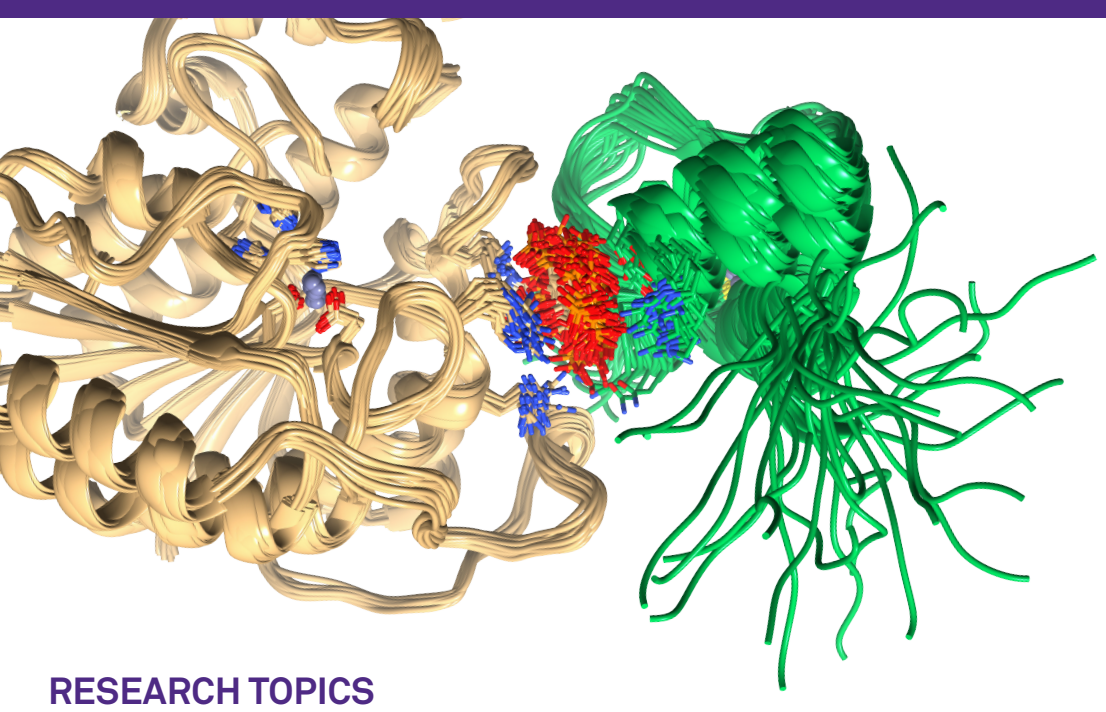
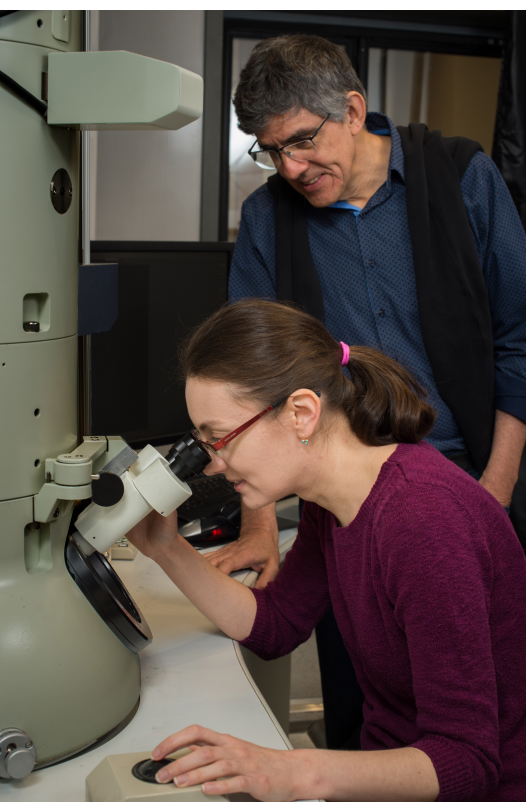
Northwestern | MOLECULAR BIOPHYSICS TRAINING PROGRAM



RESEARCH TOPICS

Research programs explore diverse topics in structural biology, drug design, mechanistic biology, computational biology and informatics, and chemical biology. A variety of fundamental biological questions are being studied in the following areas:

- gene regulation
- macromolecular machines/motors
- metal trafficking and homeostasis
- protein-protein/DNA interactions
- protein structure and function
- protein folding and design
- RNA structure and function
- cellular signaling



CURRICULUM

The didactic component of training includes courses on these topics:

- molecular biophysics
- macromolecular structure
- macromolecular function
- contemporary biophysical methods
- quantitative biology

Besides courses, the training program sponsors these activities:

- Biophysics Club
- Biophysics Seminar Series
- Journal Clubs
- Structual Biology Workshop
- Annual Biophysics Symposium
- Annual Biomedical Career Forum
- Social events for networking between current and past trianees

FACULTY PRECEPTORS

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Pael DeCaen
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Alfred George
Xiaolin He
Yuan He
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Northwestern | MBTP MOLECULAR BIOPHYSICS TRAINING PROGRAM

With graduate programs on the Evanston and Chicago campuses and more than two dozen labs in seven departments, the Molecular Biophysics Training Program brings together a collegial biophysics community that transcends traditional boundaries. The NIH-supported program has prepared predoctoral students for productive scientific careers in academia for more than 20 years. Its strengths include accomplished faculty preceptors with diverse research interests, state-of-the-art facilities and instrumentation, a contemporary and rigorous curriculum, and many training and career development activities. Situated along the shores of Lake Michigan, both campuses have ready access to cultural and recreational opportunities, restaurants, and shops.

