



# **BMS 590: Laboratory Rotations**

**Fall 2010**

## **LABORATORY ROTATION IN BIOMEDICAL SCIENCES INFORMATION BOOKLET**

**April Burch, Ph.D.  
Course Director**

**BMS 590: 1 credit**

## Course Description

The aims of the laboratory rotations are:

- (1) To allow the student to interact with scientists of varied disciplines working on a variety of problems.
- (2) To introduce the student to laboratory techniques and principles.
- (3) To give students and laboratory staff a chance to interact intellectually and socially.
- (4) To aid the student in selecting a mentor for graduate research.

The rotation will consist of a small research project developed in consultation with the research mentor. It is expected that the student will spend a **minimum** of 10 hours a week in the rotation. Some mentors may expect more than this, and the student and mentor should discuss expectations prior to agreeing on the rotation, bearing in mind other student obligations such as coursework and service work that is required for the SUNY assistantships that are the source of support for most students during the first year. At the end of the rotation a written report is submitted and evaluated and a short oral presentation is given as well (see below).

**Repeat rotations in the same laboratory are not permitted.**

**Please keep in mind that:**

- Rotations should be in laboratories that are funded to accept students or have a reasonable likelihood of obtaining such funding in the near future.
- Students should consider the fit of the laboratory.
- Students should consider the fit of project.

## Fall 2010 Lab Rotation Schedule

- Ph.D. and M.S. students are required to rotate in two laboratories
- Additional rotations are allowed in the Spring semester
- Rotation times are outlined below:

	Dates	Rotation Length	Details	Evaluation forms due; Other forms due	Rotation Report, Evaluation forms due to <b>BMS OFFICE</b>
Rotation 1	Sept 6-Oct 22	7 weeks		Oct 13	
Rotation 2	Oct 25-Dec 10	7 weeks	Includes Thanksgiving Week	Dec 8	Dec 13

Students entering the graduate program in September will register for BMS 590 in the Fall. The grading is S(atisfactory)/U(nsatisfactory). Grades for rotations will be based on the written and oral reports, in addition to the mentor evaluations. The grading policy for this course requires attendance at **all scheduled meetings** and completion of oral and written reports and presentations at required deadlines. The grade for the rotation may be decreased if these requirements are not met. Rotation 2 includes the Thanksgiving recess. The rotation schedule is

designed to allow the maximum lab experience within the framework of courses and additional graduate responsibilities. The program can be adjusted for exceptional circumstances.

**Please note that a satisfactory grade in all rotations must be attained to fulfill the rotation requirement.**

### **Student Obligations**

A student may choose to work in the laboratory of any faculty within the Department of Biomedical Sciences. Special permission may be given to a student who wishes to do a lab rotation with a faculty member in one of the school's other departments. Students should make their choice based on the written descriptions of faculty research. Students should also view the BMS web site: <http://www.wadsworth.org/sph/bms/> for faculty research interests. Students are strongly encouraged to meet with some of the faculty on an individual basis to help them decide on rotation mentors. Students should fill out the student/faculty rotation agreement (attached to this document) give it to the rotation advisor to complete, and then return it to the **BMS DEPARTMENT OFFICE ESP C236**, as indicated on the attached form. Students must decide on their first rotation advisor by **Wednesday, September 1st** but are encouraged to decide as early as possible. Please indicate your choices for the second rotation by completing rotation agreement forms by **Wednesday, October 20th**. This will help us to avoid conflicts, such as two students desiring to do a second rotation with a faculty member who only has space for one. Rotation agreements must be submitted for the second rotation prior to beginning the actual rotations.

Students are required to write a brief report (2-3 pages) describing their research project for one rotation. Generally this will include an Introduction describing the research and its purpose, a Methods section, a section including Results and Discussion (these may be separate), and a short bibliography. Properly formatted Figures and Tables should be included as appropriate. This report should be given to the research advisor by the dates indicated above near the end of the rotation for editing. The final version of the report (including mentor critiques) **must be submitted to the BMS DEPARTMENT OFFICE, ESP C236, by the dates listed** in the rotation schedule table (page 2). The rotation reports are considered in the student's grade for the rotation. **The student is responsible for submitting this report and failure to do so will result in an incomplete (and eventually Unsatisfactory) grade.** Students will also have their notebooks evaluated by their rotation advisors as part of their rotation requirement, and will discuss their performance with the advisor at the end of the rotation.

