, water), which have estrogenic properties, may exert adverse effects on reproductive health. These compounds mimic and/or antagonize steroid hormones, acting through steroid hormone receptors, and interfere with the function of the endocrine axis. Our major focus will be investigation of the role of steroid hormone receptors in mediating effects of environmental toxicants on Leydig cell differentiated function and male reproduction.

Jennifer R. Panizzi, PhD

Assistant Professor of Physiology Department of Anatomy, Physiology and Pharmacology

Dr. Panizzi joined the Auburn University College of Veterinary Medicine faculty in 2013. A native of Tennessee, Dr. Panizzi received a B.S. degree majoring in both chemistry and biology (1998) from Austin Peay State University in Clarksville, TN, then earned her Ph.D. (2007) from Vanderbilt University in Nashville, TN. Dr. Panizzi continued her training as a postdoctoral fellow in the Nephrology Division at Massachusetts General Hospital/Harvard Medical School in Boston, MA., where she was awarded a Ruth L. Kirschstein National Research Service Award from the National Institutes of Health.

Research Interests:

The unifying theme of our research program is to utilize the power of the zebrafish model system to characterize morphological and molecular consequences resulting from coding sequence mutations and/or environmental changes during development. Current research in the lab includes 1) evaluating the safety of novel therapeutic drugs, 2) conducting environmental toxicity studies, and 3) elucidating the molecular mechanisms underlying genetic diseases.