Campus pioneers who have played a major role in the development of the IGB: Michael Allen, Nancy Cantor, David Chicoine, Robert Easter, Peter Fox, Richard Hermann, John Katzenellenbogen, Harris Lewin, Charles Miller, Gerald Shea, Shankar Subramanian, Carl Woese, Charles Zukoski

2000
INSTITUTE FOR GENOMIC BIOLOGY APPROVED BY GOVERNOR RYAN

2002
STATE GOVERNMENT FUNDING FOR BUILDING PROJECT RELEASED

2003
HARRIS LEWIN NAMED FOUNDING DIRECTOR

2004
CONSTRUCTION BEGAN
A $75M, 186,000-square-foot state-of-the-art facility

FIRST TWO IGB GRANTS

$3M from the Dept. of Energy to study the effect of climate change on crops

$5M from the National Science Foundation for BeeSpace, an interactive environment for analyzing nature and nurture in societal roles

CONSTRUCTION COMPLETED
November 2006

$1M FROM THE ILLINOIS REGENERATIVE MEDICINE INSTITUTE

2005
$14M IN NEW FEDERAL AND PRIVATE SUPPORT SECURED BY FACULTY

FACULTY RECOGNITIONS IN 2005
Theme leader Robinson elected to the National Academy of Sciences
Woese elected to Royal Society

2006
CONSTRUCTION COMPLETED
November 2006

$1.5M FROM THE ILLINOIS REGENERATIVE MEDICINE INSTITUTE

FOR WORK ON STEM CELLS

2007
BUILDING DEDICATED
March 20, 2007

$500M EBI PARTNERSHIP ANNOUNCED

Long and colleagues created first industry partnership: BP, University of California, Berkeley, University of Illinois at Urbana-Champaign and Lawrence Berkeley National Laboratory

THE CERTIFICATE IN ENTREPRENEURSHIP AND MANAGEMENT LAUNCHED

2008
FIRST PATENT APPLICATION FILED

EXTERNAL FUNDING REACHED $5M

NEW PROGRAM TO TEACH BUSINESS SKILLS TO LIFE SCIENTISTS LAUNCHED

2000-2015
FACULTY RECOGNITIONS IN 2008
Wilfred van der Donk and Phillip Newmark appointed Howard Hughes Medical Institute investigators*

2000-2015
FACULTY RECOGNITIONS IN 2005
Theme leader Robinson elected to the National Academy of Sciences
Woese elected to Royal Society

*Howard Hughes Medical Institute is one of the largest private funding organizations for biological and medical research in the United States
DNA is the language of all living things. Genomics, the study of the structure and function of an organism’s complete set of genetic material, gives scientists a powerful tool with which to study every form of life and every biological process.

The Carl R. Woese Institute for Genomic Biology (IGB) brings together diverse experts to address formidable challenges using genomics. Since 2007, our Institute—an experiment in transdisciplinary research—has yielded many discoveries and scientific advancements, continually supporting the hypothesis that the whole is greater than the sum of its parts.

IGB members are drawn from a broad range of disciplines, including the life sciences, social sciences, engineering, law and business. They remain an integral part of home departments while pursuing collaborative research projects in the Institute’s state-of-the-art, $75-million, 186,000-square-foot facility. Theme leaders help coalesce members into thematic research groups housed in large shared laboratories.

Through innovative outreach and education programs, the IGB invites people of all ages to learn about and participate in transdisciplinary research. The IGB hosts accessible, hands-on educational activities for children and their families, as well as workshops and events designed to engage groups through relevant genomic research.
The IGB—seven research themes and one externally funded institute.

Within these groups, IGB members address pressing problems facing society. As societal needs change and technology advances, Illinois researchers can propose new themes, allowing our Institute to evolve to meet new challenges.

Studying how genomic mechanisms support phenotypic plasticity to answer how the genome responds to developmental signals, environmental factors and social stimuli; what mechanisms control and modulate those responses; and how those mechanisms are integrated into gene regulatory networks.

Exploring energy solutions to the problems associated with climate change, global warming, and the rising price and diminishing supplies of carbon-based fossil fuels.

Focusing on the changing global climate’s economic impact on agro-ecosystems, the development of products for agricultural pest and disease management, and better understanding of the environmental implications of various energy supply options.
Unlocking the vast biochemical potential of microbial genomes using sequence-based approaches, leading to the discovery of novel classes of antibiotics, improved production methods, and increased antibiotic efficacy in human and animal hosts.

Employing synthetic biology tools for the design of improved or novel biological systems, and addressing fundamental issues in eukaryotic synthetic biology to create methods around sustainability and human health.

Designing drugs and devices to restore the body’s own mechanisms of natural regeneration to replace bone, cartilage, and soft tissue, and developing novel biomaterials, micro- and nano-devices, and drugs for tissue and organ replacement.

