Responsible Conduct of Research
Cell and Molecular Biology Graduate Program

All students in the Cell and Molecular Biology Program will receive training in the following areas:
1. Conflict of Interest and Commitment
2. Data Acquisition, Management, Sharing and Ownership
3. Research Misconduct
4. Publication Practices and Responsible Authorship
5. Mentor/Trainee Responsibilities
6. Peer Review
7. Human Subjects (where required)*
8. Animal Welfare (where required)*

*For individuals involved in human or animal subjects' research, the MSU training modules for those subjects must be completed before submitting IRB or IACUC approvals.

Specific CMB Training Requirements

All Graduate Professional, Masters (plan A and B) and Doctoral Students

1) *Initial online training.* All graduate (Master's Plan A and B, PhD) and graduate professional students will complete 4 CITI online modules within the first year of enrollment in their program:

- Introduction to the Responsible Conduct of Research
- Authorship
- Plagiarism
- Research Misconduct

Completion of this requirement will be tracked in SABA.

2) Discussion-Based Training: In addition to the above online training, all students must complete a minimum of 6 hours of discussion-based training prior to receiving their degrees. These hours can be completed at any point in the graduate program and in a number of different formats (ie, as part of a course, in the Graduate School RCR Workshop Series, during lab meetings, etc). **Attendance at the RCR Workshop series will be tracked in Saba. Other training must be documented by a supervising faculty member, and will be recorded by the CMB Program in GradInfo as "Initial" training.**

Master's Plan A and Doctoral students:

3) Additional online training. In addition to numbers 1 and 2 above, within the first 2 years of enrollment in their programs, Master's Plan A and PhD students must complete three additional MSU online training modules, to be selected from the following list. **Completion of this requirement will be tracked in SABA**.

- o CITI Collaborative Research
- o CITI Conflicts of Interest
- o CITI Data Management
- o CITI Financial Responsibility
- o CITI Mentoring
- o CITI Peer Review
- o IACUC Tutorial for Animal Care Training (in http://Train.ORA.msu.edu)
- o Human Research Protection/IRB Certification (in http://Train.ORA.msu.edu)
- o Rigor and Reproducibility Course (still in production)

<u>Doctoral Students</u>

4) Annual refresher training. Starting in year 3, all doctoral students must complete 3 hours of annual refresher training. This can include discussion-based training and/or online courses beyond the 7 required in years 1 and 2. Examples include specific readings identified *in consultation with the mentor,* face-to face meetings with the mentor and group meetings that discuss RCR issues, and additional courses or training modules. The graduate school offers a large number of resources: http://grad.msu.edu/researchintegrity/resources/. **Completion of this requirement must be documented by a supervising faculty member and will be recorded by the CMB Program in GradInfo as "Annual" training.**

Questions, comments, and concerns are to be directed to the CMB Director, Dr. Susan Conrad (conrad@msu.edu).