BIG PRELIMINARY QUALIFYING EXAMINATION GUIDELINES (Academic Year 2019-2020)

THE GOAL
The primary goal of the Preliminary Qualifying Examination (PQE) is to ensure that you have achieved a high standard of scientific scholarship and skills that are critical for successful completion of your Ph.D. thesis and beyond. In addition to assessing your foundation in genome sciences, computational methods, and statistical analysis, the PQE will test your competence in:

- Functional genomics
- Basic molecular biology techniques
- High throughput sequence measurement and analysis
- Population genetics

PROCEDURAL ISSUES
You are required to take the PQE before May of your G2 year.

PQE Application Form (due to BIG Program Office 6 weeks before exam period)
1) Identify potential exam committee members and an exam chair from the core and affiliate faculty list here and below: (http://www.hms.harvard.edu/dms/BIG/fac/index.html) Final selection of examiners will be at the discretion of the BIG Program Office.
2) Once the BIG Program Office receives the PQE Application Form, an exam chair from the PQE Committee will be confirmed. You are responsible for scheduling your oral exam. Before the committee is formed, inform the BIG office if there are faculty members that you know or believe should be excluded because of a conflict of interest.

Role of the PQE Steering Committee Chair
The Chair of the PQE Steering Committee, Isaac Kohane, M.D., Ph.D., is available to answer questions, clarify expectations, and provide guidance at any point during the exam preparation process.

Role of Examination Committee Chair
PQE chairs are experienced examiners and are responsible for keeping the exam on course and ensuring that examiners pursue an appropriate line of questions. The PQE chair is responsible for creation of the examination.
Core and Affiliate BIG faculty members. Eligible exam chairs are in bold.

Martin Aryee  
Paul Avillach  
Michael Baym  
Bonnie Berger  
**Rameen Beroukhim**  
Jason Buenrostro  
**Martha Bulyk**  
Scott Carter  
**Christopher Cassa**  
George Church  
**Stirling Churchman**  
Mark Daly  
Stephen Elledge  
**Maha Farhat**  
Jason Flannick  
**Nils Gehlenborg**  
Gad Getz  
Todd Golub  
Jesse Gray  
Robert Green  
James Gusella  
**Alexander Gusev**  
Steven Gygi  
Nir Hacohen  
Kevin Haigis  
Joel Hirschhorn  
Rafael Irizarry  
**Peter Kharchenko**  
Zak Kohane  
Aleksandar Kostic  
Eric Lander  
E. Alice Lee  
Heng Li  
**Xiaole (Shirley) Liu**  
Po-Ru Loh  
Daniel MacArthur  
Faisal Mahmood  
Debora Marks  
Matthew Meyerson  
Miles Miller  
**Leonid Mirny**  
Vamsi Mootha  
**Cynthia Morton**  
Benjamin Neale  
Martin Nowak  
**Peter Park**  
**Chirag Patel**  
Luca Pinello  
**Alkes Price**  
**Soumya Raychaudhuri**  
Pardis Sabeti  
Chris Sander  
Ayellet Segre  
Christine Seidman  
Jonathan Seidman  
Edwin Silverman  
Meromit Singer  
Peter Sorger  
Kimberly Stegmaier  
**Shamil Sunyaev**  
Peter Szolovits  
**Michael Talkowski**  
Eliezer Van Allen  
Ulrich von Andrian  
Christopher A. Walsh  
Scott Weiss  
Timothy Yu  
**Cheng-Zhong Zhang**
**ORAL EXAM**

At the beginning of a week, the student will be provided a set of questions that typically require extensive reading and computation. A week later, the student will meet with the committee who will hear a formal presentation of the student’s response to the questions. The examiners will then ask questions related to the student’s presentation as well as on any material that the student is expected to have mastered in his/her coursework. The exam will last approximately two hours.

**Input/Advice**

Students are not allowed to consult with anyone other than the program director and exam chair about the exam.

**THE OUTCOMES**

You will be informed of the outcome (pass, conditional pass, or fail) at the end of the exam (see below). Within 1 week and in rare cases 2 weeks, a written evaluation will be provided.

- **Pass.** No further work on the PQE will be required.

- **Conditional.** A student will receive a conditional pass if the committee feels that he/she would benefit from additional preparation or work. The conditions for changing the grade to “pass” will be determined by the exam committee. If possible, these recommendations will be given to the student at the end of the exam, but may be provided at a later date. The plan will be noted in the evaluation form, along with the expected time frame for when the condition may be satisfied. It may be helpful for the student and the chair to communicate by email shortly after the exam in order to make sure that it is clear what the student will be expected to do.

- **Fail.** A student will receive a fail if there are serious concerns based on the oral exam. In this case, a follow-up meeting with the exam chair, PQE committee chair, program head, program advisor, and thesis advisor will be scheduled. After this meeting, a set of recommendations will be made to address the identified issues. The student will be given the opportunity to retake the oral exam following completion of the recommended work.

- **Feedback.** In addition to determining the outcome of the exam, examiners will be asked to provide students with short comments on their strengths and weaknesses.

**THE NEXT STEP**

After passing the PQE, you will assemble a Dissertation Advisory Committee (DAC). This meeting should happen within 3-4 months after passing the PQE.
Preliminary Qualifying Exam Application Form

Student Name ____________________________________________________________

Suggestions for Committee Members:

Proposed Chair(s) ____________________________________________ or ____________

Proposed Examiners ____________________________________________

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Faculty that should not be used [please indicate reason (collaborator/competitor/etc.)]:

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Please return to BIG Program Office (DBMI, Countway suite 514)