Chemistry-Biology Interface (CBI) Graduate Program

At Johns Hopkins University, our nation’s first research university, there is a long tradition of scientists conducting research at the interface of chemistry and biology. This tradition was formalized in 2005 with the establishment of the Chemistry-Biology Interface (CBI) Program. Our program is one of the few in the United States that confers a Ph.D. in Chemical Biology. We are also one of about 20 CBI Programs nation-wide that are supported by a National Institutes of Health (T32) Chemical Biology Training Grant.

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Chemistry-Biology Interface (CBI) Graduate Program

I was drawn to the interdisciplinary research and study of the CBI program because I think the solutions to fundamental problems are not found within one discipline; instead, an interdisciplinary approach allows for multiple perspectives to unite under the common banner of scientific inquiry.” — JOSH MONTS, entered 2016

Living in Baltimore

Baltimore is in the midst of an urban renaissance and offers numerous recreational and cultural activities. Harborplace, located along the scenic Inner Harbor, is a striking collection of pavilions and promenades set at the water’s edge. The National Aquarium adjoins Harborplace, as well as Camden Yards, home of the Baltimore Orioles, and M&T Bank Stadium, home of the 2012 NFL Super Bowl champions, the Baltimore Ravens.

There are a number of major museums located within the city including the Walters Art Museum and the Baltimore Museum of Art (adjacent to the Hopkins Campus). The Baltimore Symphony Orchestra offers a range of symphonic and “pop” music at the modern Joseph A. Meyerhoff concert hall. In addition, a variety of festivals and special events occur in Baltimore including the Preakness and Artscape, the largest free public arts festival in the U.S. These events and activities are all conveniently located about 15 minutes from campus.

Baltimore is also near other attractions in the mid-Atlantic region. Washington, D.C. is less than an hour to the south and is home to some of the best museums and cultural offerings in the country. Within Maryland, the Chesapeake Bay and the Atlantic shore offer water and beach activities, while the mountains lie two hours west of Baltimore for skiing in the winter and year-round hiking and camping.

The Chemistry-Biology Interface Graduate Program

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CBI Curriculum

The CBI curriculum enables students to individualize their programs to enjoy the desired balance of chemistry, biology and biophysics. CBI graduates are trained to address diverse questions in chemistry and biology using a broad array of experimental methods. Coursework ensures that students have a strong foundation in chemistry in addition to ample knowledge of the biological sciences. The breadth of faculty research and teaching interests enables students to explore many aspects of the Chemistry-Biology Interface.

Our curriculum, including writing an original research proposal, is designed to help students develop their analytical skills and the ability to think independently. Peer support and learning are also integral to the educational experience.

Choosing an Advisor

The CBI Program consists of 28 faculty mentors who hold primary appointments in one of 7 departments distributed throughout the 4 Schools of Arts & Sciences, Engineering, Public Health and Medicine at Johns Hopkins. Students carry out 3 research rotations during their first year to expand their research base and assist their selection of a thesis research advisor. Each research rotation is 10 weeks long. CBI students choose an advisor and begin thesis research in May of their first year.

Research Areas Include:

- Enzyme mechanisms, inhibitors, and metabolic pathways
- Synthetic methods and medicinal chemistry
- DNA replication, damage, and repair
- Molecular probes for interrogating biological processes
- Signal transduction and gene regulation
- RNA and protein folding
- Chemical tools for biotechnology
- Synthetic modeling of metalloenzymes
- Macromolecular structure determination by NMR and X-ray crystallography
- Protein engineering

Admissions

To apply to the CBI Program you will need to submit:

- an online application (http://grad.jhu.edu/apply/)
- undergraduate transcript(s)
- three (3) letters of recommendation
- official GRE scores for the General test

In addition, one of the following Subject Tests is strongly recommended: Biochemistry, Cell and Molecular Biology, Biology, or Chemistry.

Selected applicants will be invited to visit Johns Hopkins University for an interview at the program’s expense. The CBI Program will arrange for meetings with faculty and students, as well as plan for time to explore the campus and Baltimore.

Financial Aid

Graduate students are guaranteed full tuition remission, a yearly stipend, and are provided with health insurance. The CBI stipend for 2017-2018 is $32,470 per year.

Want To Know More?

If you are interested in learning more about the CBI Program at Johns Hopkins University, please visit www.cbi.jhu.edu or contact us. The CBI contact information is provided on the back of this pamphlet.

About JHU

Johns Hopkins University was the first American institution to offer and emphasize graduate education. Throughout the years, the name Johns Hopkins has become world renowned and synonymous with scholarly excellence and cutting edge scientific research. Johns Hopkins has consistently ranked among the top universities by U.S. News and World Report.

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