

CHINA SCHOLARSHIP COUNCIL-YALE WORLD SCHOLARS

In the Combined Program in the
Biological & Biomedical Sciences (BBS)



Twenty-first century research in the biological and biomedical sciences is fast-paced, exciting, and interdisciplinary. Training students to excel in this research environment is the singular goal of Yale University's BBS Program.

BBS provides unified recruiting, admissions, and training for all of the bioscience graduate programs at Yale. BBS faculty are from all of Yale's bioscience departments and also include faculty from Psychology, Computer Science, Chemistry, Statistics, and many of Yale's clinical departments at the School of Medicine. Students at Yale in the CSC-Yale World Scholars Program have access to all the resources, labs and training opportunities in the Yale BBS Program, as well as special training designed specifically to ensure their success in graduate school. Please visit our website at www.bbs.yale.edu.

BBS First Year Training

Students apply to and affiliate with one of 8 interest-based "Tracks" within BBS:

- Computational Biology and Bioinformatics;
- Immunology;
- Microbiology;
- Molecular Biophysics and Biochemistry;
- Molecular Cell Biology, Genetics and Development;
- Neuroscience;
- Pharmacological Sciences and Molecular Medicine;
- Physiology and Integrative Medical Biology.

First year students take two to three courses per semester, conduct two to four lab rotations, and then select a thesis adviser in whose lab they will conduct their doctoral research.

Second Year and Beyond

Second year students join one of the Ph.D. programs below:

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| Cell Biology | Interdepartmental Neuroscience Program |
| Cellular and Molecular Physiology | Microbiology |
| Computational Biology and | Molecular Biophysics and Biochemistry |
| Bioinformatics | Molecular, Cellular, and Developmental |
| Experimental Pathology | Biology |
| Genetics | Neurobiology |
| Immunobiology | Pharmacology |

Students finish course requirements, take a qualifying exam, act as teaching assistants in lecture or lab courses, and conduct thesis research. The average time-to-degree for BBS students is 5.5 years.

Special Training for China Scholarship Council-Yale World Scholars

Professional Practices in Biomedical Science. The China Scholarship Council (CSC)-Yale World Scholars receive additional mentoring and guidance during their studies at Yale. Senior faculty in the BBS program will coordinate a series of professional development programs for the Scholars. For example, Scholars will meet with senior members of the Yale administration, including deans, vice presidents, and provosts, to learn about the operations of leading a research university. They will meet with senior faculty to gain insights on how to run a successful research lab. They will receive training in scientific writing and oral presentations and assistance in preparing for their qualifying exams. They will also receive guidance in preparing their CVs and cover letters when they apply for postdoctoral positions upon graduating from Yale. In sum, the CSC-Yale World Scholars will be introduced to the critical practices, strategies, and conventions necessary to become future leaders in biomedical research.

English Communication for Scientists. Scholars will be enrolled in Yale's English Language Institute and will participate in a six-week intensive program to improve their English language skills. The course will help students with the fundamental skills of pronunciation, vocabulary, reading, and conversation with a special emphasis on scientific and technical literature, but it will also introduce them to scientific writing and public speaking. The ability to write for publication in scientific journals and to present one's research in a public forum are indispensable to becoming successful scientists, and this communications course will provide students with the necessary foundations to acquire these skills during their graduate training.

Education and Research Facilities

Yale University and its School of Medicine constitute one of the world's great research institutions. Yale is among the top universities in research funding from the National Institutes of Health and the Howard Hughes Medical Institute. It is also in the midst of an unprecedented \$1 billion investment in science facilities on the main campus and at the School of Medicine. Additionally, Yale recently purchased all of the lab buildings of a neighboring pharmaceutical company and is expanding its research operations into several hundred thousand square feet of space on this new campus.

The BBS faculty are leaders in virtually every major field of modern biological and biomedical sciences, and despite their commitment to their own laboratories, they pride themselves on maintaining an educational and research environment that is both collaborative and supportive. Students should expect to interact with numerous faculty as part of their training at Yale.

BBS students, regardless of the Track they join in their first year and the department they join in their second year, are free to take classes, do lab rotations, conduct thesis research, and attend seminars anywhere on the Yale campus.

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Applying to the BBS Program



Qualifications of Applicants

The BBS Program seeks applicants who have the following qualifications:

1. *A strong background in the Life Sciences.*

Students can major in any of the biological sciences (biology, biochemistry, biophysics, molecular biology, cell biology, genetics, physiology, neuroscience or other related fields). In addition to taking advanced classes in the biological sciences, the best applicants will also have taken classes in chemistry, organic chemistry, and physical chemistry.

2. *Laboratory research experience.*

Admissions committees will strongly favor applicants who have previous research experience. Most importantly, students should be able to think independently in the lab rather than simply follow the instructions of a supervisor.

3. *High academic standards.*

Applicants should have very high grades in their undergraduate courses as well as strong GRE scores. All applicants are required to submit GRE General Test and TOEFL scores. Although high scores are attractive to admissions committees, good scores are less important than a strong academic record and research experience.

4. *English proficiency.*

It is very important that applicants have the ability to speak and write fluently in English. Students who are very intelligent and highly motivated, yet who have difficulty communicating in English, will struggle to succeed in graduate school at Yale.

Nominations

Five Chinese institutions participate in the CSC-Yale World Scholars Program: Fudan University, Huazhong University of Science and Technology, Peking University, Tsinghua University, and Zhejiang University. Each institution nominates 4 students and officially conveys the information to Chen Taowei, Project Officer, CSC at twchen@csc.edu.cn, and to Dr. Lynn Cooley, BBS Director, at lynn.cooley@yale.edu. The 20 students apply to Yale via the process described below.

Application Process

Prior to beginning the application process, nominated students should contact Dr. John Alvaro, BBS Administrative Director, at john.alvaro@yale.edu to request an application fee waiver. Dr. Alvaro will

send them a fee waiver form, which they will include in their online application. With this form, they will NOT need to pay the \$95 application fee.

All students apply to the BBS Program via the Yale Graduate School's online application, which is available from our website at www.bbs.yale.edu. On the application, students select a first choice BBS Track to which they wish to apply. Each Track has a separate admissions committee that will review its own applications. Although the BBS application deadline is December 3, 2010, nominees for the CSC-Yale World Scholars program should submit their applications no later than November 5. Faculty from the BBS Program will travel to China in December to interview applicants, and the November 5 deadline will provide faculty with sufficient time to review application materials before the interviews.

To prepare for the CSC-Yale World Scholars interview in China, we strongly encourage incorporating student interviews by faculty in the process of selecting nominees for the program. Students who have an opportunity to practice are more experienced and therefore more successful during the formal Yale interview process.

After the interviews with the Yale faculty have been completed, the BBS admissions committees will select up to 8 nominees from the pool of 20 applicants and recommend them for admission to Yale Graduate School. These Scholars will be the best candidates in the judgment of the Yale admissions committees and will not necessarily be evenly distributed among the five Chinese universities. The Dean of the Graduate School makes all final admissions decisions, which will be communicated to the CSC and the Chinese universities in writing.

The 8 students admitted to Yale will then need to apply for a CSC fellowship via an online application, available at <http://apply.csc.edu.cn>. The CSC will officially announce the selection results to relevant Chinese universities and grantees in official documents.