

BYLAWS of the QUANTITATIVE BIOLOGY INITIATIVE at MICHIGAN STATE UNIVERSITY

1. PREAMBLE

The Quantitative Biology Initiative (QBI) is the umbrella organization for an interdepartmental and intercollegiate research program in quantitative biology that includes the Quantitative Biology (QB) dual-major PhD program. The home department and college of QBI are the Department of Biochemistry & Molecular Biology (BMB) and the College of Natural Science (CNS); however, QBI activities involve about 20 additional departments in the physical and biomedical sciences and engineering.

Modern problems in biological sciences increasingly require highly interdisciplinary approaches with significant quantitative input from a range of disciplines. QBI enables such research by promoting and facilitating interdisciplinary collaborations and training between biological and physical, chemical, mathematical, and computational disciplines, with a focus on the areas of structural biology, systems biology, evolutionary modeling, and bioinformatics and functional genomics.

The purpose of this document is to outline the procedures by which QBI faculty, staff, and graduate students participate in the academic governance of its programs. If, in any matter, specifications or omissions place these Bylaws in conflict with University or College policies, as promulgated in their Bylaws, the latter shall take precedence.

2. QBI MEMBERSHIP, LEADERSHIP, AND MEETINGS

2.1 VOTING MEMBERS

QBI voting members consist of all MSU faculty members holding the rank of professor, associate professor, assistant professor, or instructor under the rules of tenure or those holding other research-oriented faculty appointments (research stream, specialist, and adjunct positions) who choose to be part of the organization, as defined by providing their contact information, focus area affiliation(s), and other research information for posting on the QBI website. QBI voting members will be eligible to vote for the co-directors and executive committee members, on bylaws issues, and in any other elections that may be held by QBI.

2.2 AFFILIATE MEMBERS

Affiliate members are other faculty members, staff, postdoctoral fellows/research associates, and graduate students who are not eligible to vote (as defined in the section above) but choose to be affiliated with QBI, as defined by providing their contact information, focus area affiliation(s), and other research information for posting on the QBI website. Affiliate members are also encouraged to participate in QBI activities.

2.3 CO-DIRECTORS

QBI has two co-directors, one principally responsible for Research Programs (e.g., seminars, conferences, research funding, infrastructure development, faculty hiring coordination, and

promoting the national and international prominence of our research) and one for Graduate Programs (e.g., graduate recruiting, graduate fellowships, curriculum development, student activities, training grants, and external prominence of the training program). The co-directors will coordinate their efforts to fulfill the functions listed below, and can appoint associate directors to participate in these functions, if they so choose. Associate Directors may be elected to the executive committee and may also act as committee chairs.

2.3.1 Co-Director Functions

2.3.1.1 Call and lead meetings of the executive committee and oversee QBI staff.

2.3.1.2 Carry out long-range planning with the executive committee regarding QBI research directions, graduate and postdoctoral training, and budget. This planning should emphasize a balance in representation and active participation from the four research focus areas, as well as participation by a breadth of departments.

2.3.1.3 Work with executive committee members to appoint members to the QBI committees, as described below.

2.3.1.4 Serve as administrative liaison between QBI and its partner graduate training units (currently, BMB, Cell & Molecular Biology [CMB], Chemical Engineering & Materials Science [CHE], Chemistry [CEM], Civil & Environmental Engineering [CEE], Computer Science & Engineering [CSE], Epidemiology [EPI], Genetics [GEN], Mathematics [MTH], Mechanical Engineering [ME], Microbiology & Molecular Genetics [MMG], Pharmacology & Toxicology [PHM], Physics & Astronomy [PHY], Physiology [PSL], Plant Biology [PLB], Statistics & Probability [STT], Zoology [ZOL]), and other graduate programs.

2.3.1.5 Serve as administrative liaison with the QBI home college (CNS) and other interdisciplinary programs (e.g., Ecology, Evolutionary Biology, and Behavior [EEBB]) of Michigan State University. The co-director reporting to the CNS Dean and University administration may be one of the co-directors, or both, with approval of the CNS Dean.

