

# WHERE SCIENCE MEETS SOCIETY

INSTITUTE FOR GENOMIC BIOLOGY



[www.igb.illinois.edu](http://www.igb.illinois.edu)

The Institute for Genomic Biology is dedicated to transformative research in Agriculture, Human Health, the Environment, and Energy Use and Production. We're fulfilling our mission to advance life science research and to stimulate bioeconomic development in the state of Illinois in a number of ways, including:

## PIONEERING ENERGY RESEARCH



The IGB is home to the Energy Biosciences Institute. EBI scientists are searching for a comprehensive understanding of cellulosic biofuels—from identifying the best feedstocks to harvesting, processing, and distributing next-generation biofuels. The EBI is a \$500 million partnership with the University of California at Berkeley, Lawrence Berkeley National Lab, and the energy company BP.

## CRITICAL CLIMATE CHANGE STUDIES



IGB researchers are studying corn and soybeans grown under atmospheric conditions forecast for the year 2050, helping fine-tune climate models and providing data to improve future crops. Rather than assessing plants grown in chambers in a greenhouse, as most studies have done, the Soybean Free Air Concentration Enrichment (Soy FACE) lab at Illinois is an open air facility that can expose crops to a variety of atmospheric carbon dioxide levels—without isolating the plants from other environmental influences, such as rainfall, sunlight, and insects.

## HELPING THE BODY TO HEAL



Illinois scientists are at the forefront of research in regenerative medicine, working to develop drugs and devices that restore the body's natural regenerative powers. In conjunction with the US Army, the Illinois Regenerative Medicine Institute, and the American Heart Association, IGB researchers are working to address craniofacial injuries, extremity and digit injuries, and wound repair—work that holds promise for the thousands of troops injured in combat every year.

## DISCOVERING NEW DRUGS



Antibiotic resistance is a growing—and troubling—problem for the healthcare system. Yet many pharmaceutical companies have eliminated their antibiotic discovery efforts, leaving universities and research institutes to pick up the slack. With the support of a five-year, \$7 million grant from the National Institute of Health, researchers at the Institute for Genomic Biology are looking for new metabolites—potent, naturally derived drugs that scientists hope can be mass-produced efficiently and inexpensively.

## ABOUT THE IGB

### RETURN ON INVESTMENT



**Total Project Cost:** \$75 million

**External Grants and Contracts through FY11:** \$79.5 million

**Economic Development:**

- Jobs created: >100 high paying technical and professional positions
- Foundation for future economic growth in Illinois:
  - 14 invention disclosures
  - 5 patent applications

### FACILITIES



The IGB, which opened in 2007, is housed in a three-story, 186,000 square-foot building. It is fully equipped with state-of-the-art microscopy, imaging and bioanalysis instrumentation, and includes both a teaching lab and classroom space. The EBI's 320-acre Energy Farm south of campus will be dedicated to large-scale trials of prospective bioenergy crops, including breeding discovery plots, large scale production plots, and storage facilities.