

# ***Cellular Biotechnology Training Program (CBTP)***

## ***The University of Michigan***

The CBTP is dedicated toward uniting academic and industrial scientists interested in basic research to further enhance career opportunities for Ph.D. graduates. Toward this end, outstanding scientists from industry serve important leadership roles in CBTP.

**The Program:** The Cellular Biotechnology Training Program at the University of Michigan is designed to provide students in a wide range of graduate departments an enhanced educational experience directed towards biotechnology. The Program, which is departmental based, provides students a background in basic cellular design principles and insights into rational engineering directed toward development of integrated biotechnological processes for optimum production of useful products. This enhanced experience includes: (1) monthly dinner meetings in which students from the associated departments discuss their research and discuss research with invited faculty, (2) a one semester course in cellular biotechnology, (3) a seminar series directed towards biotechnology with outstanding scientists from academia and industry, (4) an opportunity to have a research experience in an industrial setting, (4) a yearly symposium in which students and faculty have an opportunity through posters to discuss their research, and (5) contacts with scientists in the biotechnology industry.

Students in the Program are drawn from a number of departments which include, Cell and Developmental Biology, Biomedical Engineering, Biological Chemistry, Biology, Chemical Engineering, Chemistry, Civil and Environmental Engineering, Human Genetics, Microbiology and Immunology, and Physiology.

**Support:** Funding is available from CBTP for students in the Program for a period of three years. This funding is awarded on a competitive basis and is available through a number of sources including a training grant from the National Institutes of Health and University funds.

**Experience in industry:** One of the goals of CBTP is to make sure all students in the Program have some experience acquainting them with work in an industrial setting. To insure that this goal is met, it is now a requirement that all students supported by CBTP have such an experience which can vary from learning a technique in a laboratory in a biotechnology company to doing an internship. The Program will help in arranging such an experience if the mentor is unable to provide the necessary contacts. Students in the Program consider that this requirement is not a burden, but a benefit.

**Expanded choice of laboratories:** If a student in the Program decides to perform his/her thesis work in the lab of a faculty member who is not currently part of the Program, the Program Committee will consider that faculty member for admission to the Program at the time the student enters the lab.

**Thesis committees:** Students in the Program must have at least one member of the Program other than their thesis advisor on their dissertation committee.

**Core course:** Students are required to take the core course, Cellular Biotechnology 504, which is offered every Winter term.

**Monthly student meetings:** Students are required to attend the monthly dinner meetings. At these meetings students have an opportunity to present their research and learn about research in laboratories outside their area of immediate interest.

**Certificate program:** The Rackham Graduate School will award a Certificate in Biotechnology to trainees upon completion of their Ph.D. providing the student fulfills the minimum set of requirements set by the Rackham Graduate School and the CBTP.

**Application:** The CBTP typically has four to six slots each year. The call for applications will go out to all departments and faculty associated with the CBTP and is generally done in May or June each year.

Application materials consist of the following:

- A copy of the student's complete Rackham application, which would include transcripts, GRE scores, statement of purpose, and letters of recommendation
- Information on any industrial experience that the candidate may have had either before or during graduate school
- Information that indicates the student's interest in biotechnology
- A cover letter indicating from the person nominating the student indicating why they think the student is appropriate for the CBTP

For any information regarding the CBTP, please contact the Program Director, Dr. Joel Swanson or Margaret Allen, Program Administrator (see below for contact information).

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