2.3.1.6 Prepare annual budget requests in coordination with the executive committee, and supervise budget expenditures.

2.3.2 Co-Director Appointment and Review

2.3.2.1 Candidates for the Research and Graduate Program co-director positions must be voting members of the QBI and may nominate themselves or be nominated by others (upon indicating a willingness to serve). The EC screens the nominees and accepts as candidates those who have demonstrated commitment to the QBI and its goals through their recent activities. The resulting pool of candidates are then given an opportunity to state their qualifications and goals to the QBI membership at large, either at a general meeting or by e-mail circulation to the QBI voting members, at least two weeks before the election takes place.

- 2.3.2.2 The election of two co-directors, one for Research and one for the Graduate Program, occurs at a general meeting (with members given the opportunity to vote by e-mail if unable to attend) or by an e-mail vote, typically near the end of Spring semester. A non-voting staff member (e.g., QBI Administrative Assistant) will be responsible for collecting and tallying the votes, and announcing the election results. The co-director election takes place prior to the executive committee election, typically in June of the same year, so that candidates not selected as co-directors may participate as candidates for executive committee openings.
- 2.3.2.3 If a majority of >50% of the votes cast is not achieved by one or both of the co-director candidates, a run-off election is held (following the voting guidelines stated above) between the top two ranking candidates for the position. Each elected co-director has a term of three years, beginning that Fall semester, subject to approval by the CNS Dean.
- 2.3.2.4 Before the end of the three-year term, the executive committee and the CNS Dean review the desirability of continuing the appointment of the co-directors. The co-directors are also consulted concerning their desire and willingness to continue. If the executive committee, the CNS Dean, or the Co-Director does not desire to renew this co-directorship, an election is held within six weeks to elect a new co-director (for either Research or Graduate Program, as relevant), subject to approval by the CNS Dean.
- 2.3.2.5 Under extraordinary circumstances, any member of the QBI faculty may request from the executive committee and CNS Dean a review of the co-directors at any time. A new election following the above procedure, subject to the Dean's approval, is held when it is deemed necessary or desirable to instate a new co-director.

2.4 EXECUTIVE COMMITTEE (EC)

- 2.4.1 The EC is composed of twelve voting members who advise the co-directors and chair the QBI committees. Together they are responsible for overseeing and populating the committees and working towards the goals of the QBI.
- 2.4.2 The twelve EC members are elected by the QBI voting members and are expected to be active in one or more of the QBI committees.
- 2.4.3 Four positions are up for election every year, typically in June, with all positions elected for 3-year terms starting that Fall semester. EC members are eligible for unlimited reelections. If a member steps down prior to the end of his/her term, that position will be filled at the next election cycle. The EC will solicit new candidates/nominees from the QBI voting members prior to each election. The names, affiliations, and experience of the candidates with QBI and its predecessors, and any short statement they choose to provide about their interests/goals for QBI, will be circulated by e-mail to the voting members at least two weeks before the election. Those nominees receiving the most votes will be elected to the open positions in the EC. Results will be announced within a week of the election. Any vote ties between candidates will be resolved by a runoff election to be held within the following month. A non-voting staff member (e.g., QBI Administrative

Assistant) will be responsible for collecting and tallying the votes, and announcing the election results.

- 2.4.4 EC members will be appointed as chairs of the standing and ad hoc committees by the co-directors and EC, taking into consideration the interests of the EC members as well as their commitment to take an active role in one or more committees. The term of each committee chair is three years, subject to renewal by agreement of the EC and the chair. Replacement of a committee chair by the co-directors and EC may occur at an earlier date if the member is not actively pursuing the committee's goals.

