



Graduate Program in Cell and Molecular Biology (CMB)

www.med.umich.edu/cmb/

What is CMB? The CMB Graduate Program is an interdisciplinary PhD-granting program. Funded by NIH for over 25 years, CMB is dedicated to training students in broad-based research involving cellular and molecular biology. CMB trains students to address biological problems from multiple perspectives through individualized, flexible programs of coursework and research. Over 100 CMB faculty throughout the University in basic science and clinical departments participate in training CMB students. Our graduates continue in excellent postdoctoral positions and have successful careers in academia, biotech and other scientific pursuits.

Research areas in CMB:

Cell biology, cell biochemistry, cell physiology, cell structure
Genetics, genomics, gene regulation
Microbes, viruses, microbial and viral pathogenesis
Developmental biology, organogenesis, neurobiology, aging
Immunology and inflammation
Molecular mechanisms of disease, cancer biology, genetics of disease

Coursework in CMB.

A. Basic coursework.

1. Biochemistry, Cell Biology, Genetics: Three credits of coursework in each of these three areas. Note that no specific course is required, and that CMB students can take any of a variety of graduate-level courses to fulfill each of these requirements.
2. Electives: six elective credits based on their research interests
3. Research responsibility: one credit (PIBS 501).

B. CMB courses

1. CMB Student Seminar (CMB 850). Mondays, 12:00-1:00 pm, 5623 Med Sci 2 (one credit per semester). CMB students present seminars on their research or findings in the literature.
2. Short course (CMB 630). Minisymposium on topic selected by students, presented by invited leaders in the field (4-5 sessions per semester; students register for 4 semesters).

C. Research rotations - at least two semesters of rotations in at least two labs.

Preliminary exam. Students write an NIH-style grant proposal on a new research topic. The proposal is defended at an oral examination with a committee of four CMB faculty members (two selected by student, two selected by Program). Generally taken winter term, second year.

CMB Program features:

Annual Symposium and Poster Session - student poster awards
Teaching requirement - one semester
Career development workshops
Student mentorship, Esprit de corps

Distinctive features of CMB:

Broad based training in cellular and molecular biology.
University-wide - wide choice of labs and ability to take courses throughout the University
Flexible, individualized research training
Faculty dedicated to training graduate students

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