

IGB Outreach and Education Programs

The IGB embodies its motto: Where Science Meets Society. Through site visits, workshops, art exhibits, and other events, the IGB helps people learn about and appreciate science.

The IGB's innovative outreach and education programs expose people to transformative research, research that is helping to solve preeminent problems faced by local and global communities. These meaningful interactions remind IGB faculty, students and staff what motivates their research, while helping the public understand the work that goes into modern, cutting-edge research and the results that come out of it.

The IGB believes that community knows no borders, that learning has no age limit, and that there is no telling what we can discover together.

Summer Day Camp

For the second year in a row, almost thirty middle school girls from around East Central Illinois came to the IGB in July 2014 to participate in Pollen Power Camp, a week-long science day camp. The camp was designed to give girls a kaleidoscopic picture of what it means to be a plant biologist: activities included using the IGB Core Facilities' high-powered microscopes, designing and printing 3D pollen grains at the Champaign-Urbana Community Fab Lab, learning to identify different types of pollen and to pollinate corn, planning and recording a climate newscast with green screen technology, and hearing guest talks from IGB researchers on the science of pollen and the crucial role that women play in STEM fields. The camp, which is funded in part by a grant from the NSF, will be held again in July 2015.

Genomics for™ Programs

Genomic research will eventually uncover a complete picture of how our genetic information, acting in concert with our experiences, influences our health and behavior. When considering whether an individual's genetic inheritance can be blamed for criminal behavior, or how information on disease predisposition should be used, who is qualified to testify, and what kinds of knowledge are needed to make sound judicial decisions?

The Supreme Court of Illinois and its Administrative Office of the Illinois Courts (AOIC), in coordination with members of the Illinois Judicial Conference Committee on Education, appointed by the Supreme Court, are responsible for facilitating educational resources for Illinois judges, including those pertaining to sciences in the law. The IGB had the unique opportunity to work with the AOIC in offering a new seminar, "Genomics for™ Judges," that was designed to prepare judges to grapple with legal questions involving DNA sequencing and analysis, as well as related technologies, in the courts today and in the future. The two-day course was also supported by the OVCR and the College of Law. Forty-eight judges and justices from around Illinois participated in the workshop, which included sessions on the structure and function of DNA, how gene function is influenced by the environment, and how genome sequences are analyzed.

The IGB has led successful other Genomics for™ programs for Illinois prosecutors and science teachers. In Summer 2015, a similar program will be held for additional Illinois judges. There are also discussions to provide programs to other professionals, such as physicians and entrepreneurs.

iGEM

A team of undergraduates from Illinois have participated in the International Genetically Engineered Machine (iGEM) Foundation competition at MIT and in Boston since 2008. The iGEM competition is dedicated to education, advancement of synthetic biology, and the development of open community and collaboration. The Illinois team is composed of undergraduate students from a variety of departments, including Bioengineering, Agricultural and Biological Engineering, and the School of Molecular and Cellular Biology, led by mentors at the IGB who conduct synthetic biology research.

Genome Day

Genome Day is part of the IGB's mission to engage K-12 students, as well as the broader East Central Illinois community, in learning about the biology that underlies its research and technology development.

Each year several hundred children, parents, and friends of the IGB participate in Genome Day, an afternoon of learning about genomes, genes, DNA, and evolution at the Orpheum Children's Science Museum in Champaign. More than 100 volunteers help run 14+ child-friendly activities related to genetics, including learning how organisms relate to each other on the Tree of Life, constructing their own models of DNA and cells, and extracting strawberry and banana DNA to make necklaces. Volunteers from SACNAS (Society for Advancement of Chicanos and Native Americans in Science) provide bilingual volunteers for the event. The fourth annual Genome Day will be in November 2015.

Art of Science

The 'Art of Science: Images from the Institute for Genomic Biology,' now in its fourth year, is a meeting place between the University and our community as a whole, and a celebration of common ground between science and art. The exhibition comprises images from research addressing significant problems in the environment, medicine, and energy use and production. The images are selected and some are artistically enhanced to highlight the beauty and fascination encountered daily in scientific endeavors. Showcasing imagery for the Art of Science traveling art exhibit exemplifies the IGB's commitment to scientific discovery and the collaborative spirit that makes it all possible. Exhibitions are currently on display at the Chicago O'Hare and Midway International Airports and Research Park.

OLLI

IGB Offers Lifelong Learning Through the Osher Lifelong Learning Institute (OLLI) at Illinois, the IGB welcomes community members 50 years or older into their labs—and not just for a tour or week-long workshop. These OLLI members are integrated into the IGB as part-time research assistants who contribute to innovative research.

In 2011, the IGB partnered with the Beckman Institute to create the OLLI Citizen Scientist program, which pairs OLLI members with research projects that relate to their personal interests or life experiences. Citizen Scientists are trained by graduate students or postdoctoral researchers and work alongside them in pursuit of discoveries. This mutually beneficial relationship illustrates the IGB's commitment to collaborative research and community involvement.

OLLI is a member-centered community of adult learners that is supported by the Bernard Osher Foundation, the Illinois Office of the Provost, and the generous donations of OLLI members and community partners.

SING

Since 2011, the IGB has organized three Summer Internships for Native Americans in Genomics (SING) Workshops. During the weeklong workshop, more than a dozen students from across North America discuss the potential, as well as the risks, of genomic research in Native American communities. They learn not only about recent Native American genomic studies and genetic legal cases, but also the skills that are required to conduct real-world genomic research, from DNA extraction to DNA sequence analysis.

Throughout the workshop, instructors and participants discuss the intricacies of conducting such research, including the difference between community and individual consent and the complexity of interactions between indigenous communities and non-indigenous scientists. Support for the workshop is provided by the NIH (including the National Human Genome Research Institute) and NSF.