**PMB Preliminary Exam**: Literature based “general” exam testing the ability to read primary research articles, synthesize information, and apply critical thinking and analysis to important biological questions across disciplines. Examinations will take place in the last two weeks in January of year 2.

**Objectives:**
- Gain facility with critical analysis of the primary literature
- Master the wide range of approaches, techniques, and model systems applicable to research in PMB

**Paper Selection:**
- PMB faculty will be asked to submit a primary research article they feel best represents “the best in their field” for the previous twelve months.
- Submissions will be due August 7, to ensure that the 30 selected papers can be given to 2nd year students by August 15, prior to the start of classes.
- Steering committee or program advisors will select the 30 articles that best represent the range of research in PMB and a wide spectrum of approaches and fields
- Students read and analyze the group of 30 papers as part of a fall student run journal club- Bio 5723- Seminar in Plant and Microbial Biosciences*

**Preparation:**
*The fall semester prior to the preliminary exam, second year students are expected to enroll in Bio 5723: Seminar Plant and Microbial Biosciences*
- 2 credit course. Counts towards PMB’s journal club course requirement
- Students will be in charge of divvying up the papers and presenting them such that each student gets a fair share of the burden
- The presenting student will write a 1 page synopsis on each paper to hand out to the class prior to their presentation. (See Current Biology Quick Guides and Primers for examples)

**Committee Selection:**
- 4 faculty members will be assigned to committees based on availability and balanced composition. Exam chairs will be selected from the PMB steering committee
- Once the examination committee is selected, faculty will send their paper selections to the committee chair to avoid overlap.
- Students will not be told beforehand which faculty are on their exam

**Exam Format:**
- During the 90-minute exam, each of 4 faculty examiners select 2 papers (8 total) to question students on round robin style. Once the first question has been asked, the floor is open to questions from all 4 faculty examiners. A soft 10 minute limit per paper will be enforced by the chair to ensure the exam proceeds in a timely manner.
- The exam chair will have pdfs of all the papers available to put up on screen to help the student (and the examiners) get their bearings.
- Faculty are encouraged to test critical thinking and AVOID questions focusing on memorization!
- **Students will not be told their status until after the steering committee has met.**

**Evaluation:**
- At the end of the exam, faculty score performance on a 1 to 5 scale with 5 being high. Students will need an average of 2.5 or higher to pass
To ensure as much continuity as possible across committees, the ultimate decision on pass/fail is left up to the steering committee which meets only after all exams are complete.
Outcomes:

- Pass.
- Fail. If a student fails the QE, they will have three weeks to schedule a retake. The reading list will not change, but papers that were utilized in the first round will be eliminated from the pool. The chair of the first exam committee will serve on (but not chair) the retake exam committee.
  - Note that a failing outcome upon retaking the exam will result in automatic dismissal from the program.
  - If the student does not wish to retake the exam, it is possible to graduate with a terminal Master’s degree pending submission and defense of a Master’s Thesis.