**Guidelines for the Selection of Suitable CBI Trainees**

* First or second year students may apply for support during their second or third year of doctoral study. However, priority is given to first-year students.
* All applicants should be in the laboratory of a PI who is a CBI mentor. If the PI is not a CBI mentor but wishes to become one, please contact the CBI Program Director, Jeremy Baskin: [jeremy.baskin@cornell.edu](mailto:jeremy.baskin@cornell.edu))
* Applicants must be US citizens or permanent residents.
* **Selection procedure:** All applications will be reviewed by the Executive Committee, which consists of 5-7 faculty mentors. Faculty mentors with students applying to CBI will be excused from reviewing applications and from writing referee statements. Each applicant will be reviewed and scored by three members of the Committee. Applicant ranked in the top 50% will be discussed and ranked again in a meeting attended by all the review members. In certain cases, an informational interview with the applicants may be conducted by the Committee to help choosing the trainees.

**Requirement for Trainees**

* Course requirements include the following:
  1. Two courses from the following: CHEM 4500/6450, CHEM 6650, CHEM 6660, CHEM 6670, CHEM 6860, and VETMM 7050, one of which must be either CHEM 4500/6450 or CHEM 6650;
  2. A cell biology course (BIOMG 4320, 6360, or 6390);
  3. An additional five credit hours from the list of CBI electives below. Chemistry trainees are expected to satisfy this requirement with biology-rich courses, and biology trainees are expected to satisfy it with chemistry-rich courses. All courses must be taken for credit, not audit or pass/fail.
* Trainees will be expected to complete a course in the Responsible Conduct of Research; e.g., BIOMG 7510. Our trainees are also required to complete eight modules of online “Responsible Conduct of Research” foundational training through the Office of Research Integrity and Assurance. Each trainee will also participate in the Responsible Conduct of Research symposium for each of the two years in which they are appointed as trainees.
* Trainees are required to use the online Individual Development Plan (IDP) assessment tools to analyze their skills and career interests and if appropriate, discuss their career interest and goals with their Special Committee. If consulted, the Special Committee should guide the students to produce plans aimed to ensure acquisition of the skills needed for desired career goals. The use of the IDP should be documented in the annual progress report.
* A sabbatical of 6-10 weeks in a laboratory selected by the Trainee is required to help develop the trainee’s career. This laboratory can be on campus or off campus and can be industrial or academic. Trainees should submit a sabbatical proposal no later than the final semester of the traineeship. This proposal should clearly describe how the sabbatical complements the trainee’s current research and help achieve the trainee’s career goals. During the sabbatical internship, it is mandatory that students conduct research in an area that is significantly different, in subject or methodology, from their thesis research. All proposals must be approved by the training grant executive committee.
* While being supported by CBI training grant, trainees are required to participate in biweekly meetings, which include research seminars, workshops, and literature talks, as well as hosting CBI seminar speakers and organize an annual symposium.
* Trainees who are rotated off the CBI training grant but are still in training are required to attend and present research seminars, hosting CBI seminar speakers, and organize the annual symposium.
* Student support on multiple training grants is strongly discouraged.
* Students supported by Cornell Recruiting Fellowships are strongly encouraged to apply.

**Requirement for faculty mentors**

* Faculty mentors are required to supplement the shortfall of stipend using non-federal funds.
* Faculty mentors will make sure funded trainees fulfill the requirement of CBI training program and help trainees developing their research and career skills.
* Faculty mentors are required to take mentor-training activities organized by several training programs on campus with the help of OFDD.
* Faculty members will participate in the training activities for the trainees, such as workshops and annual symposium.

**CBI Training Grant Course List**

AEP 4700: Biophysical Methods (3) (also VETMM 4700, BIONB 4700)

BIOMS 3160: Cellular Physiology (3) (also BIOAP 3160)

BIOMS 4150: Essential Immunology (3)

BIOMG 3310: Principles of Biochemistry: Proteins and Metabolism (2)

BIOMG 3320: Principles of Biochemistry: Molecular Biology (2)

BIOMG 4320: Survey of Cell Biology (3)

BIOMG 4390: Molecular Basis of Human Disease (3)

BIOMG 6310: Protein Structure and Function (3)

BIOMG 6320: Stem Cells and Regeneration (2)

BIOMG 6330: DNA Biology (2)

BIOMG 6360: Functional Organization of Eukaryotic Cells (3)

BIOMG 6390: The Nucleus (2)

BIOMG 6391: Molecular Basis of Disease (3)

BIOMG 6850: Developmental Biology (3)

BIOMG 6870: Human Genomics (3)

BIOMG 6870: Tricks of the Trade: How to Use Genetics to Dissect Cells, Molecules and

Developmental Pathways (3)

BIOMG 6880: Cancer Genetics (3)

BIOMI 4090: Principles of Virology (3)

BIOMI 4310: Medicinal Parasitology (3) (also BIOMS 4310)

BIOMI 6901–06: Bacterial Physiology (1 credit each)

BIOMS 7050: Advanced Immunology (3)

BIONB 3690: Chemical Ecology (3)

BIONB 3920: Drugs and the Brain (4)

BIONB 3950: Molecular and Genetic Approaches to Neuroscience (3)

BIONB 4550: Molecular and Neural Basis of Decision Making (3)

BIOPL 4620: Plant Biochemistry (3)

BME 5130: Introduction to Microbiome Engineering (3)

BME 5620: Biomineralization: The Formation & Properties of Inorganic Biomaterials (3)

BME 5700: Biophysical Methods (also AEP 4700, BIONB 4700, VETMM 4700) (3)

BME 5830: Cell-Biomaterials Interactions (3)

BME 6210: Engineering Principles for Drug Delivery (also CHEME 6310) (3)

BME 6230: Cancer and Immuno-Engineering (3)

BME 6260: Optical Microscopy and Fluorescence Methods for Research (3)

CHEM 4400: Bioinorganic chemistry (4)

CHEM 6250: Advanced Analytical Chemistry I (4)

CHEM 6450: Principles of Chemical Biology (3) (also CHEM 4500)

CHEM 6650: Advanced Organic Chemistry (4)

CHEM 6660: Synthetic Organic Chemistry (4)

CHEM 6670: Topics in Chemical Biology (4)

CHEM 6690: Modern Catalytic Reactions in Organic Synthesis (4)

CHEM 6700: Fundamental Principles of Polymer Chemistry (4)

CHEM 6860: Physical Chemistry of Proteins (4)

CHEM 7880: Modern Methods in Structural Biology (3)

CHEME 5430: Bioprocess Engineering (3)

CHEME 6400: Polymeric Materials (3)

CHEME 7770: Advanced Principles of Biomolecular Engineering (4) (also CHEME 5440)

COGST 3250: Neurochemistry of Human Behavior (3)

MSE 4610: Biomedical Materials and Their Applications (3)

NS 3200: Introduction to Human Biochemistry (4)

PLPPM 4010: Molecular Biology of Plant-Microbe Interactions (3)

VETMM 7050: Chemistry of Signal Transduction (2)

VTPMD 6250: Evolutionary Genomics of Bacteria (1)