**Biomedical Sciences Graduate Program**

**Faculty Membership Application**

The mission of the Biomedical Sciences Graduate Program (<http://biomedsci.ucsd.edu>) in the UCSD Health Sciences is to provide outstanding graduate training competitive with the best graduate programs in biomedical science worldwide. The program incorporates diverse research areas that help focus and develop customized training opportunities for students to advance toward the PhD or combined MD/PhD or PharmD/PhD degrees. A distinctive characteristic of the program is its multidisciplinary nature.

**Appointment to the BMS Program**

All faculty at UC San Diego whose research is relevant to the biomedical sciences are welcome to apply for membership by completing the application on the following pages. BMS faculty are expected to maintain the following as conditions of both initial and continued appointment:

1. Appointment in a Professorial series (Professor, In-Residence, Adjunct, or Clinical X) in a basic, applied, or clinical science department at UCSD;
2. Demonstrated past and ongoing independent research productivity in areas appropriate to biomedical sciences;
3. Research support for active, ongoing laboratory research, including funds to pay for thesis student stipend, tuition and fee remission and research supplies and equipment;
4. Adequate formally assigned research space;
5. A training environment that provides opportunities for collaboration and participation in seminars and journal clubs.

**Entry-Level faculty in the UCSD Health Sciences** that: (1) have been recruited through an open national search in which multiple candidates were interviewed by a search committee; (2) are appointed through the Professor or In-Residence series and have at least 0.5 FTE salary support in a Health Sciences department; (3) have formally assigned laboratory space; and (4) have significant startup funding; may apply for membership in BMS coinciding with their arrival at UCSD. ***Their application should include a letter from their Department/Program Chair affirming that they meet the above criteria and describing their formally assigned lab space, salary support, and startup funding.*** These applications are reviewed on a rolling basis by the BMS Chair and Vice Chair.

**Entry-level faculty in the UCSD Health Sciences** that lack salary support (i.e. are appointed in the Adjunct or Clinical X series), formally assigned laboratory space, and/or startup support are required to show strong evidence of independent research productivity and stable research funding as a condition of BMS membership. ***Their application should include a letter from their Department/ Program Chair describing any institutional support available, including formally assigned lab space, salary support, and startup funding.*** Applications from these faculty are reviewed once per year (in the Spring quarter) by the BMS Executive Committee.

**Established faculty** **in the UCSD Health Sciences** with a robust training and funding record may apply for membership in BMS coinciding with their arrival at UCSD. ***Their application should include a letter from their Department/Program Chair describing their formally assigned lab space, salary support, and startup funding.*** These applications are reviewed on a rolling basis by the BMS Chair and Vice Chair.

**Faculty with appointments in non-Health Sciences Departments at UCSD or at SIO** are welcome to apply for membership. Applications from these faculty are reviewed once per year (in the Spring quarter) by the BMS Executive Committee.

**Continued Membership in the BMS Program**

Active participation of the faculty is essential to the success of BMS. Therefore, a condition of continued membership is active participation in teaching, service, and research related to training in the BMS Program. In addition to hosting students for rotations and as thesis advisors, all faculty are expected to actively participate in BMS program activities, including:

* Annual recruitment of graduate students
* Attendance of annual Program Retreat
* Mentoring graduate students in laboratory rotations
* Service on Research Proposition Qualifying committees
* Service on Thesis committees
* Teaching in core or elective courses (see below)
* Service on standing committees (see below)

All members will be periodically reviewed to evaluate their continued participation in student training and program activities. Faculty that do not participate significantly risk their continued membership in the program. **Please keep in mind that although having a student in your group contributes to the program, it does not represent a sufficient level of participation to justify continued membership and access to future trainees.**

Note: All new faculty members will be required to serve as Committee Chairs for the Research Proposition Exams (BIOM 296), which are held in the fall quarter each year. All new faculty are also expected to attend the BMS Retreat, which is held yearly in late September, and participate in recruitment activities in January and February. Continued membership in the program is contingent on participation in these three activities during the first year of membership.

