

October 2000

**Memorandum of Understanding Among  
The Molecular and Cellular Biology Program  
The Department of Biological Sciences,  
The Department of Biomedical Sciences  
The Department of Chemistry and Biochemistry  
and  
The Department of Environmental and Plant Biology  
Ohio University**

The Interdisciplinary Doctoral Program in Molecular and Cellular Biology (MCB) is an academic program providing a broad graduate training of students by faculty from the participating departments. Because MCB students are departmental graduate students, they must be simultaneously admitted into both the MCB Program and their department of emphasis (home department). **The home department is defined as the department where the graduate degree will be granted. In the case of M.S. students in the MCB program, the home department will be the Department of Biological Sciences, Chemistry and Biochemistry or Environmental and Plant Biology.** This double enrollment requirement is time consuming, and it leads to confusion for students and faculty because of the potential that requirements may vary between MCB and the home department or may be interpreted differently. Each home department listed above participates in programs of study leading to the M.S. degree, with its own requirements for admission and graduation. It is important that MCB admission and graduation requirements reflect the requirements of each student's home department in addition to the requirements of the MCB Program. Therefore, a document unifying and specifying the various requirements for admission and graduation is necessary. This document delineates the role of both the departments and the MCB Program in admitting M.S. students, offering stipends and other support, setting requirements for graduation and monitoring progress. General requirements, specific MCB requirements, and specific home department requirements all must be followed. The intent is to provide clarity and simplicity in these aspects of MCB student affairs. The home departments and MCB reserve the right to make changes in their policies, procedures, and requirements from time to time; therefore, this document will be revised as required by such changes. The policies and requirements in force at the time that they matriculate will govern students.

**I. GENERAL PROCEDURES**

**A. Admission** The MCB Graduate Committee is composed of one MCB faculty member from the four participating departments and an MCB student. In addition, the graduate chairperson (or designate) from the home department will serve as an MCB Graduate Committee member for the purpose of considering the application of a student that is being considered for admission into the department. Therefore, for the purpose of student admission, the MCB Graduate Committee will consist of five (5) voting persons, and the fifth member will vary depending upon the intended home department of the applicant. The departmental graduate chairperson has veto authority regarding admission. The MCB Graduate Committee, in considering applications, will use the specific admission requirements for the home department and MCB Program (specified below under MCB requirements and departmental requirements) as well as the objective

and subjective evaluation of the quality of such information as letters of reference and student interviews. The specified requirements are to be considered minimal.

**B. Student Progress and Graduation** Each student is personally responsible for satisfying all requirements and all deadlines and for ensuring that all documentation of completion of all requirements is provided to the MCB Graduate chairperson within one week after completion. The MCB Graduate Committee chairperson will maintain records and annual progress reports for each student. In addition, copies of all documents regarding a student will be provided to the home department graduate chairperson by the MCB graduate chairperson within one week of receipt of the document. The specific requirements for progress and graduation are defined below under MCB and departmental requirements, and the chairperson of the MCB Graduate Committee will serve as the authority for determination that the requirements have been met. To ensure that students will not be confused over which unit governs their progress and graduation, once a student has been admitted she/he will deal with the MCB Graduate Committee chairperson. The MCB Graduate Committee chairperson, in consultation with the home department graduate chairperson, the student, and the student's advisor, will determine any action to be taken concerning problems or answers to any questions that might arise. Thus, the student need only notify the MCB chairperson of a concern or questions and will not be expected to mediate between MCB and the home department. However, departments may terminate students from their program if departmental requirements, as stated in this document, are not met.

If a department determines that this arrangement is not serving well, this Memorandum of Understanding can be altered in the spring or summer quarter of each year. However, a student already enrolled will be affected only by the agreement in force when she/he was admitted.

