

**GUIDELINES**  
**ACADEMIC CHALLENGE RESEARCH GRANTS**  
**DEPARTMENT OF BOTANY, MIAMI UNIVERSITY**  
Updated May 2007

Grantsmanship is one aspect of a successful scientific research career. The ability to communicate the potential, plan, and significance of a research project, in a clear and concise manner to non-specialists, is considered by the Department of Botany to be an integral part of both undergraduate and graduate education. The goal of the Department of Botany's Research Grants Program, within the Academic Challenge Program context, is to support independent scholarly botanical research by graduate and undergraduate students.

The Department of Botany's Academic Challenge Research Grant Program is competitive and not an entitlement to the student or faculty advisor. Graduate committees should not approve plans of study assuming support from this program is automatic. Failure of students to make adequate progress, because of financial constraints, toward their degree aspirations is not the responsibility of this program. Students and their faculty mentors are expected to apply for and successfully obtain support from external (outside the university) grant programs, as well as from Miami University grant programs such as through the Undergraduate Research Committee.

Students may submit only one proposal per deadline. In the past, research awards have not exceeded \$2,000 per submission. Resubmitted proposals should address previous reviewers' comments. This program can not fully fund research projects in their entirety.

**A. Eligibility - General**

1. Botany graduate students working on botanical research projects approved by their graduate committee and under the direction of a member of the Botany faculty. Students who have not had a plan of study approved by their committee are eligible to submit a start-up proposal only.
2. Undergraduate students working on botanical research as part of an enrolled program of independent research in botany and under the guidance of a member of the Botany faculty. Undergraduate students are not eligible for start-up grants.
3. Except under exceptional conditions, graduate student researchers must provide evidence that they have attempted or that they are aggressively attempting to secure funds for this project elsewhere, preferably from external sources. Undergraduate researchers likewise should provide evidence that they have sought funds elsewhere, although not necessarily outside of the University.

**B. Eligibility - Format and Process**

1. ***Failure to follow guidelines will disqualify proposals for funding.***
2. The appropriate number of copies of the complete grant proposal (already reviewed by the advisor) is to be submitted to the departmental secretary on or before one of the following deadlines: October 1 and March 15. The student will provide a list of committee members for review. [Note: Students are encouraged to submit electronic versions of their proposals to the secretary for distribution to their graduate committee members. They should not be submitted to their committee directly, and must go through the secretary. If this is not feasible then enough hard copies for all committee members should be provided at this stage.]
3. Graduate committee members are to review the proposals and provide the students with constructive criticism within one week of the receipt of proposals. In the case of undergraduate proposals the faculty research advisor(s) will serve as the "committee".
4. Students are to revise proposals based on comments of committee members. At this point, six copies of the REVISED, complete grant proposal are to be submitted to the chair of the Research Committee on or before one of the following deadlines: October 15 and April 1. [Note: If any of the deadlines in this section fall on a weekend or holiday, then proposals are due on following business day.]
5. Proposals must be prepared with: (a) minimum 2.5 cm margins at top, bottom, and on each side, (b) minimum 10 point font size, (c) if constant spacing is used, there should be no more than 12 characters per 2.5 cm, whereas proportional spacing should provide an average of 15 characters per 2.5 cm, and (d) maximum 6 lines per 2.5 cm.

### **C. Submission of Start-up Proposals**

Each graduate student within the Department of Botany's Ph.D. or M.S. program is entitled to one start-up grant of \$250 to enable the student to gather preliminary data, with the intent of demonstrating that his/her project is feasible.

The Start-up grant proposal submission (1 to 2 pages in length) shall consist of:

- a. Completed cover page (see attached; not counted in 1-2 pages).
- b. Statement of objectives.
- c. General outline of the types of methods to be used. If work requires instrumentation of equipment not available in the department this should be indicated. Rare exceptions maybe made to purchase equipment.
- d. Statement of significance of the study.
- e. Statement of how the start-up funds will be used. (A detailed budget is not required.)

- f. Signatures of student and mentor.

#### **D. Submission of New Research Proposals**

1. One copy of the proposal will be placed on file in the Botany office for review during the review period by any interested faculty member. This copy will subsequently be retained on file by the Chair of the Department of Botany. The other six copies are to be distributed to the members of the Research Committee for review by each member of the Committee.

