

Rotation and Mentor Selection:

Students must perform a minimum of three and are encouraged to perform four laboratory rotations. The rotations must be in the laboratories listed in Table B (below) which span four levels of biology and physiology inclusive of a level termed “behavioral or integrative”. Students must select from at least three distinct laboratories and ensure these selections cover at least three distinct columns. Moreover, note that several laboratories are listed in multiple columns. This occurs because these faculty are engaged in research projects that span several biological levels. Students must show that a rotation in a lab for a particular column engaged the student in experiences associated with that column’s theme. This rotation system insures that QBP students experience biology over multiple scales, regardless of which laboratory they select for their dissertation topic.

Table B: QBP Laboratory Selections

Molecular/Genetic	Cellular/Tissue	Tissue-Organ/Sensory	Behavioral/Integrative
Biomolecular Engineering Research Center (T. Smith)	Binaural Hearing Lab (Colburn)	Systems Neurobiology (Tsien)	Applied BioDynamics Lab (Collins)
Cellular Regulation Labs (Gardner, Collins, Steffen)	Cell &Tissue Mechanics Labs (Stamenovic, Suki)	Brain & Vision Lab (Vaina)	Systems Neurobiology (Tsien)
Center for Advanced Biotechnology (Collins, Frank-Kamenetskii, Gardner)	Cellular and Subcellular Biomechanics Lab (Dembo, Damiano)	Cochlear Biophysics Lab (Mountain)	Binaural Hearing Lab (Colburn)
Biomolecular Systems Lab (Delisi)	Cellular Regulation Labs (Gardner, Collins)	Visual Information Processing Lab (Passaglia)	Biomedical Optics Lab (Bigio)
Nanobiotechnology and Nanobiosystems (Goldberg, Unlu, Erramilli, Georgiadis, Mohanty, Meller, Grinstaff, Wong, Klapperich)	Cell & Tissue Engineering (Morgan, Tien, Grinstaff, Klapperich, Wong)	Natural Sounds and Neural Coding Lab (Sen)	
Macromolecular Chemistry Lab (Grinstaff)	Micro and Nano Biosystems Labs (Klapperich, Wong)	Pulmonary Bioengineering (Lutchen, Jackson)	Cell &Tissue Mechanics Labs (Suki)
Protein Engineering Lab (Weng)	Neuronal Dynamics and Neuroscience Labs (Eldred)	Cell &Tissue Mechanics Labs (Stamenovic, Suki)	Mathematics BioDynamics Group (Kaper, Kopell)
Structural Bioinformatics Lab (Vajda)	Systems Neurobiology (Tsien)	Olfactory Processing (Wachowiak)	Biocomplexity and Multiscale Biology (Suki, Lutchen)
Systems Neurobiology (Tsien)	Biomedical Optics Lab (Bigio)	Biomedical Optics Lab (Bigio)	
	BioMicroscopy Lab (Mertz)	Biomicroscopy Lab (Mertz)	

Program Cohesion, Retention, Enhancement and Information Flow:

The program cohesion and cultural components include: monthly journal club, common office space for trainees, invitation and active involvement in annual retreats, and participation on our Annual Fall Symposium in Quantitative Biology and Physiology Symposium run by and for trainees. Each trainee beyond their 3rd year in the BME program gives a talk at the symposium. There are also Bi-Monthly Dinners.