Developing novel approaches to microbial ecology, evolution and systems biology, as well as exploring the early history of life and its emergence from primordial geochemistry.

Leveraging computational, biological, and social science approaches to study reproductive well-being, the underlying causes of pregnancy-related disorders, and positive and negative impacts of environmental factors to better understand and reduce detrimental health conditions.

Unlocking the vast biochemical potential of microbial genomes using sequence-based approaches, leading to the discovery of novel classes of antibiotics, improved production methods, and increased antibiotic efficacy in human and animal hosts.

Designing drugs and devices to restore the body’s own mechanisms of natural regeneration to replace bone, cartilage, and soft tissue, and developing novel biomaterials, micro- and nano-devices, and drugs for tissue and organ replacement.

Employing synthetic biology tools for the design of improved or novel biological systems, and addressing fundamental issues in eukaryotic synthetic biology to create methods around sustainability and human health.
At the IGB, researchers are united by a common goal: to solve the pressing challenges faced by our global society, and build a better future for ourselves and for our planet.

The work of many IGB members explores fundamental questions in science, strengthening the foundation upon which advances in knowledge and technology are based. They have created intricate models of the molecules and reactions that drive the functions of a single cell, and created gene editing tools to improve those functions.

A growing area of research within the IGB focuses on health and medicine—discovering how disorders occur, and creating innovative technologies for their diagnosis and treatment. By studying how the genomes respond to many different factors, from the presence of microbes to childhood social stress, scientists may soon be able to predict and avert disorders before they appear.

Genomics provides a means to address the ailments of entire ecosystems. Several path-breaking efforts at the IGB are devoted to the development of sustainable food and fuel sources that are resilient to the stresses of global climate change.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2009</td>
<td>Illinois Governor Pat Quinn visited IGB.</td>
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<td></td>
<td>Zhao and Ort named AAAS Fellows by the American Association for the</td>
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<td></td>
<td>Advancement of Science.</td>
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<tr>
<td>2010</td>
<td>Robin appointed Director.</td>
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<td>2011</td>
<td>External funding hits $37M.</td>
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<td>2012</td>
<td>New biosystems design theme created.</td>
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<td>2013</td>
<td>Twelve patent applications filed and two patents were issued.</td>
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<td>2014</td>
<td>Fifteenth year of Art of Science exhibit.</td>
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<tr>
<td>2015</td>
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**FACULTY RECOGNITIONS IN 2008**

- Illinois Governor Pat Quinn visited IGB.
- Zhao and Ort named AAAS Fellows by the American Association for the Advancement of Science.

**FACULTY RECOGNITIONS IN 2010**

- Cellular decision making in cancer named as new theme.
- Twelve patent applications filed and two patents were issued.

**FACULTY RECOGNITIONS IN 2011**

- Five million for a five-year “glue grant.”

**FACULTY RECOGNITIONS IN 2012**

- Long elected to Fellowship of the Royal Society.

**FACULTY RECOGNITIONS IN 2013**

- First start-up, Accelerated Genomics.
- External funding hits $70M.

**FACULTY RECOGNITIONS IN 2014**

- New biosystems design theme created.
- Six patent applications filed, 33 patents issued.
- Moore named Howard Hughes Medical Institute Professor.
- Berenbaum received National Medal of Science.

**FACULTY RECOGNITIONS IN 2015**

- IGB officially renamed to Carl R. WoeSE Institute for Genomic Biology.
- Fifth year of Art of Science exhibit.

**LEWIN ELECTED TO NATIONAL ACADEMY OF SCIENCES**

- LEWIN elected to National Academy of Sciences.

**COMGLEN INITIATIVE, $2.6M NSF FUNDED PARTNERSHIP WITH IGB AND COORDINATED SCIENCE LABORATORY**

- Long elected to Fellowship of the Royal Society.

**YECHEN INITIATIVE**

- $3.2M National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) Grant awarded to the Institute for Genomic Biology and the School of Integrative Biology.

**COMPGEN INITIATIVE**

- $1.1M Grant from Bill & Melinda Gates Foundation.
- Robinson appointed director.

**KNOWENG CENTER OF EXCELLENCE IN BIG DATA COMPUTING FUNDED BY $9.3M NIH BD2K INITIATIVE**

- 11 patent applications, 4 patents issued.

**Igb and Beckman Institute form first interdisciplinary cognition and nutrition research center in the country, the Center for Nutrition, Learning, and Memory.**

**COMPGEN INITIATIVE**

- $12M Grant from Bill & Melinda Gates Foundation.
- Robinson appointed director.

**KNOWENG CENTER OF EXCELLENCE IN BIG DATA COMPUTING FUNDED BY $9.3M NIH BD2K INITIATIVE**

- 11 patent applications, 4 patents issued.

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