PH.D. PROGRAM IN BIOCHEMISTRY
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THE GRADUATE CENTER
CITY UNIVERSITY OF NEW YORK

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Ph.D. Program in Biochemistry

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CITY UNIVERSITY OF NEW YORK

"The biochemistry Ph.D. program at The Graduate Center is the only one of its kind. It appeals to a wide variety of interests spanning fields such as structural biology, bioinformatics, enzymology, and organic synthesis. The diversity of research interests matches the diverse faculty and students. Because CUNY is a consortium of colleges, students have access to more facilities, faculty, and technology than they would at just one campus."

—Alison Domzalski
Biochemistry Doctoral Student

"Aside from welcoming international students from all walks of life, The Graduate Center also proved to be a vibrant, interconnected, and a beautiful community. The biochemistry PhD. program gave me the platform to learn valuable research skills and techniques from different faculty mentors. My many research experiences have shaped my career aspirations, and I must say I have enjoyed every bit of the journey."

—Solomon Haizel
Biochemistry Doctoral Student

"I am extremely happy with the Ph.D. program in biochemistry at The Graduate Center. The program offers a unique interdisciplinary education. The faculty are exceptionally passionate about their field and are committed to their students' success. The training, resources, and the opportunity to collaborate with renowned researchers from other premier institutions have helped me to generate quality research, build a foundation of research expertise, and prepare for my career as a scientist."

—Roksana Azad
Biochemistry Doctoral Student
Researcher, Structural Biology Initiative,
Advanced Science Research Center

The Graduate Center

A graduate school of arts and sciences, The Graduate Center (GC) is the principal doctorate-granting institution of The City University of New York, offering more than 30 doctoral degrees. In addition to rigorous academic training in the humanities, sciences, and social sciences in a Ph.D.-focused, scholarly environment, The Graduate Center fosters globally significant research across the faculty and in a wide variety of centers and institutes. It is an inclusive community of over 7,000 students, scholars, and researchers, drawing upon the widest possible range of experience of race and ethnicity, nationality, sexual orientation, religion, gender identity, age, physical ability, and socioeconomic status.

Admission Requirements

■ Most candidates enter the program with an undergraduate major in chemistry, biochemistry, or less often, biology or biochemistry. Competitive candidates will have taken physical chemistry and calculus courses and have had research experience and a GPA in the sciences of at least 3.0. Official transcripts and letters of recommendation from two or three professors or professional contacts are to be submitted with applications. Scores on English proficiency exams are required of foreign applicants. Submission of GRE scores (verbal, quantitative, writing) is optional.

■ All admitted students will receive generous financial support (CUNY science scholarship), full tuition waiver (see below), and health insurance options. Admission deadline is January 1 for attendance starting the following fall semester.

■ Graduates go on to prestigious professional positions and tenure-track university jobs as well as research scientist jobs in the chemical and pharmaceutical industries. Career counseling and professional development are among the goals of the program.

The Advanced Science Research Center (ASRC)

■ This cutting-edge center allows scientists from within CUNY and beyond to work across disciplines with directors and faculty researchers in five fields of applied science: nanoscience, photonics, neuroscience, structural biology, and environmental sciences. ASRC facilities supplement those found at the individual CUNY campuses, making state-of-the-art instrumentation available for discoveries enabled through scientific collaboration.

Program Specifics

■ Courses are taught at The Graduate Center, while research opportunities are found at CUNY college campuses throughout New York City and at affiliated institutions (the New York Structural Biology Center, the American Museum of Natural History, and the New York Botanical Garden). The ASRC and medical center laboratories are available for research and collaboration. Resources at three nearby university campuses are also available.

■ A standard biochemistry core and advanced course curriculum as well as a specialized molecular biophysics track are available to students in the program. Mastery of current bodies of knowledge in biochemistry including macromolecular structure and function, molecular biology, enzymology and metabolism, bioorganic and biophysical chemistry, and techniques for analysis of structure and function is achieved through core and advanced courses during thefirst two years (60 credits). Research rotations are required during the first year to allow students to become familiar with faculty research.

■ Milestones in the path to the degree include the first-level and second-level examinations, given respectively at the end of the first year of study and before the end of the third year, and a doctoral dissertation based on original research.

■ State-of-the-art equipment supporting research efforts is housed at CUNY's senior college campuses and at the ASRC. Representative techniques include high resolution and solid state NMR, EPR, UV, and optical spectroscopies including laser techniques and circular dichroism; microcalorimetry; rapid kinetics measurements; surface plasmon resonance; cryoelectron microscopy; confocal microscopies; LCMS, GCMS and high-resolution mass spectrometry; cell cytometry; advanced imaging; small molecule x-ray crystallography; high-throughput crystallography; and high-performance computing.

■ Federal agencies (NIH, NSF) and other sponsors support research in areas such as macromolecule-ligand interactions, molecular biology of cancer and anti-cancer drugs, ribosome function and RNA structure, drug design, de-novo protein design, toxic metals, peptides for epigenetic therapies, biosynthetic pathways in human pathogens, kinases as regulators, photoreceptor physiology, and telomeres, among others.

Financial Aid

■ All biochemistry doctoral students are provided with five years of financial support (CUNY science scholarships), tuition waiver, and subsidized health insurance (NYSHIP) that includes major medical, dental, and optical plans. Parental accommodation is offered to new parents for the birth or adoption of a child. Part of the award is provided as a paid teaching fellowship.

Contact Information

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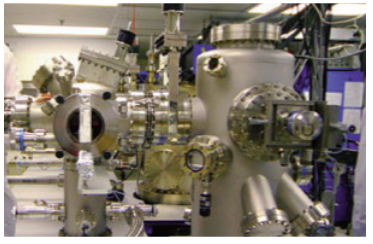

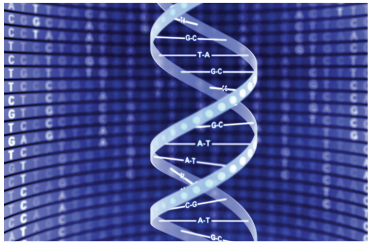

To learn more about the Ph.D. Program in Biochemistry, visit **www.gc.cuny.edu/biochemistry**

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