## **BMS 590 Laboratory Rotation Class Schedule for 2010/2011**

The required class schedule for this course is listed below. Students will give informal oral descriptions of their project and an oral progress report of each rotation at mandatory meetings for this course. Additionally, faculty interested in students for the second rotation will be invited to these meetings to give short descriptions of their work during the Fall.

<b>Date</b>	<b>Purpose</b>	<b>Time</b>	<b>Room</b>
Sept 1	Overview	2:00-3:00	DAI Classroom 1041
Sept 8	<b>Describe Rotation #1</b>	2:00-3:00	DAI Classroom 1041
Sept 15	Invited Faculty Talks (Rotation 2 Mentors)	2:00-3:00	DAI Classroom 1041
Sept 22	Invited Faculty Talks (Rotation 2 Mentors)	2:00-3:00	DAI Classroom 1041
Sept 29	Progress Discussion	2:00-3:00	DAI Classroom 1041
<b>Oct 13</b>	<b>Rotation 1 Oral Final Summary</b>	2:00-3:00	DAI Classroom 1041
Oct 27	<b>Describe Rotation #2</b>	2:00-3:00	DAI Classroom 1041
Nov 3	Rotation Report Discussion	2:00-3:00	DAI Classroom 1041
Nov 17	Progress Discussion	2:00-3:00	DAI Classroom 1041
Dec 1	Progress Discussion	2:00-3:00	DAI Classroom 1041
Dec 8	<b>Rotation 2 Oral Final Summary</b>	2:00-3:00	DAI Classroom 1041
Dec 13	<b>Rotation Report Due</b>	2:00-3:00	DAI Classroom 1041

### **Research Advisor Obligations**

The research advisor is responsible for assigning to the student a small project which the student should be able to make tangible progress on in the limited time frame of a rotation (a minimum of 10 hrs per week). The advisor should take the time to ensure that the student understands how the project fits into the larger scheme of the lab's overall goals. The advisor should meet on a regular basis (at least weekly) with the student to monitor progress during the rotation.

It is very important for the advisor to recognize that some of the new students may have limited laboratory experience, and to take responsibility for making sure the student is aware of proper procedures for laboratory safety (use of protective clothing/safety glasses; handling toxic compounds and suspected carcinogens, e.g. acrylamide, ethidium bromide; wearing goggles or a face mask when using the UV transilluminator; proper use of Bunsen burners; etc.).

At the end of the rotation, the advisor fills out a LABORATORY ROTATION EVALUATION SHEET, taking into account the student's time in the lab, laboratory notebook and final report. The students will be given copies of this form at orientation, and additional copies can be obtained from the department office or the "department login" on the web site [www.wadsworth.org/sph/bms](http://www.wadsworth.org/sph/bms). The rotation mentor must also meet with the student to discuss the evaluation that is given, point by point. In order to meet SUNY grading deadlines, this evaluation must be submitted to the Department Office **one week after the end of the rotation.**

Any questions on rotation procedures should be directed to the BMS office, one of the course directors, or the BMS Department Chair.

Fall, Dr. April Burch, [aburch@wadsworth.org](mailto:aburch@wadsworth.org)  
Dept. Chair, Dr. M. Joan Curcio, [curcio@wadsworth.org](mailto:curcio@wadsworth.org)

David Axelrod Institute  
Center for Medical Sciences

## LISTING OF FACULTY AVAILABLE FOR FALL ROTATIONS

### Track: Immunology and Infectious Disease

Nick Mantis  
Vishnu Chaturvedi  
Sudha Chaturvedi  
David Lawrence  
Gary Winslow  
David Wentworth  
Kathleen McDonough  
April Burch

