

## RESEARCH IN THE LIFE SCIENCES AT PENN

Life science research at Penn includes a wide variety of biomedical disciplines, which are summarized in this section. There are more than 500 active life science investigators in the Schools of Medicine, Veterinary Medicine, Dental Medicine, Arts and Sciences, and Engineering. For academic purposes, researchers are organized into a number of University-wide graduate programs offering PhDs in many disciplines in the life sciences. **These same faculty are available as potential mentors for postdoctoral fellows.** The life science disciplines are:

- Biochemistry and biophysics
- Clinical epidemiology and biostatistics
- Cell and molecular biology with programs in
  - Cell biology and physiology
  - Cell growth and cancer
  - Developmental biology
  - Gene therapy
  - Genetics and gene regulation
  - Microbiology and virology
- Genomics and computational biology
- Immunology
- Neurosciences
- Parasitology
- Pharmacology
- Bioengineering (affiliated with the School of Engineering)

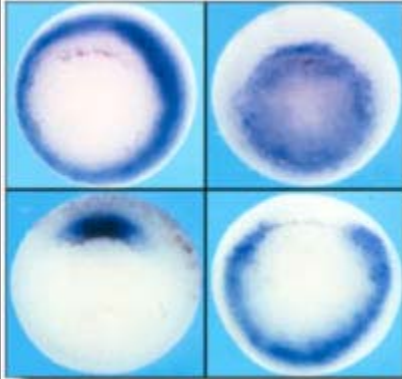
A searchable database of faculty in the life sciences is the gateway to identify investigators in specific research areas. The database is accessible under the postdoctoral section of the Global Health Programs website:

[www.med.upenn.edu/globalhealth/postdoc.shtml](http://www.med.upenn.edu/globalhealth/postdoc.shtml)

More information about individual life sciences research disciplines can be obtained at the Biomedical Graduate Studies website, [www.med.upenn.edu/bgs/](http://www.med.upenn.edu/bgs/), which has hyperlinks to the websites for the individual graduate programs.

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## Graduate Programs

Biomedical Graduate Studies' eight graduate groups offer the graduate student an integrated training experience in modern biomedical science. In the first year, students take courses in fundamental areas of biochemistry, molecular biology, and cell biology offered by faculty in all the appropriate graduate groups. The second year is devoted to more focused laboratory work and courses related to a student's particular interests. Beginning in year three, students conduct dissertation research in the laboratory of their choosing; this research typically takes two or three years. The individual graduate groups are as follows:

- **Biochemistry and Molecular Biophysics**
- **Cell and Molecular Biology**, with programs in:
  - Cell Biology and Physiology
  - Cell Growth and Cancer
  - Developmental Biology
  - Gene Therapy
  - Genetics and Gene Regulation
  - Microbiology and Virology
- **Epidemiology and Biostatistics**
- **Genomics and Computational Biology**
- **Immunology**
- **Neuroscience**
- **Parasitology**
- **Pharmacological Sciences**, with programs in:
  - Neuropharmacology
  - Cardiovascular Pharmacology
  - Cancer Pharmacology
  - Pharmacogenetics
  - Pharmacological Chemistry

### Affiliated Graduate Groups:

- Biology
- Bioengineering



## Biomedical Research Core Facilities

### School of Medicine:

#### Laboratory/Molecular:

- Biomedical Imaging Core Facility
- Biomedical Informatics Core
- Cell Center Service Facility
- Cell Center Stockroom
- DNA Sequence Core Facility
- Flow Cytometry Facility
- Microarray Core Facility
- Molecular Diagnosis and Genotyping Facility
- Proteomics Core Facility
- Radioimmunoassay Core Facility
- Research Instrumentation Shop
- Small Animal Imaging Facility
- Transgenic and Chimeric Mouse Facility
- Vector Core

#### Clinical Health Service Research:

- Biomedical Informatics Core
- Clinical Cell and Vaccine Production Facility
- Clinical Research Computing Unit
- Flow Cytometry Facility
- Human Immunology Core
- Molecular Pathology Core
- Small Animal Imaging Facility

### School of Arts and Sciences:

- Nucleic Acid Facility
- Regional Laser and Biomedical Technology Laboratory

### School of Dental Medicine:

- Biopolymer Analysis Laboratory
- Flow Cytometry and Cell Sorter Laboratory
- Levy Center for Oral Health Research
- Ultrastructural and Imaging Core Facility

### School of Veterinary Medicine:

- Bacteriology and Mycology
- Biopsy
- Calcified History
- Clinical Pathology
- Drug and Detection Analysis
- Immunology Laboratory
- Kidney Stone Analysis
- Metabolic Screen
- Microbiology
- Molecular Biology Service
- Nutrition
- Parasitology
- Pathology and Histopathology
- Virology and Serology

### Other:

- BSL3 Cell Sorting Facility
- Stokes Research Institute (CHOP)
- Wistar Institute



## graduate faculty

Because there are no sharp divisions in biological science, there is a certain amount of structured overlap in the areas of interest of individuals graduate groups, and many of the 550 BGS faculty members belong to more than one graduate group. This arrangement allows the student to examine a given area of biomedical science from multiple viewpoints.



The BGS training faculty includes scientists from five schools of the University of Pennsylvania:

- [Medicine](#)
- [Veterinary Medicine](#)
- [Arts and Sciences](#)
- [Dental Medicine](#)
- [Engineering and Applied Science](#)

Faculty from several distinguished research institutions with close ties to Penn are also represented in BGS, including:

- [Wistar Institute](#)
- [Fox Chase Cancer Center](#)
- [National Institutes of Health, via the Graduate Partnerships Program](#)

Information about individual faculty members' research is available by graduate group:

- [Biochemistry and Molecular Biophysics](#)
- [Cell and Molecular Biology](#)
- [Epidemiology and Biostatistics](#)
- [Genomics and Computational Biology](#)
- [Immunology](#)
- [Neuroscience](#)
- [Parasitology](#)
- [Pharmacological Sciences](#)

## search graduate faculty

Whether you are looking for a new research area, or exploring further study in an area you have experience, you can find faculty members using the search form. You may search for faculty throughout BGS by name, keyword, and/or graduate program.

[search](#)