**Mentorship Responsibilities of the Thesis Advisor**

BMS expects thesis advisors to meet the following criteria for supervision of graduate students:

1. Guide the student in development of a research project that is original, feasible, and will lead to a Ph.D. thesis and peer-reviewed publication(s). While not a formal requirement for graduation, the BMS program expects that students will publish (or submit for publication and post on an open-source preprint server like *bioRxiv*) at least one first author or co-first author research publication during their time in BMS.
2. Determine that the student is making progress in meeting the Ph.D. requirements, including (a) the timely completion of the Research Proposition Qualifying examination by Thanksgiving day of the student’s second year in the program; (b) timely completion of the Advancement to Candidacy examination by the end of the Spring quarter of the student’s third year in the program; (c) timely submission of a formal annual evaluation of the student’s research progress in consultation with the student’s thesis committee by the end of each Spring quarter beginning in the student’s second year in the program (this evaluation is a requirement for the student’s registration for the following year); and (d) holding a yearly thesis committee meeting where the student updates their committee on the status of their work. The committee meeting would ideally occur in conjunction with the annual evaluation in the Spring quarter.
3. In consultation with the student, select a series of elective classes to expand the student's knowledge in the areas that are relevant and/or complementary to the student’s Thesis research project.
4. Guide the student in developing skills to communicate scientific ideas in writing and orally, through participation in journal clubs, research meetings, seminars, symposia and the preparation of fellowship applications and manuscripts.

**Financial Responsibilities of the Thesis Advisor**

Thesis Advisors are obliged to provide financial support of the student for the duration of their Ph.D. The BMS program will support the first-year students for up to 12 months during their rotations through different research labs. Thereafter, the thesis advisor is expected to be fully responsible for the student, which amounts to approximately $55,000 per year in stipend/tuition and fees for up to 5 years, as well as research resources. Faculty without stable funding should not take rotation students unless the rotation is for training purposes and both the student and faculty are aware of the situation. Faculty and students should communicate openly about whether the faculty member can support the student prior to the student rotating in the lab or joining a thesis lab. If the faculty member loses funding during the time a student is in their lab, it is the responsibility of the faculty member to find alternative sources of support.

#### Research Proposition Exams

The Research Proposition is a grant-writing and oral presentation exercise that takes place during the Summer of the 1st year and the Fall of the 2nd year. The purposes of the Research Proposition are:

1. To encourage students and their thesis advisors to work together at an early stage to develop a thesis research project;
2. To encourage students to interact with potential members of their thesis committee early in their graduate careers;
3. To teach students grant writing and oral presentation skills;
4. To test students’ grasp of core material relating to their research project;
5. To provide a written foundation for external fellowship applications.

Satisfactory performance will permit the student to proceed with full time research. Unsatisfactory performance may necessitate re-writing or re-presenting the oral defense, or result in a recommendation that the student withdraw from the program. The BMS Research Proposition Chair will guide students through the Research Proposition process and will communicate with the student and Thesis advisor if any problems arise.

#### BMS Committee Descriptions

The **Admissions and Recruiting Committee** oversees the admissions process in the winter and recruiting efforts throughout the year.

The **Research Proposition Committee** administers the Research Proposition Qualifying Exam. It also mentors first-year students with their applications for pre-doctoral fellowships and awards.

The **Student Awards Committee** oversees the selection of awardees and presents the awards at the BMS annual retreat.

The **Student Promotions and Advisory Committee** (SPAC) provides an important advisory system for the students, particularly during their first year in the program. The SPAC committee assists the BMS Chair in resolving problems arising with students as they progress through the program.

The **Diversity Committee** is charged with maintaining and improving diversity and inclusion in all aspects of BMS, particularly including admissions & recruitment, and in supporting students during their time in the program. Because of its cross-cutting role, the Diversity Committee works with all other committees in BMS.