**C. Stipends and Other Financial Support** At the time of admission and each time that contracts are written for a student, the MCB graduate chairperson and the home department graduate chairperson will consult together and with the student's advisor to determine the appropriate source (department, MCB, or grant) of support, if any. Factors such as teaching or research needs, availability of grant-paid stipends and student aptitude and progress will be considered. The MCB graduate chairperson in conjunction with the departmental graduate chairperson will provide each student a description of any service required for support.

**D. Master's Advisory Committee** The student and her/his research advisor will choose a Master's Advisory Committee (MAC) composed of no fewer than four faculty members, at least three of whom are MCB faculty. Two members of the committee, including the chairperson (the student's research advisor), must be from the student's home department or have graduate faculty status in the home department. At least one committee member must not be associated with the graduate program of the student's home department. The MAC will be formed by the end of the third quarter of study in the MCB Program. A limited amount of responsibility for determination of the program of study of the student is left to the MAC. General and specific requirements are included in this document, and the MAC has the initial responsibility to ensure that these requirements are met. The chairperson of the MAC will submit to the MCB graduate committee chairperson documentation of the completion or failure to complete each requirement within one week of the event. The MAC has the responsibility not only of ensuring that minimum requirements are met but also of developing the entire course of study and research for a student.

## II. SPECIFIC REQUIREMENTS

### A. MCB Program

**1. Admission** Applicants must have a B.A. or B.S. degree in biological or physical science. Criteria considered are course work completed, grades, letters of recommendation, and scores on the Graduate Record Examination (GRE). Unconditional admission requires an overall grade-point average of 3.0 on a 4.0 point scale. International students, for whom English is not their primary language, are required to have earned a minimum grade of 620 on the Test of English as a Foreign Language (TOEFL).

**2. Research Advisor** The student will select her/his research advisor from among the MCB program faculty before the end of the third quarter in the program. Prior to selection of the research advisor, the chairperson of the MCB Graduate Committee will serve that capacity. The selected faculty advisor must have graduate faculty status in the home department of the student advisee. If the faculty member does not have graduate status in the student's home department, the student must apply for and be admitted to the home department in which the faculty has such an affiliation.

**3. Coursework** The student's MAC has the responsibility of determining appropriate course work. However, a required M.S. core curriculum for MCB students consists of one quarter of biochemistry (CHEM 590), Molecular Biology (MCB 720), Cell Biology (PBIO 531 or MCB 760), and Molecular and Cellular Biology Laboratory (MCB 730). Students are required to register for Seminar in Molecular and Cellular Biology (MCB 741) when offered and must present at least one seminar each year. Note the first year students may be exempt from this presentation requirement depending upon seminar enrollment. Also note that students in their final year in the program may use a thesis research seminar to fulfill the yearly MCB seminar presentation requirement. Attendance is required for all seminars in the quarters registered. All students are also required to attend all seminars presented by MCB -invited speakers. The MCB Graduate Committee chairperson or her/his representative will record student attendance at all MCB seminars. Absences must be approved in advance by the MCB Graduate Committee chairperson. Typically, during the first year of enrollment, a student is expected to take core courses in the following sequence: fall quarter - CHEM 590, PBIO 531 and MCB 741; winter quarter - MCB 720 and MCB 741; spring quarter - MCB 730 and MCB 741. Any additional course work chosen by the MAC should have as one of its objectives the adequate preparation of the student for the qualifying examinations. Each student is required to complete a minimum of 30 graded hours of graduate work, with the total number of hours being dictated by the student's choice of a home department (see Section II. B).

**4. Research Proposal** **With the approval of her/his advisor, the student will prepare and submit a specific research proposal to her/his MAC by the end of the third quarter in the program.** The MAC will advise the student on the merits of the proposal, and the student will be allowed two attempts to submit an acceptable proposal. The proposal must be approved at a meeting of the committee with the student to determine the student's understanding of the proposed research. If deficiencies are discovered, the MAC will ask the student to prepare again for another meeting (including revision of the proposal if required). A second unsatisfactory presentation will lead to termination from the MCB Program.