GRADUATE PROGRAMS

Interdisciplinary Program in Biological Sciences
ibis.northwestern.edu

Chemistry
chemistry.northwestern.edu

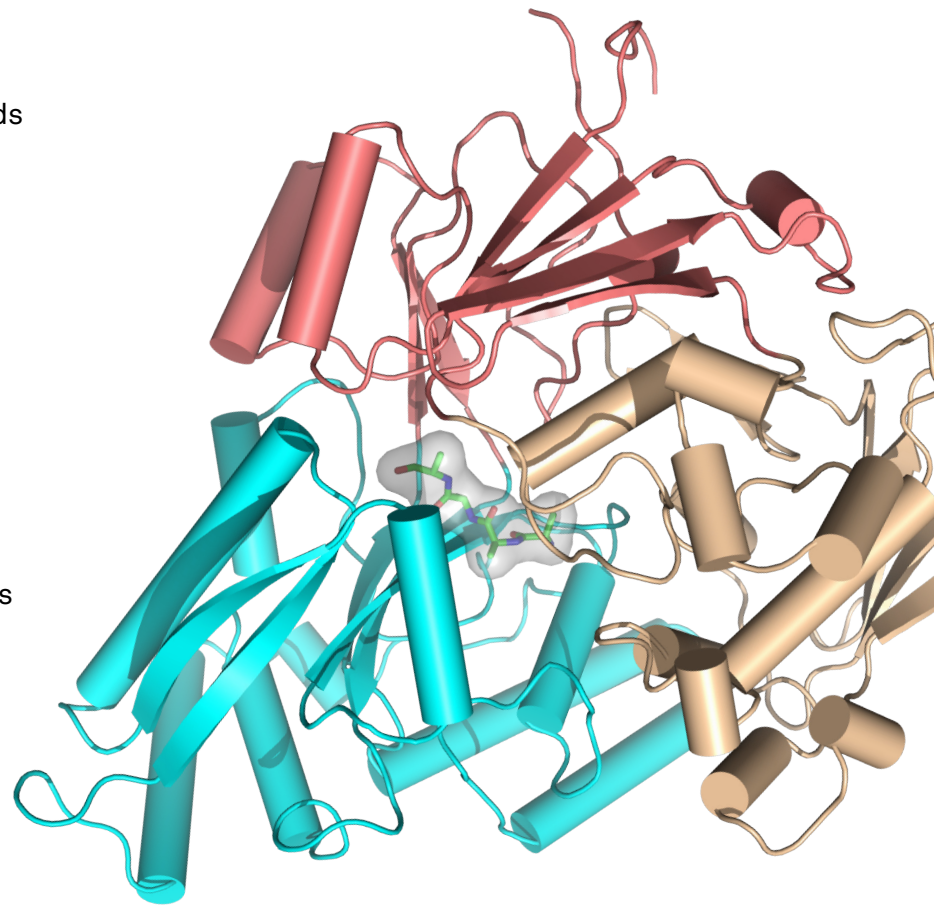
Chemical and Biological Engineering
mccormick.northwestern.edu/chemical-biological

Driskill Graduate Program in Life Sciences
feinberg.northwestern.edu/sites/dgp

Interdepartmental Neurosciences Program
nuin.northwestern.edu

Medical Scientist Training Program
feinberg.northwestern.edu/sites/mstp

Physics and Astronomy
physics.northwestern.edu



FACILITIES

Facilities featuring cutting-edge technologies and instrumentation for contemporary biophysics research include:

- **Center for Structural Biology at the University of Illinois at Chicago:** 800 and 900MHz super high-field NMR spectrometers
- **Integrated Molecular Structure Education and Research Center:** analytical instrumentation, including premier resources for biomolecular NMR and an array of high-resolution spectrometers and chromatographs
- **Keck Biophysics Facility:** more than 20 instruments for macromolecular structure-function analysis
- **LS-CAT at the Advanced Photon Source at Argonne National Laboratory:** macromolecular crystallography resource at the APS, the premier synchrotron in the United States
- **Proteomics Center of Excellence:** custom instruments for Fourier transform mass spectrometry (FTMS)
- **Structural Biology Facility:** premier resources for structure determination of biological macromolecules and macromolecular complexes including electron cryomicroscopy (cryoEM) and X-ray crystallography; advanced computational resources for model building and refinement, drug discovery, and molecular dynamics simulations