Students have a professional obligation to submit proposals to their graduate committee members in time to allow thorough, critical review before signing. Advisors have a professional obligation to review proposals before they are submitted to the entire committee.

2. Proposals shall not exceed five (5) pages in length.
3. The format of a proposal shall be as follows:
  - a. Completed Cover Page (see attached), copies of which are available in the department office (not counted as part of the five pages).
  - b. Table of Contents (not counted as part of the five pages).
  - c. Introduction: A short perspective on the project.
  - d. Hypothesis/Research Goals: A statement of the overall research goals, a concise statement of the hypothesis(es) to be tested in this component of the research and how this hypothesis(es) relate to the overall research goals.
  - e. Materials and Methods: A descriptive outline of the procedure(s) to be used to answer the question or test the hypothesis(es).
  - f. Rationale for, and Feasibility of, Research Methods: What types of information will be obtained and how will these be useful in addressing the question?
  - g. Significance: How is the proposed research important to scientists within and outside of your specialty area, as well as to the general public?
  - h. Plans for Dissemination of Research Results: Where do you plan to present your research results (i.e., which professional meetings, journals, etc.)?
4. Attached to the proposal (and not counted as part of the five pages) shall be the following Appendices:
  - a. Literature cited.
  - b. Timetable for proposed research.
  - c. Detailed budget with detailed justification, including summer Field workshop funds, Herbarium Travel Funds, and grants, etc.

Indicate how these funds relate to the budget as a whole. Only expenses directly related to the research will be considered. Investigator salary, meals, and faculty travel will not be funded. Typically equipment will not be funded.

- d. Summary of preliminary data and results in support of the proposed project.
  - e. Curriculum vitae.
5. A table listing ALL past, present, and pending proposals, external and internal, funded and unfunded, submitted while at Miami University. This table is to include: PI & Co-I's, proposal titles, funding agency/source, funded amount, starting and ending dates (not counted as part of the five pages).

## **E. Submission of Renewal Grant Proposals**

— Expansion or Continuation of research funded through an “Academic Challenge Start-up Grant” is not to be considered a renewal.

1. Proposals from students who previously received funding for research conducted as part of their current degree program are treated as Renewal Grant Proposals.
2. Renewal proposals also must include a 1 to 2 page statement on "Progress on Previously-Funded Research" (not counted toward the five page limit). This section is to immediately follow the Table of Contents.

In this section, students must state the objectives of their previously-funded research proposal and provide a detailed summary of results. Failure to demonstrate that significant progress has been made in achieving the objectives will adversely affect chances for additional support.

This section also must include a list of presentations at professional meetings and manuscripts submitted to refereed journals, based on previously-funded research. Students who have actively disseminated their research results will be advantaged in competition with other students submitting Renewal Grant Proposals.

3. A table listing ALL past, present, and pending proposals, external and internal, funded and unfunded, submitted by the student (not the faculty advisor) while at Miami University. This table is to include: PI & Co-I's, proposal titles, funding agency/source, funded amount, starting and ending dates (not counted as part of the five pages).

## **F. Criteria for Proposal Evaluation**

Consideration of eligible proposals will be based on:

1. **Guidelines:** *Failure to follow guidelines will disqualify proposals for funding.*
2. **Research performance competence:** Capability of the investigator, technical soundness of the proposed approach, and availability of resources. This criterion normally will be judged according to the demonstrated feasibility of a new project or the demonstrated progress in addressing the objectives of a previously funded project (renewal proposal).
3. **Intrinsic merit of the research:** Likelihood that the research will lead to new understanding within the field of botany.
4. **Written quality of the proposal:** The proposal must be understandable to a scientifically or technically literate reader outside of the specialized area of the proposed research. Proposals should be clear and complete, and proposers should reduce, and define, jargon as much as possible.
5. **Budget:** The degree to which expenditures have been justified.

Preference in awarding funds may be given to Botany graduate students or undergraduate Botany majors. Faculty mentors, if serving on the Research Committee, will absent themselves from the room during discussions and decisions on their students' proposals.

## **G. Administration of Grant Funds**

Administration of any funds granted will be primarily the student's responsibility, but will be overseen by the student's faculty mentor. All paperwork associated with grant expenditures must be signed by the student and countersigned by the student's faculty mentor.