DEPARTMENT OF BIOMEDICAL SCIENCE

BMS 590a,b: Laboratory Rotations

Fall 2009 – Spring 2010

LABORATORY ROTATION IN BIOMEDICAL SCIENCES
INFORMATION BOOKLET

April Burch, PhD, Fall Course Director 590a,
David Wentworth, PhD, Fall Co-Director 590b,
James Dias, PhD, BMS Department Chair

BMS 590a: 1 credit Fall
BMS 590b: 1 credit Spring

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 2009 – Spring 2010 Lab Rotation Schedule

- Ph.D. students are required to rotate in three laboratories (the third rotation may be waived at the discretion of the Graduate Academic Committee); M.S. students are required to rotate in one laboratory. Rotation times are outlined below:

	Dates	Rotation Length	Details	Rotation Report, Student and Mentor Eval. due to **Mentor**	Rotation Report, Student and Mentor Eval. due to **BMS office J. Duckor**
Rotation 1	8/27-11/18	12 weeks		11/18	12/2
Rotation 2	11/19-12/18 1/6-2/17	13 weeks	2 weeks vacation (optional)	2/17	3/3
Rotation 3	2/18-5/12	11 weeks		5/5	5/12

Students entering the graduate program in September will register for BMS 590a in the Fall, and BMS 590b in the Spring. The grading is S(atisfactory)/U(nsatisfactory). Grades for all 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 winter recess, but is structured to permit a winter break. 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 2rd** but are encouraged to decide as early as possible. Please indicate your choices for the second and third rotations by completing rotation agreement forms by **Wednesday**, **November 4th**. This will help us to avoid conflicts, such as two students desiring to do a third rotation with a faculty member who only has space for one. Rotation agreements must be submitted for the second and third rotations prior to beginning the actual rotations.

Students are required to write a brief report (2-3 pages) describing their research project for each 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 590a,b Laboratory Rotation Class Schedule for 2009/2010

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 and third rotations will be invited to these meetings to give short descriptions of their work during the Fall.
Students will also give short talks (about 10 minutes) on one of their rotation projects in a Symposium in June 2010 that faculty, staff and students will be invited to attend.

Date	Purpose	Time	Other Details	Room
Aug 26	Orientation/ intro to the course	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Sept 2	**Describe rotation #1**	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Sept 9	Invited Faculty Talks	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Sept 16	Invited Faculty Talks	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Oct 7	Progress Discussion	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Oct 14	Invited Faculty Talks-if necessary	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Nov 11	**Final oral report for Rotation #1**	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Nov 18	**Describe rotation #2**	2:00 PM-3:00 PM	**Rotation Paper and Evals due to Mentor**	********** DAI Auditorium **********
Dec 2	Invited Faculty Talks-if necessary	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Jan 20	Progress Discussion	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
Feb 17	**Final oral report for Rotation #2**	2:00 PM-3:00 PM	**Rotation Paper and Evals due to Mentor**	CMS 1st Floor Conference Room
Feb 24	**Describe rotation #3**	2:00 PM-3:00 PM		CMS 1st Floor Conference Room
May 5	**Final oral report for Rotation #3**	2:00 PM-3:00 PM	**Rotation Paper and Evals due to Mentor**	CMS 1st Floor Conference Room
Lab Rotations Course Symposium Talks **June 10, 2010**	**Student gives 10 minute talks on one of their rotations. Peer Review** **Attendance both days is required.** **Faculty, staff and students invited to attend**	10:00 AM-12:00 PM		**DAI Auditorium**

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. 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	David Axelrod Institute
Spring, Dr. David Wentworth,dwentwor@wadsworth.org	Griffin Laboratories
Dept. Chair, Dr. James Dias,dias@wadsworth.org	David Axelrod Institute

Listing of Faculty Available for Fall or Spring Rotations

Track: Immunology and Infectious Disease

David Lawrence

Nicholas Mantis

David Wentworth

Gary Winslow

Joe Wade

Track: Molecular Genetics

Marlene Belfort

Michael Fasullo

Alain Laederach

Track: Neuroscience

Track: Structural and Cell Biology

Joachim Jaeger

Hongmin Li

PLEASE RETURN DIRECTLY TO DEPARTMENT OFFICE 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: 1 ____ Semester: Fall ____ Year: _____

2 ____ Spring _____

3 ____ Summer _____

A student-faculty agreement sheet must be filled in for each rotation. **You must submit this sheet to the department office 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)

Faculty will receive a Lab Rotation Evaluation Sheet for grading approximately two weeks before the end of each rotation. It is suggested that you make a copy of these sheets for your files.

forms\BMS rotation agreement

BMS 590 Peer Review of Trainee Rotation Description

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:

Rotation Term: Today's Date:

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

Additional comments:

All comments are confidential, and will be compiled and given to the trainee.

Return this form to April Burch, DAI 4080

PLEASE RETURN DIRECTLY TO DEPARTMENT OFFICE C236

DEPARTMENT OF BIOMEDICAL SCIENCES
BMS 590 a,b,c – MENTORS EVALUATION OF STUDENT

Lab Rotation Mentor: _____

Student: _____

Semester: _____

Rotation: 1 2 3 4 Fall Spring Summer

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 B- C+ C

____ UNSATISFACTORY: The student clearly does not meet performance expectations for one or more tasks, not even at a minimally acceptable level. 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.

I have reviewed and discussed this evaluation with the student.

_____

Signature of rotation mentor date

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

_____

Signature of student date

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DEPARTMENT OF BIOMEDICAL SCIENCES

BMS 590 a,b,c - Laboratory Rotations in Biomedical Sciences

Student Evaluation of Mentor

Session and Semester: BMS 590

Name of Lab Rotation Mentor: _____

Name of Course Directors: David Wentworth, 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.

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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FINAL EVALUATION

DEPARTMENT OF BIOMEDICAL SCIENCES

BMS 590 a,b,c - Laboratory Rotations in Biomedical Sciences

Course Director Evaluation

Session and Semester: BMS 590

Name of Lab Rotation Mentor: _____

Name of Course Directors: David Wentworth, 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?

BMS590 Student Power Point 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: