

Thematic Program: Cell, Molecular, & Developmental Biology
Program Director: Brad Yoder, Ph.D.
Program Co-Director: Rosa Serra, Ph.D.

Thematic Program Description (*provided by Program*)

The CMDB theme will consist of faculty whose research interests focus on basic processes in cell biology (e.g. protein trafficking, cell matrix interactions, organelle assembly and function), molecular biology (e.g. gene regulation, protein engineering) and embryonic and post-natal developmental biology (e.g. cell differentiation, growth, patterning, and morphogenesis). Additional areas of emphasis related to developmental biology will include stem cell biology, tissue repair, regeneration and engineering, mechanisms of birth defects as well as post-natal conditions with a developmental etiology. Research activities in the laboratories of CMDB faculty will utilize cell and molecular biology techniques to study normal cellular processes, embryonic and post-natal development as well as associated disease conditions. Model systems used will likely range from *in vitro* cell culture models to a wide range of *in vivo* model organisms including *C. elegans*, *Drosophila*, *Xenopus*, and mouse. This is intended to be a very broad based theme. Faculty members in the CMDB theme are expected to provide high-quality training and research opportunities for the CMDB students and must be willing to participate in teaching endeavors involving core and theme-focused classes as well as journal clubs. Faculty are also expected to participate in recruitment and admissions as well as thesis committees. Faculty will maintain active research programs with significant extramural research support. Students accepted into the CMDB theme will be instructed in the fundamentals of cell and molecular biology, genetics, biochemistry, statistics, and the basic functions of organ systems. These basic courses will be followed by more intense theme based electives of interest to the student and the preceptor's laboratory.

Thematic Program: Interdisciplinary Genetics
Program Director: Ada Elgavish, Ph.D.

Thematic Program Description (*provided by Program*)

The main goal of the UAB Interdisciplinary Genetics Graduate Program (IGGP) is to provide students interested in genetics with an excellent, flexible didactic experience and a large pool of mentors with expertise in a wide variety of areas of genetics, to prepare them for independent and innovative careers in research and training. The research interests of our faculty span the fields of genetics, cell biology, molecular and developmental biology. Modern molecular approaches are used to study gene structure, expression and function in diverse experimental systems from humans and mice to bacteria. The Program emphasizes a broad approach to the fundamental principles of genetics, development and molecular biology combined with extensive research training. The IGGP is designed to permit close interaction between graduate students, postdoctoral fellows and faculty, in the classroom and the laboratory, while also encouraging full participation in the larger community of biological scientists at UAB.