2.5 MEETINGS

Meetings of the EC are called at the discretion of the QBI co-directors and/or EC, typically four times a year, and general meetings of the QBI voting and affiliate membership are held at least once per year. Representatives of the QBI-affiliated graduate students (i.e., participating in the QB or other dual-major graduate program or in the laboratory of a QBI faculty member) may be invited to attend the faculty meetings unless, in the judgment of the co-directors, the discussion centers on matters in which student participation is not appropriate. The meetings will be led by a co-director and governed by Robert's *Rules of Order, Revised*.

2.6 EXTERNAL ADVISORY BOARD (EAB)

The EAB will provide guidance and periodic feedback to the co-directors and EC on the activities of QBI, and seek to enhance its stature. The EAB will be selected by the EC and co-directors from distinguished scientists at other outstanding universities and institutions, for renewable terms of three years. Updates on QBI activities will be provided to the EAB on an annual basis, and meetings with the EAB will typically be held annually, either at MSU or by teleconference.

2.7 STANDING COMMITTEES

QBI standing committee members are appointed by and overseen by the EC member chairing each committee. The committee members each have one-year terms and are eligible for renewal if they, the committee chair, and the EC are agreeable. Graduate students, postdocs, and staff may be appointed as committee members if they are deemed well qualified by the EC. These committees are:

- 2.7.1 *Graduate Recruiting Committee*. This committee consists of four QBI voting members plus one QBI-affiliated graduate student, preferably elected by the QB students. Its functions are to:

2.7.1.1 Evaluate applications for admission to the QB Graduate Program and make recommendations in favor of or against admission to the Graduate Program Co-Director. In doing so, the Graduate Recruiting Committee shall consider the following: academic performance, research experience, letters of recommendation, competence in the English language, and GRE scores. The prospective QB Program student must also be admitted by one of the QB dual-major Ph.D. participating departments or graduate programs.

2.7.1.2 Advertise and select recipients of QBI Recruiting fellowships to entice top new students to come to MSU and join the QB program. These recruiting

fellowships will be offered to incoming PhD students only. For units that require heavy teaching and do not encourage student rotation projects, these fellowships can be used to buy time out of teaching and allow research rotations.

2.7.2 *Graduate Fellowship Committee.* The Fellowship Committee consists of four QBI voting members. Its functions include:

2.7.2.1 Advertise and select recipients of QBI fellowships to support current QB students (or exceptional students not associated with the QB program, but working on an interdisciplinary QB-related project), with fellowship selections occurring on a yearly basis. A balance will be sought between funding the most meritorious applications and distributing support across the various QBI research focus areas.

2.7.2.2 Administer fellowships associated with QBI-related training grants following the stipulations of the granting organization.

2.7.3 *Graduate Curriculum Committee.* This committee consists of four QBI voting members plus one QBI-affiliated graduate student, preferably elected by the QB students. The Curriculum Committee oversees the development of new QB-related courses and facilitates coordination with existing courses/programs on campus. The committee's functions include:

2.7.3.1 Periodically review, at intervals not exceeding four years, course offering and requirements in the QB Program, and advise the Graduate Program co-director of desirable changes. In performing this function, the Curriculum Committee shall work closely with the co-director, affected and concerned individual faculty, and the faculty and graduate students in the QB Graduate Program.

2.7.3.2 Consider requests from QBI faculty and QB students for new courses or changes in existing courses.

2.7.3.3 Consider revisions in the existing QB degree program and instigate and design new QB degree programs. Advise the Graduate Program co-director and QB Graduate Program faculty on the implementation and development of these initiatives.

2.7.3.4 Review and approve QB Program course offerings, and assist the Graduate Program co-director in identifying suitable subjects and instructors for the QB required core courses.

2.7.3.5 Serve as the initial hearing board for student problems, coordinate the assignment of QB faculty representatives to student guidance committees (as needed), and review the progress of QB students. This committee will also have authority to select eligible faculty trainers in the program to ensure that students have the best training environment possible.

2.7.4 *Seminar Committee.* This committee consists of three QBI faculty members plus one QBI-affiliated graduate student, preferably elected by the QB students. This committee plans QBI-hosted seminars, including those in the Science at the Edge series, and works with the co-directors to budget the seminars and secure continued funding. Suggestions for seminar speakers will be sought from the QBI faculty.