### Track: Molecular Genetics

Randy Morse  
Doug Conklin  
Bruce Herron  
Xinxin Ding  
Mike Fasullo

### Track: Neuroscience

Matt Hynd  
Anne Messer

### Track: Structural and Cell Biology

Haixin Sui  
Joachim Jaeger  
Xiang Yang Chen  
Nilesh Banavali  
Hong Min Li

**PLEASE RETURN DIRECTLY TO DEPARTMENT OFFICE**  
**ESP C236**

**LABORATORY ROTATION IN BIOMEDICAL SCIENCES**  
**STUDENT-FACULTY AGREEMENT**

**STUDENT - PLEASE FILL IN THE INFORMATION BELOW**

NAME: \_\_\_\_\_

STUDENT I.D. NUMBER: \_\_\_\_\_

DEGREE PROGRAM:      MS \_\_\_\_\_      PhD \_\_\_\_\_

TRACK: \_\_\_\_\_

ROTATION MENTOR: \_\_\_\_\_

Lab Phone #: \_\_\_\_\_ Lab Room #: \_\_\_\_\_

Rotation Number (check one):      1: \_\_\_\_\_ 2: \_\_\_\_\_

Year: \_\_\_\_\_

A student-faculty agreement sheet must be filled in for each rotation. **You must submit this sheet to the department office ESP C236** with the completed information **BEFORE** the start of each rotation.

**RESEARCH MENTOR - Please fill in the information below:**

LABORATORY ROTATION PROJECT TITLE: \_\_\_\_\_

\_\_\_\_\_

Research Mentor Name: \_\_\_\_\_

Lab Phone #: \_\_\_\_\_ Lab Room #: \_\_\_\_\_

Additional comments \_\_\_\_\_

\_\_\_\_\_

\*Faculty member approval to act as lab rotation mentor: \_\_\_\_\_

(signature)

## PROGRESS DISCUSSION GUIDELINES

Projects will be described using the following criteria. No Power Point presentations. You may use an overhead if you desire but this is not required. Clarity of oral presentation and ability to communicate the science is the goal of this exercise. This is not a test, it's a learning tool.

STUDENT NAME:

TODAY'S DATE:

Criteria	Marginal	Good	Excellent
Rationale			
Hypothesis			
Methods			
Expected Results			
Anticipated Problems			
	Please Check one		

ADDITIONAL COMMENTS:

**PLEASE RETURN DIRECTLY TO DEPARTMENT OFFICE**  
**ESP C236**

**DEPARTMENT OF BIOMEDICAL SCIENCES**  
**MENTORS EVALUATION OF STUDENT**

Lab Rotation Mentor: \_\_\_\_\_

Student: \_\_\_\_\_

Semester: \_\_\_\_\_

Rotation:        1        2        (circle one)

Please use this form to evaluate the student's performance in the laboratory. All information received will be used by the Graduate Academic Committee for student evaluations and will become a permanent part of the student's departmental file.

Please address the following areas, being as informative as possible:

- 1)        Assess the student's scholastic ability.
  
  
  
  
  
  
  
  
  
  
- 2)        Evaluate the student's original thinking and independence.
  
  
  
  
  
  
  
  
  
  
- 3)        Describe the student's work habits (enthusiasm, motivation, dependability, time effort, etc).
  
  
  
  
  
  
  
  
  
  
- 4)        Evaluate the student's lab notebook. Comment on both scientific and writing skills including the final report.
  
  
  
  
  
  
  
  
  
  
- 5)        Assess the student's oral presentations.

6) How well did the student interact with other people in the lab, socially and scientifically?

7) Additional comments.

Please check the rating which best summarizes the student's performance:

\_\_\_\_\_ SATISFACTORY: This is the expected and usual level of performance. The student generally meets performance expectations for all tasks and performs in a good and competent manner.

If Satisfactory, please circle one of the following:

A      A-      B+      B

\_\_\_\_\_ UNSATISFACTORY: The student clearly does not meet performance expectations for one or more tasks. The student requires significant extra direction (taking into account any previous lab experience) and cannot be relied upon to perform experiments in a timely and effective fashion.

B-      C+      C

I have reviewed and discussed this evaluation with the student.

I have reviewed and discussed this evaluation with my rotation mentor.

\_\_\_\_\_  
*Signature of rotation mentor      date*

\_\_\_\_\_  
*Signature of student      date*

**PLEASE RETURN DIRECTLY TO DEPARTMENT OFFICE**  
**ESP C236**

**DEPARTMENT OF BIOMEDICAL SCIENCES**  
**STUDENT EVALUATION OF MENTOR**

Name of Lab Rotation Mentor: \_\_\_\_\_

NOTE: This evaluation will be treated with the strictest confidence. Your remarks will not be communicated to the faculty member being evaluated. Please **DO NOT SIGN YOUR NAME** to this form.

Mentor Evaluation:

Rate the following questions on a scale of 1 to 5, using the key for that questions, in the spaces provided.

- 1) To what extent did the instructor provide you with the necessary education/training to carry out the laboratory work? 1,2 = less than adequate; 3 = adequate; 4,5 = more than adequate.