#### Course Descriptions

BMS students are expected to complete a series of required core courses during the first year that provide an overview of biomedicine, from molecules to organisms. The Seminars in Biomedical Research help students develop critical thinking skills. In the winter and spring quarters, students are required to take two core courses and two core seminar courses offered by the various Research Areas. Two courses in Statistics/Computer analysis and Scientific Ethics are also required for all students and they are offered in the spring quarter. More information about course content can be obtained at <http://biomedsci.ucsd.edu/curriculum/course-information.html>

**Biomedical Sciences Graduate Program**

**Faculty Membership Application**

*Please email completed application to Leanne Nordeman:* [lnordeman@health.ucsd.edu](mailto:lnordeman@health.ucsd.edu)

Name/Title\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Department\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Campus Address\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mail Code\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Office Phone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ E-mail \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Yes, I am willing to participate ***significantly*** in Graduate Program functions, including teaching in core, elective and seminar courses, student recruitment and rotations, serving on the Research Proposition and Thesis committees, participation in annual retreats, etc.
* No, I am not willing to participate *at this level.*

Indicate your appointment series (left column) and your rank (right column) at UCSD:

* Professorial ❑ Assistant
* In-Residence ❑ Associate
* Adjunct ❑ Full
* Clinical X

Indicate the research area(s) in BMS with which you would affiliate (*maximum of 3*):

* Cancer Biology
* Cell and Developmental Biology
* Computational Biology and Data Science
* Genetics and Genomics
* Immunology
* Microbiome and Microbial Sciences
* Molecular and Structural Biology
* Molecular Pharmacology and Drug Discovery
* Neurobiology of Disease

Indicate your involvement/interest in the following Cross-Disciplinary Training Areas (*optional*):

* Glycobiology (<https://medschool.ucsd.edu/research/GRTC>)
* Anthropogeny ([https://carta.anthropogeny.org](https://carta.anthropogeny.org/))
* Multiscale Biology (<http://interfaces.ucsd.edu>)
* Quantitative Biology (QBio; <https://qbio.ucsd.edu>)
* Program in Immunology (<https://immunology.ucsd.edu>)

Have you previously been a thesis advisor to PhD or MS students?

* Yes ❑ No

If you have not been a thesis advisor previously, indicate the name of a senior faculty member in your home department who has agreed to serve as your faculty mentor, and can provide guidance in student mentorship: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* I have read the attachment and agree to its terms.

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Signature

1. Please attach your current NIH-formatted Biosketch, including a link to a full list of publications and existing/pending grant support (source of funding, project dates and annual direct costs).

2. Please attach a letter from your UCSD Department/Program chair describing institutional resources available to you, including salary support, formally assigned lab space, and start-up funds. Please also include this description in the space below:

3. Describe any prior experience you have in training graduate students as a mentor, rotation advisor, member of thesis committees, instructor or in any other capacity you consider relevant:

**COMMITMENT FOR FUTURE PARTICIPATION**

1. Please indicate which of the following activities are willing to do in the future. See the next page for a description of committees.

❑ Graduate Student Admissions and Recruiting Committee

❑ Research Proposition Committee

❑ Student Awards Committee

❑ Student Promotion and Advisory Committee

❑ Diversity Committee

2. Teaching:

❑ BIOM 200A/B, Molecules to Organisms (Fall quarter)

❑ BIOM 200C, Introduction to Computational Biology (Winter)

* BIOM 201, Seminars in Biomedical Research (Fall)
* BIOM 203, Topics in Biomedical Sciences (Fall and Winter)
* BIOM 219 Ethics in Scientific Research (Spring)
* BIOM 285, Statistical Inference (Spring)
* BIOM 293, Essentials of Grant writing (Fall)
* Core Courses in which you would volunteer to teach:
  + BIOM252 Genetics and Genomics I and II (Winter/Spring)
  + BIOM253 Pathogens and Host Defense I and II (Winter/Spring)
  + BIOM254 Molecular and Cell Biology (Spring)
  + BIOM255 Drugs and Disease I and II (Winter/Spring)
  + BIOM256 Fundamentals of Cancer Biology (Winter)
* Core Seminar Courses which you would volunteer to organize or in which you are willing volunteer to participate:
  + BIOM272 Seminars in Genetics (Spring)
  + BIOM274 Seminars in Molecular and Cell Biology (Spring)
  + BIOM275 Seminars in Pharmacology (Winter)
  + BIOM276 Seminars in Physiology (Spring)
* Other Courses relevant to Biomedical Sciences: