

**Lilly Hall of Life Sciences**



**Wayne T. and Mary T. Hockmeyer Hall of Structural Biology**



## By the Numbers

### Students (Spring 2016)

**784 Undergrad Bio. Sciences majors**

100 Under Represented Minority

60 International students

**136 Graduate students**

128 Ph.D. candidates

- 6 Under Represented Minority

- 75 International students

8 Master's candidates

- 1 Under Represented Minority

- 3 International students

**\$100K** available departmental scholarships, fellowships, and prizes (2015-2016)

### Degrees Awarded (2014-2015)

**176 Bachelor's Degrees**

**4 Master's Degree**

**15 PhD Degrees**

### Faculty and Instruction (Fall 2015)

**39 Faculty**

**13 Joint Faculty**

**7 Lecturers**

**22 Emeritus Faculty**

**18 Affiliated/Adjunct Faculty**

**78 Graduate Teaching Assistants**

### Students Served (2014-2015)

**82 Undergraduate BIOL courses offered**

**47 Graduate BIOL courses offered**

**10,480 Undergraduate students enrolled**

3572 Bio Department Majors

6898 Non-biology Department Majors

### Research (2014)

**\$16.9** Million Research expenditures

**109** Research Proposals submitted

**88** Research Proposals awarded

The Department of Biological Sciences is the largest department in the Life Sciences disciplines at Purdue University. As part of the College of Science, the department fulfills the teaching and research mission of the university in areas of biological systems ranging from the molecular through ecosystem levels. The Department offers baccalaureate degrees in 10 major areas of study and supports graduate student research across 6 research topic concentrations. As a widely recognized leader in scientific discovery, the Department's research contributions inform both fundamental questions and complex problems across diverse areas of interest from cancer models to host-pathogen interactions to behavioral ecology.

## Baccalaureate Degrees Offered

Biology

Biology Honors

Biochemistry

Biology Education

Cell, Molecular and Developmental Biology

Ecology, Evolution and Environmental Biology

Genetics

Health and Disease

Microbiology

Neurobiology and Physiology

## Department of Biological Sciences faculty Honors include:

1 National Academy of Science Member

1 Royal Society of London Member

7 American Association for the Advancement of Science Fellows

1 American Society for Plant Biology Fellow

1 Biophysical Society Fellow

3 American Academy of Microbiology Fellows

1 Guggenheim Fellow

5 Herbert Newby McCoy Award recipients

6 Endowed/Distinguished Professors

6 Teaching Academy Fellows

4 Murphy Award for Outstanding Undergraduate Teaching Recipients

2 Distinguished Graduate Mentoring Awards

Encompassing six research area concentrations, the Department fosters a culture supporting collaborations linking faculty, post-doctoral researchers, graduate students and undergraduates with colleagues both within Purdue University as well as nationally and internationally. The diverse nature of the Biological Sciences provides endless opportunity for cross-discipline partnerships with other research enterprises including those in the physical sciences, agriculture, engineering, education and computational sciences.

### Research Areas

**Microbiology, Immunology and Infectious Diseases:** conducts innovative basic research in the areas of cellular and molecular mechanisms of infectious disease, as well as the immune response and microbe-host interaction. Seek to investigate microbial signaling systems, exploitation of host cell functions by pathogenic organisms, and mechanisms of protective host immune responses to infection.

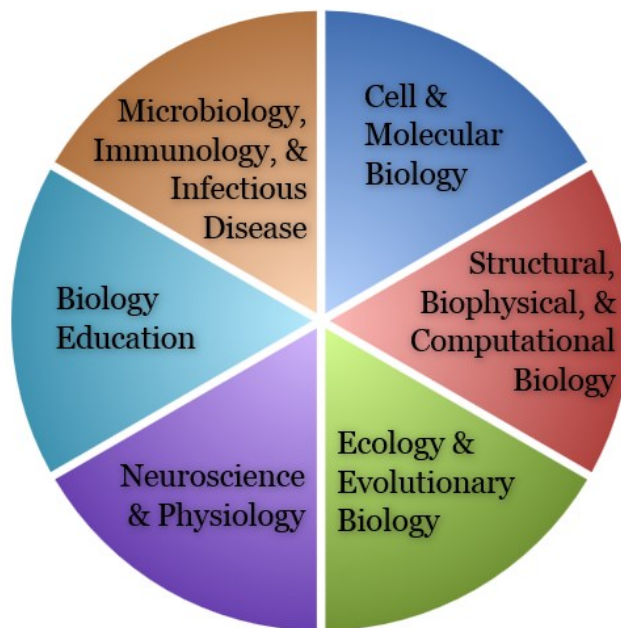
**Cell and Molecular Biology:** reveals the molecular basis of both normal and abnormal cell and tissue biology, focusing on cancer, regulation of gene expression, cell biology and cellular dynamics, plant biology and bioenergetics. Experimental approaches include cell signaling and differentiation, molecular biology, proteomics, genomics and genetics, and advanced cell imaging.

**Structural, Biophysical and Computational Biology:** research includes determination of protein and nucleic acid structures, mechanism and structure of protein and RNA enzymes, membrane biochemistry, structure and mechanisms of macromolecules and viruses, computational investigations of macromolecular interactions, plant cell wall and cytoskeleton structure and function, and computational systems biology.

**Ecology and Evolutionary Biology:** focal research areas are Animal Behavior and Sensory Ecology, Ecological and Evolutionary Consequences of Human Impacts, Ecology of Emerging Infectious Diseases, and Evolutionary Genomics. Using laboratory, field and computational methods, faculty study individuals, populations and communities both locally and globally. A key resource is the Ross Biological Reserve, a living laboratory comprised of 92 acres of mature forest on the Wabash River.

**Neuroscience and Physiology:** employs molecular and cellular biology, electrophysiology, transgenesis, mutagenesis, experimental embryology, and behavior assessment to study the development, structure, function and regeneration of the nervous system as well as fundamental systems including vision, hearing, movement, and social interaction.

**Biology Education:** interfacing with other research areas in a cross-disciplinary approach, researchers promote high quality instruction and enhanced student learning through the application of educational theory and research outcomes to improve the quality of courses and curriculum at all levels of the education process.



### Affiliated Purdue Centers and Institutes

- ◆ Purdue Center for Cancer Research
- ◆ Bindley Bioscience Center
- ◆ Markey Center for Structural Biology
- ◆ Purdue Institute of Inflammation, Immunology and Infectious Disease
- ◆ Purdue Energy Center
- ◆ Center for the Environment
- ◆ Purdue Climate Change Research Center
- ◆ Purdue Interdisciplinary Center for Ecological Sustainability
- ◆ Integrative Neuroscience Center
- ◆ Purdue Hearing & Acoustics in Science and Engineering
- ◆ Birck Nanotechnology Center
- ◆ Purdue Genomics Center