2.7.5 *Conference Committee.* This committee consists of two or more QBI faculty members plus one QBI-affiliated Graduate Program student, preferably elected by the QB students. Their function is to plan QBI-hosted conferences, work with the co-directors to budget these conferences, and secure continued funding for them. Conference topics will generally relate to the QBI focus areas, but opportunities will also be considered for growing into new areas.

2.8 AD HOC COMMITTEES

QBI Ad Hoc committees are created by the EC, chaired by an EC member, and include other QBI-associated members as needed. The committee members each have one-year terms and are eligible for renewal if they, the committee chair, and the EC are agreeable. Graduate students, postdocs, and staff may be appointed as Ad Hoc committee members if they are deemed well qualified by the EC. These committees are:

2.8.1 *Public Relations (Web and Advertising) Committee.* This committee develops and designs updates to the QBI website, develops advertising literature, and plans open-house and outreach activities for our research and graduate programs, in coordination with the co-directors and the Graduate Recruiting Committee.

2.8.2 *Development Committee.* This committee will coordinate development of new funding for the QBI, including identifying major external and intramural grant opportunities and selecting faculty who could potentially lead (or otherwise participate in) the pursuit of funding. In addition, in coordination with MSU Development offices, private funding opportunities will be evaluated.

2.8.3 *Infrastructure Committee.* This committee will participate in developing computing and other major shared equipment or facilities relating to QBI.

3 GRIEVANCE PROCEDURES

3.1 Any QBI faculty member or QBI-affiliated graduate student may initiate a grievance procedure, alleging violation of existing policies or established practices, pursuant to the procedures set forth in the Michigan State University Faculty Grievance Procedure or Michigan State University Graduate Student Grievance Procedure.

3.2 As a first step, a QBI Co-Director(s), Associate Director(s), or one or more representatives of the EC will meet with the parties involved in an effort to resolve the grievance informally.

3.3 If the grievance is not resolved to the satisfaction of all parties, a formal complaint may be filed with the Faculty Grievance Official (FGO) or Graduate Student Grievance Official pursuant to the procedures set forth in the Faculty Grievance Procedure or Graduate Student Grievance Procedure.

3.4 If a grievance is initiated at the QBI Program level, the Model Academic Unit Grievance Procedure will apply.

4 BYLAWS

4.1 INITIAL APPROVAL

The QBI Bylaws, as drafted by the EC, were approved by a two-thirds majority of the QBI voting faculty on Oct. 10, 2007, and became effective upon approval by the Dean of CNS on Nov. 28, 2007.

4.2 INTERPRETATION

In cases where the bylaws are deemed ambiguous, the QBI co-directors and EC members together shall propose a clarification that is subject to official approval (by 2/3 majority of those voting members who participate in the vote) and by the Dean of CNS, who will be the final authority with regard to the interpretation of these bylaws.

4.3 AMENDMENTS OR REVISIONS

Any voting QBI faculty member may request in writing that the EC initiate procedures to amend or annul any part of these Bylaws. The EC shall research and discuss the proposed amendment at its next meeting and shall forward the request, together with its recommendation, to the faculty at a regular or special meeting or by electronic means, so that it can be considered further, and amended if necessary. Following passage of a motion for approval of the request (or its amended version) to be put to vote, the amendment shall be submitted to the QBI voting faculty. Upon approval by a two-thirds majority of all who participate in the vote, and the CNS Dean, the amendment becomes a part of the bylaws, or the section whose annulment was desired, becomes void.

4.4 REVIEW OF BYLAWS

In accordance with the provisions of the University Bylaws for Academic Governance, the QBI membership will review the bylaws at regular intervals not to exceed five years. The EC will ensure that these reviews are carried out. The EC will have delegated authority by the Dean of CNS to establish the procedures of the review process.