The Ohio State University Department of Molecular Genetics is comprised of a diverse group of researchers and faculty from the Department of Molecular Genetics and the Department of Plant Cellular and Molecular Biology. Together, they form a vigorous, synergistic unit whose work revolves around fundamental issues in 21st Century molecular biology.

SUMMER RESEARCH EXPERIENCE FOR UNDERGRADUATES (REU)

Molecular geneticists Amanda Simcox and Susan Cole co-direct the National Science Foundation’s 10-week summer program, Research Experience for Undergraduates (REU), partnering with biochemistry.

REU is an opportunity for science majors from smaller institutions to do intellectually demanding research in leading-edge labs, giving them better preparation for graduate or professional school.
DNA FINGERPRINTING WORKSHOPS

In 2000, Professor Amanda Simcox and her undergraduate students field-tested an idea to get high school biology students interested and excited about science. The DNA Fingerprinting Workshops consist of two components: first, a session that gives the students hands-on experience with state-of-the-art equipment and molecular-biology techniques. The second part involves setting up a crime scene scenario that students can solve using the DNA fingerprinting techniques they have learned. Undergraduate students take a class with Simcox and learn how to go into the schools to mentor and teach the high school students.

GRADUATE STUDENT SYMPOSIUM

Annual Falkenthal Spring Symposium: An alumnus/alumna is invited each year to be the keynote speaker at this event, which showcases graduate student presentations.

BASIC RESEARCH RELATED TO REAL-WORLD PROBLEMS

Stephen Osmani’s look at how the cell cycle is regulated during mitosis should provide insights about how cancer develops and can be treated.

Hay-Oak Park’s studies on oxidative stress response and oxidant-induced cell death has implications for better understanding the aging process in humans.

Erich Grotewold’s work on the structure of plant gene regulatory networks and the mechanisms underlying combinatorial gene regulation holds potential for enhanced crop production.

We have a significant opportunity here to increase the scientific literacy and competency of our students and to reach out and attract and nurture the next generations of scientists.

(Anite Hopper, Professor, Molecular Genetics)

AREAS OF RESEARCH SPECIALIZATION

- Fungal organisms
- Invertebrates
- Plants
- Vertebrates
- Molecular Biology
- Cell Biology
- Developmental Biology
- RNA Biology
- Genomics and Systems Biology