**5. Qualifying Examination** After passing the research proposal requirement, the student must pass a written qualifying examination prepared by their MAC. The MAC will decide which member (other than the student's advisor) will administer the examination. The student should speak with each member of the MAC in order to determine how she/he should prepare for the examination. It is the student's responsibility to contact the MAC members for this information. After notifying the student of the general content of the examination, each member of the MAC will prepare written examinations. These examinations will then be submitted to the MAC member administering the examination. The MAC member will administer the written examinations to the student, who will take the examinations one or two per day over a ten-day period. The MAC will then meet to discuss the results of the examination within two weeks after completion of the last examination. An examination may be repeated no more than one time. The MAC will meet within two weeks after the repeated examinations to evaluate the results. The student and the MCB graduate chairperson are to be notified by the MAC (in writing and signed by all examiners) of the results of the written examination within one week after the meeting of the MAC to evaluate examination results (original and repeats). If more than one examinations are failed, the MAC and MCB graduate chair will determine which examinations are to be repeated, whether additional course work is required, and when the examinations are to be repeated. **The qualifying examination is to be completed no later than the end of the fourth quarter of enrollment in the MCB Program.** In the event an examination must be repeated, it must be completed by the end of the fifth quarter of enrollment. Failure to pass all examinations after any second attempts will result in termination in the MCB Program.

**6. Grades** Students must maintain a 3.0 grade-point average to remain in the MCB Program and to graduate (see item 11 below). In addition, if a student receives a grade of C+ or less in more than two courses, she/he will be terminated from the MCB Program.

**7. Financial Support** Students must have unconditional admission status in the MCB Program and maintain a 3.0 or better grade point average in overall course work to receive financial support from the MCB Program. A student may be supported for two years with the possibility of extending support for an additional quarter.

**8. Teaching Experience** Each student who is supported by either the MCB Program or a participating department is required to teach a full assigned course load for a minimum of two quarters per year while enrolled in the MCB Program. Teaching in an MCB course(s) and/or a home department course(s) as needed by the department and MCB may fulfill the teaching requirement.

**The MCB Program reserves the right to select specific students enrolled in the MCB Program to serve as teaching assistants for MCB courses, as long as the selected student is being fully supported (stipend and fee waiver) by the MCB Program.**

**9. Scholarly Disciplines** Scholarly disciplines are proficiency in statistics, computer languages and/or usage, foreign languages, or advanced mathematics. The MAC will determine whether any scholarly discipline requirement is to be satisfied. Within two academic quarters after its formation, the MAC will submit to the MCB

Graduate Committee chairperson the plan for completion of the student's scholarly discipline requirement (if any). This will consist of a statement signed by all MAC members indicating specifically what the scholarly disciplines are to be and reasons why they are deemed appropriate for the student. The MCB Graduate Committee will approve or disapprove the MAC recommendation and notify the student and MAC members in writing within one month.

**10. Thesis Defense** Each student must defend her/his thesis before the MAC at a public forum. In addition, each student is required to present the thesis research as an MCB Program seminar.

**11. Probation and Remediation** A student failing to achieve a 3.0 or higher GPA at the end of any quarter will be placed on probation for the next quarter. If the GPA is still below a 3.0 at the end of the probationary quarter, the student will be terminated from the MCB Program. No variance from the requirements stated in this document is allowed except in extraordinary cases, such as prolonged hospitalization. If a deadline cannot be met due to an unforeseen and unavoidable extraordinary circumstance, the student and her/his advisor may petition the MCB Graduate Committee in writing for an opportunity to correct the deficiency. The graduate committee will determine whether the request can be allowed and notify the student and advisor in writing of its decision.

**12. Academic Misconduct** Academic misconduct in any form by an MCB graduate student will not be tolerated. It is the student's responsibility for knowing what constitutes academic misconduct. However, incoming students will be provided with material from the Office of Judiciaries, which defines many forms of misconduct. If the student did not receive this material, she/he should obtain it from the MCB graduate chairman. Students can also consult the Ohio University student handbook for information regarding academic misconduct. A guilty charge of academic misconduct may result in the loss of financial support (i.e. stipend), fee waiver or dismissal from the MCB Program. The MCB Executive Committee will be responsible for the review of each case of academic misconduct and will determine the penalties.

## **B. Departmental Requirements**

### **1. Additional Requirements for MCB Students Whose Home Department is Biological Sciences**

**ALL STUDENTS ARE REQUIRED TO FULFILL ALL THE REQUIREMENTS DESCRIBED IN THE DOCUMENT ENTITLED "GRADUATE PROGRAM INFORMATION, DEPARTMENT OF BIOLOGICAL SCIENCES" INCLUDING THE FOLLOWING:**

**a. Required Course** All students must take BIOS 670, Biostatistics I, or its equivalent. Students must also register for additional graded credit hours to reach the required 30.

- b. Approvals by the Departmental Graduate Chair** Both the written research proposals as well as the thesis (which must satisfy departmental requirements) must be approved by the departmental graduate chair.
- c. Admission** Graduate students whose first language is not English must pass the TOEFL with at least a 620 score to be admitted into the graduate program for Biological Sciences. All students must score in the **50th** percentile or above on the **General Test of the Graduate Record Examinations** (verbal, quantitative, and analytical). Exceptions to this requirement will be made only where background or special talents dictate.
- d. Grades** Graduate students are expected to maintain a GPA of 3.0 or better; failure to maintain a 3.0 GPA will usually result in dismissal.
- e. Thesis Advisor** A thesis advisor must be selected by the end of the second quarter of the program.
- f. Graduate Teaching Associates** Teaching Associates generally teach three quarters per year (may not necessarily be fall, winter, and spring). Appointments at all stipend levels require 12-graduate credit hours registration each quarter unless otherwise approved by the Department of Biological Sciences and, if necessary, by the Dean of Arts and Sciences.
- g. Master's Advisory Committee** The graduate advisor and a second member of the committee must have Graduate Faculty Status in the Department of Biological Sciences.

## **2. Additional Requirements for MCB Students Whose Home Department is Chemistry and Biochemistry**

- a. Required Courses** Students must take CHEM 591 General Biochemistry and CHEM 592 General Biochemistry. Students must also register for additional graded credit hours to reach the required 30.
- b. Approvals by the Departmental Graduate Chair** Both the written research proposal as well as the thesis (which must satisfy departmental requirements) must be approved by the departmental graduate chair.
- c. Admission** Graduate students whose first language is not English must pass the TOEFL with at least a 620 score to be admitted into the graduate program for Chemistry and Biochemistry.
- d. Grades** Graduate students are expected to maintain a GPA of 3.0 or better; failure to maintain a 3.0 GPA will usually result in dismissal.
- e. Thesis Advisor/MAC** A thesis advisor must be selected by the end of the second quarter of the program. The graduate advisor and a second member of the committee must have Graduate Faculty Status in the Department of Chemistry and

Biochemistry. Once an advisor and DAC are chosen, any subsequent changes must be approved the Graduate Committee of the Department of Chemistry and Biochemistry.

**f. Graduate Teaching Associates** Teaching Associates generally teach loads of three-quarters per year and a partial load during the summer. Appointments at all stipend levels require 15-graduate credit hours registration each quarter unless otherwise approved by the Department of Chemistry and Biochemistry and by the Dean of Arts and Sciences.

**g. Thesis Defense** The required MCB Program seminar must be presented prior to the thesis defense.

### **3. Additional requirements for MCB Students Whose Home Department is Environmental and Plant Biology.**

**Required Courses** Students must take PBIO 524 Plant Physiology, PBIO 512 Plant Anatomy, and one course from area C of the departmental Modus (e.g., PBIO 525 Plant Ecology, PBIO 526 Physiological Plant Ecology, PBIO 653 Experimental Ecology, or PBIO 657 Plant Speciation).