Rating \_\_\_\_\_

- 2) Were you provided with reasonably attainable clearly defined goals for your laboratory work? 1 = no; 2,3 = somewhat; 4,5 = definitely.

Rating \_\_\_\_\_

- 3) Was the instructor organized and prepared for your rotation? 1 = poorly organized; 2,3 = moderately well organized; 4,5 = very well organized and prepared.

Rating \_\_\_\_\_

- 4) Rate the helpfulness and availability of the instructor during the period of the rotation. 1 = gave no help; 2,3 = reasonably helpful; 4,5 = very helpful.

Rating \_\_\_\_\_

- 5) To what extent did the laboratory rotation broaden your base of knowledge?  
1 = not at all; 2,3 = moderately; 4,5 = very much.

Rating \_\_\_\_\_

- 6) Was the work interesting? 1 = not at all interesting; 2,3 moderately interesting; 4,5 = very interesting.

Rating \_\_\_\_\_

- 7) How would you characterize the overall teaching performance of your faculty instructor?  
1 = poor; 2,3 = average; 4,5 = excellent.

Rating \_\_\_\_\_

- 8) Would you recommend a rotation in this laboratory to other graduate students? 1 = no;  
2,3 = yes, with reservations; 4,5 = definitely.

Rating \_\_\_\_\_

General comments

In the space below, please describe (a) what you like best, and (b) what you liked least about this laboratory rotation.

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**DEPARTMENT OF BIOMEDICAL SCIENCES BMS 590**  
**COURSE DIRECTOR EVALUATION**

Name of Course Director: April Burch

NOTE: This evaluation will be treated with the strictest confidence. Your remarks will not be communicated to the faculty member being evaluated. Please **DO NOT SIGN YOUR NAME** to this form.

Course Director and Staff Evaluation:

Please take a few minutes to provide us with this important feedback.

- 1) To what extent did the Directors provide you with the necessary framework for you to understand the goals of the laboratory rotation? 1,2 = less than adequate; 3 = adequate; 4,5 = more than adequate.

Rating \_\_\_\_\_

- 2) Did the meetings as a group with Directors provide you with a forum to discuss and get a feel for other student's rotations that were helpful and valuable to your rotation experience? 1 = no; 2,3 = somewhat; 4,5 = definitely.

Rating \_\_\_\_\_

- 3) Did the Directors provide faculty talks at some of the scheduled meetings and were these helpful for choosing a rotation laboratory or learning about research at the Wadsworth Center? 1 = poorly organized; 2,3 = moderately well organized; 4,5 = very well organized and prepared.

Rating \_\_\_\_\_

- 4) Were the Directors helpful and available if you encountered any issues during the period of your rotations. 1 = gave no help; 2,3 = reasonably helpful; 4,5 = very helpful.

Rating \_\_\_\_\_

- 5) What suggestions do you have to make the laboratory rotation course a more educational experience apart from your time at the bench?

6) How useful to your laboratory rotation experience was completing the laboratory report? 1 = not at all; 2, 3 = somewhat useful; 4, 5 = definitely useful.

Rating \_\_\_\_\_

7) What question should have been asked on this evaluation form that was not asked?

## PRESENTATION EVALUATION FORM

Presenting Student's Name: \_\_\_\_\_

Please evaluate the speaker's presentation based on the following criteria. Circle the value that most closely represents your opinion, using the key below. Please add your constructive comments at the bottom of this form. All evaluations are anonymous.

- 1 - room for improvement
- 2,3 - good job
- 4,5 - excellent job

1. Was the content of the presentation appropriate and effective?

1            2            3            4            5

2. Was the length of the presentation appropriate? Were time limits adhered to?

1            2            3            4            5

3. Was the rate (speed) of delivery effective?

1            2            3            4            5

4. Did the introduction set the stage for their rationale and approach?

1            2            3            4            5

5. Was the presentation well organized?

1            2            3            4            5

6. Did the conclusion emphasize the major point(s)?

1            2            3            4            5

7. Rate their speaking style (eye contact, voice, body language)?

1            2            3            4            5

8. Were there slides/overheads effective (labeled adequately, interdependent, informative, well-designed and professional)?

1            2            3            4            5

9. How well did the student handle questions/comments from the audience.

1            2            3            4            5

Helpful Comments/suggestions: