

Dr. Andrew J. Andres
UNLV School of Life Sciences
<http://faculty.unlv.edu/aandres/index.html>

Ph.D. in Cell Biology, Developmental Biology, and Molecular Genetics from Indiana University, Bloomington.

Dr. Andres' Research

Dr. Andrew J. Andres is currently an associate professor at the School of Life Sciences at the University of Nevada Las Vegas. He teaches several classes at UNLV. These classes include, Biology 304X (Molecular Genetics), Biology 489/689 (Developmental Genetics), and Biology 196 (Principles of Modern Biology I). He has always been interested in the way things work in nature, which made him very interested in biology from early childhood. His interest in molecular pathways and genetics started in college. He majored in biology during his undergraduate career and, as he learned more about biology, he became interested in genetics. He got his Ph.D. in Cell Biology, Developmental Biology, and Molecular Genetics from Indiana University, Bloomington. The research that Dr. Andres is currently involved in at the University of Nevada Las Vegas concentrates on the molecular details of how cell-signaling pathways function during development and aging in animals. His specific organism of choice is the fruit fly, *Drosophila melanogaster*. The interesting aspect of his research is that there are certain biological and metabolic pathways in *Drosophila melanogaster* that are conserved in humans; therefore, by experimenting on drosophila, certain questions can be answered about the pathways that occur in the human body. There are two major areas of research that his lab focuses on. They include steroid signaling and *Notch* signaling. Steroid hormones play an important role in the regulation of many physiological responses. There are important features of steroid-regulated programmed cell death. Notch signaling is a highly conserved cell signaling system present in most multicellular organisms and is important for cell-cell communication. The national associations in his field currently include the National Science Foundation and the National Institute of Health. Some of his major journals include Cell Science, Developmental Biology, and PLoS Genetics.

Courses taught

- BIOL 196 Modern Biology I: Structural and chemical nature of cells, complex organisms and cellular environments. Transmission and molecular genetics, cell communication, reproduction and energetics. For Biological Sciences majors and others pursuing advanced study in biology. Credits 4 Lab/Lecture/Studio Hours Three hours lecture and three hours laboratory. Notes Satisfies the General Education Core requirement for a laboratory science course.
- BIOL 304 Molecular Genetics: Comprehensive survey course designed to cover the basic principles that deal with the physical and chemical nature of genes. Specific topics include the structure/function of genes, genome organization, DNA replication and recombination, protein synthesis, regulation of gene expression, chromatin structure, epigenetic effects, and genetic engineering. Credits 4 Prerequisites BIOL 196.

- BIOL 489 Developmental Biology: Topics in molecular genetics of developmental processes explored through current literature. Credits 3 Prerequisites BIOL 300, and BIOL 405 or CHEM 474. May be repeated to a maximum of six credits.

Professional Associations

- National Science Foundation <http://www.nsf.gov/>
- National Institute of Health <http://www.nih.gov/>

Journals

- Cell Science <http://jcs.biologists.org/>
- Developmental Biology
http://www.elsevier.com/wps/find/journaldescription.cws_home/622816/description#description
- PLoS Genetics <http://www.plosgenetics.org/home.action>