

Molecular Biology Program By-Laws

Mission of Program: To foster excellence in molecular biology at the University of Colorado Denver School of Medicine.

Vision Statement for Program: It is our intent to develop the Molecular Biology Program at the University of Colorado Denver School of Medicine into one of the elite molecular biology training programs nationally. The existence of a strong interactive Center of Excellence in Molecular Biology will strengthen the research capabilities of the entire university. This will be accomplished through the enhancement of creative, original research as presented in well-recognized journals and at national symposia; by increasing the level of peer-reviewed support; and through the influence of our graduates and their accomplishments. We recognize that achievement of our goals is inseparable from the recruitment and training of the highest quality graduate students; thus, these activities represent our primary vehicle. Since success of the program is dependent upon the dedicated individual efforts of our faculty, the program will facilitate their efforts by (i) fostering communication and interaction among all molecular biology researchers, (ii) providing a resource for the dissemination of information regarding the application of molecular biology to all areas of medical research, (iii) helping to increase funding of the program membership, (iv) providing common facilities and shared instrumentation, and (v) enhancing faculty recruitment by individual departments. These achievements will be realized through full open participation of all program members as a team in which each member has the opportunity to influence the direction of the program and recognizes their individual responsibility to work in support of the program's activities.

Program Administration

The Director of the Molecular Biology Program is appointed by the Dean of the School of Medicine. The Director is responsible for the vision and direction of the Program, funding, budgets, and overall administration. The Director represents the Program on the UCD Graduate School Executive Committee. The program has a steering committee (five members plus the director) that coordinates the policies and administration of the program. The steering committee is appointed annually by the program director. The steering committee members serve as chairs of the Program subcommittees including seminar, curriculum, admissions & recruitment, membership and student advisor. A full-time Program administrator is responsible for maintaining and monitoring the academic records of students, financial records and budgets, and providing administrative support for committees, program-specific activities, and courses.

Admissions and Recruitment Committee-The admissions and recruitment committee is charged with making policy proposals to the faculty and implementing the approved policies to enable recruitment of the top students in the country that seek graduate education in the diverse molecularly-oriented fields represented by our training faculty. The committee is charged with devising strategies for “marketing the program”, for informing prospective applicants and advisors of the advantages of our program, for actively pursuing qualified students who express an interest in molecular biology, for collecting application materials, coordinating student interview visits, informing faculty and students of the purpose of these visits to maximize their recruiting utility, for making admissions decisions, and for conducting post-admissions surveys

to allow our recruiting to improve in the future. The committee should coordinate efforts with the Student Advisor so that special conditions, deficiencies, etc. can be recognized and rectified or accommodated.

Student Advisor- The student advisor advises students on and approves their individual curricula, explains program and graduate school regulations and meets with the students regularly to discuss their progress, problems, questions, concerns and suggestions. The student advisor will spend the most time integrating the first year students into the program. The student advisor serves as a liaison between students and the steering committee and faculty. The student advisor coordinates student presentations with the seminar committee and provides students with feedback on their performance. The student advisor monitors the progress of students, makes certain that students are meeting program requirements or remediating deficiencies in a timely manner, insures that students are appointing their committees and meeting with them annually after their seminar and that a written report from the committee on the student's progress is present in the student's file. The student advisor coordinates an annual report on student progress to be presented to the year-end general faculty meeting. The student advisor, working through the steering committee and the faculty, establish regulations and guidelines for student performance and oversees documentation of these guidelines in a clear form consistent with graduate school regulations. The advisor oversees students receiving this documentation and filing of a signed acknowledgment of receipt. The student advisor supervises the assembly of the preliminary examination. The student advisor coordinates the student's thesis defense and receipt of a final copy of the student's thesis in the program archives.

Seminar Committee- The Molecular Biology seminar series is a key element that bonds the program on a regular basis. It should be organized to maximize participation and be an enjoyable scientifically stimulating experience for the speakers and the audience. This committee is charged with soliciting suggestions from students and training faculty regarding potential seminar speakers, formulating policy recommendations regarding the seminar program, selecting quality outside speakers that will give the audience a balanced interesting seminar series, and for coordinating arrangements for speakers and the maintenance of the seminar schedule. Working together with the Program administrator, the committee coordinates travel arrangements for invited speakers, and supports the host who made the invitation. The committee should see that seminars are widely advertised so that all faculty and students and academic leadership of the University of Colorado Denver School of Medicine that we serve are aware of our seminars. The committee should maximize attendance and participation by Molecular Biology students, faculty and the members of the faculty's laboratories. The committee should see that all participants in the program receive advance notice of their seminar dates, understand their time limitations and the audience they are addressing and understand how to operate the lights and projector in the room that they are using. The committee coordinates seminars involving students with the Student Advisor and the Program administrator.

Curriculum Committee- The curriculum offered to our students should provide them with both a foundation in basic knowledge and the skills to pursue necessary knowledge throughout their careers. Coursework should provide students with basic skills in critically evaluating the literature. With beginning students, these skills will need to be further developed through work

in their thesis labs and with their committees, but courses should provide a firm foundation to enable this development. The curriculum committee is charged with making recommendations to the steering committee (and the faculty) regarding course offerings for trainees. The committee should annually evaluate the quality of our current courses, make specific recommendations to the course directors and instructors and evaluate proposals for new courses. The committee should evaluate the curriculum and make recommendations regarding unmet needs. The committee's responsibilities also include planning and organizing the annual Molecular Biology mini-course, including coordinating student participation, registration and timely announcements regarding the course. The committee should solicit input from faculty, students and graduates in evaluating our didactic accomplishments and needs.

Faculty Membership Committee-Maintaining a faculty who are committed to graduate education and who effectively conduct imaginative research programs is critical to the success of the program. The membership committee is charged with 1) evaluating new faculty member applications, and 2) reviewing current members' credentials and participation.

1) New Faculty Membership

Application and Evaluation Process. The membership committee is the initial contact for prospective faculty and advises potential applicants of the criteria and Program requirements for membership. The membership committee receives and evaluates written application forms and CVs. Applicants determined to meet the criteria of the Program on paper are invited by the committee to present a research seminar, meet with students, and to interview with the committee. The committee then makes a recommendation to the Steering Committee regarding the suitability of the candidate. To aid in the committee's evaluation, confidential comments from faculty and students are solicited after the research seminar and meeting with students. The Steering Committee considers the recommendation from the Membership Committee and then decides whether to take the candidate's application forward to the general faculty meeting for a vote. Admission to the Program requires a 2/3 affirmative vote by a quorum of the Program faculty. A quorum is defined as 2/3 of the total faculty in attendance at the general faculty meeting. Faculty meetings will be called at least semi-annually to consider and vote on prospective faculty candidates.

Criteria for Selection of Program Faculty. Faculty membership does not require research in a specific area of molecular biology. Individuals will be favored for membership who have an active program of hypothesis-driven or discovery-based research of fundamental regulatory processes at the molecular level. Just using the techniques of molecular biology to study problems at the cellular or organism level may not qualify.

The criteria for the selection of program faculty include all members of UCD faculty who (i) are active as a principal investigator on an NIH ROI or equivalent grant with a stable pattern of funding (with the exception noted below for junior faculty), (ii) are active in the training of graduate students or postdoctoral fellows, (iii) have a history of being participatory in graduate training activities including support for departmental Ph.D. training programs and graduate

(Ph.D.) teaching activities, (iv) are actively involved as a major research interest in molecular biological research as defined above, (v) have membership in the graduate school faculty¹, and (vi) are independently appointed, not subservient to the aims of other investigators, and at the rank of assistant professor or above². Full-time faculty at National Jewish Center (NJC) with university-equivalent rank of Assistant Professor and above, with joint appointments in a UCD basic sciences department, and who meet all other criteria as stated above, are also eligible for membership. Since the Molecular Biology Program is dependent on active participation, faculty will be favored for admission who are only members of one other interdepartmental or departmental graduate training program. Faculty are required to have independent programs since they are expected to be able to protect the academic training opportunities for their students. Thus, generally, only tenure track faculty will be considered for program admission.

For exceptionally qualified new assistant professors (M.D. or Ph.D.), the funding criterion is temporarily waived for a period of up to three years provided the candidate's chair writes a letter stating that the department will guarantee the stipend, tuition, insurance, fees and funds to support the student's research until the completion of the Ph.D., if the faculty member fails to obtain grant funding and exhausts available setup funds. The membership committee must also be provided with the junior faculty candidate's application file including all letters of recommendation, etc., an updated current research plan, and any other materials that are required to assure that the candidate will provide a quality graduate training experience that fulfills the program's goals.

2) Review of Current Faculty

Program membership will be reviewed at least every five years. A questionnaire will be sent to each faculty member being reviewed requesting an updated curriculum vita, a listing of current support and a listing of participation in program activities. The criteria for continued membership will include those described above for new members, plus a good record of participation in the seminar and training activities of the program and support of the program's agenda. The Membership Committee will make recommendations to the Steering Committee for continued faculty membership. If the majority of the steering committee does not support continued membership, the affected faculty member will be contacted by the Program Director. If they state a desire to continue membership, the matter will be brought to a vote of the program faculty. A simple majority vote is required to enable continued membership.

¹This is intended to include an appointment in a basic science department and an active participation in the graduate teaching and training activities of that department.

²generally defined as a tenure track appointment.

Student Admissions Requirements

A baccalaureate degree in a biological or physical science or in engineering is required. Students will be more favorably viewed for admission if they have a combined Graduate Record Examination score of 1200/3.5 or higher. There is no absolute requirement for grade point average above that required by the graduate school, but successful applicants will generally have GPAs above 3.2 (A=4.0). Students seeking admission should have taken Organic Chemistry (2 semesters; 1 semester of laboratory), Physical Chemistry, General Physics, college level mathematics through Calculus (1 year) Students with deficiencies may be admitted, but these must be rectified during the first year. Courses in Biochemistry and Biology or Genetics are recommended, as is prior substantive research experience either as part of undergraduate training, summer programs, or work responsibilities.

Advisor's Financial Responsibilities

The Program is financially responsible for first-year student stipends at the level determined by the UCD Graduate School, plus student tuition and all associated expenses and fees (including health and dental insurance). The program covers these expenses only until July 1 of the student's first year. The student's thesis advisor is financially responsible for these expenses for the remainder of the training program. The advisor is responsible for making a financial projection for the student's expected tenure and assuring the faculty that they have reasonable expectation of being able to support the student during this entire period. This must be done before a student is given permission to begin their thesis research in the advisor's lab.

Student Plan (see attachment)