

APPLICATION INSTRUCTIONS AND CHECKLIST
FOR MURDOCK COLLEGE RESEARCH PROGRAM FOR NATURAL SCIENCES

I. Completing the Online Application Form

Complete the online application using this link (www.murdock-trust-app.org/naturalsciences). All information requested must be entered within the space provided or uploaded as requested. Institutions must keep the order of the requested information on each page as well as the space limitations for each item must be followed strictly. Use no smaller than **11 point font and .75 inch margins**. The online application and all uploaded materials must be submitted electronically.

PRINCIPAL INVESTIGATOR, ACADEMIC RANK AND DEPARTMENT, INSTITUTION and ADDRESS -

Provide full information, including zip code.

EDUCATION and EXPERIENCE - Include information for all college and university degrees and teaching and research positions, including current position; common abbreviations may be used – must not exceed 600 characters.

TITLE OF PROPOSED RESEARCH - Title should be concise, accurate, and descriptive, and of no more than 250 characters (spell out contractions, acronyms, and chemical symbols).

DISCIPLINE / SUBDISCIPLINE - Enter the discipline and the subdiscipline which best describes the proposed research.

ABSTRACT - Enter a brief description of the research project, maximum 150 words, understandable by the intelligent non-expert (spell out contractions, acronyms, and chemical symbols).

DURATION OF REQUESTED GRANT - Self explanatory

BUDGET SUMMARY - Enter totals here, taken from the budget on page 2. The Total project budget must be the sum of the institutional contribution and the request to the Trust.

NAMES – The Names of the Principal Investigator and the Authorized Institutional Representative (President, Provost, Dean, . . .) are required. This is in lieu of an official signature and it represents an official approval of the proposal and budget by the institution.

PROPOSED BUDGET - Stipend requests should be entered separately for faculty and students, by year. (If the institution provides support such as summer room and board for the students, do NOT place these in the PROPOSED BUDGET, but describe them in COMMENTS ON BUDGET.) A request for salary for a technician is not normally allowed, but may be entered if the technician is essential for the success of the research; in this case, adequate justification for having a technician must be included in the proposal narrative.

All equipment items requested should be itemized; a brief rationale for equipment requested should appear under COMMENTS ON BUDGET, and, if appropriate, a more lengthy justification may be included in the NARRATIVE. Institutional cost share provides direct tangible support for the project of at least 20%, and is required. Cost share is calculated on the basis of the total project cost. For example, for a total project cost of \$75,000, a 20 percent minimum, required cost share is \$15,000,

allowing the investigator to request for the maximum of \$60,000 over three years. Fifty percent institutional cost sharing is expected for each equipment item in excess of \$1,000. In this situation, the total cost share will become greater than 20 percent. Start-up funds should not be listed as matching funds.

Minor requests under supplies need not be itemized. (Supplies are defined as materials or objects whose individual cost does not exceed \$500, or whose useful lifetime is expected to be less than five years.) If annual supplies exceeds \$1,000 provide a brief breakdown. Requests for travel must be itemized under “Other” and justification provided in COMMENTS ON BUDGET; only travel that is required for the performance of the research may be requested. Publication costs and indirect costs are not allowed, and should not appear anywhere in the budget.

Be sure that requested amounts for stipends fall within Program guidelines. (For students, up to \$4,000 per student per summer for 10 weeks full-time participation; for faculty, up to \$7,500 per summer for 10 weeks full-time participation; both prorated for shorter periods.) Requests of less than 10 weeks each summer must include a justification.

The total requested of the Trust plus the Institutional Contribution must equal the Budget Total (last column).

COMMENTS ON BUDGET - Rationale should be provided here for special budget requests, including equipment; other institutional financial support for the research that does not appear in the PROPOSED BUDGET may be listed here – must not exceed 600 characters.

HISTORY OF SUPPORT - List all internal, including start-up, and external support received for the last ten years by the Principal Investigator(s), including applications that are currently pending; for each, provide source, title of the project, amount, period of support, and number of summer weeks obligated by that grant. Identify pending applications with an asterisk [*], and those that duplicate this present proposal with a [D] – must not exceed 600 characters.

THE FUTURE – In 600 characters, describe the future goals of the project as well as the plan to establish a vibrant research program that include engaging students, regularly presenting at professional conferences and at other institutions, regularly publishing in peer-reviewed journals, and regularly seeking external support from peer-reviewed sources.

PUBLICATIONS BY PRINCIPAL INVESTIGATOR(S) - Provide the title of your Ph.D. thesis and give the names and affiliations of your Ph.D. thesis adviser and of your postdoctoral adviser. List all publications in refereed journals (not to exceed 10 entries, however); include titles; proper abbreviated journal names are acceptable; do not include abstracts and talks. Books and book chapters on research topics may be included. Place an asterisk after the names of all undergraduate student co-authors. Currently submitted manuscripts may be included but should be indicated as “submitted” or “accepted.”

EQUIPMENT AND FACILITIES - List major equipment items in 500 characters, with model numbers, and facilities available at your institution that are needed to support this research.

COMBINED NARRATIVE DESCRIPTION OF THE RESEARCH AND REFERENCES – (A SINGLE UPLOADED DOCUMENT that includes the Narrative Description of the Research and the References – no more than 4 pages combined; these pages should be numbered pg. 4, pg. 5, pg. 6, and pg.7). NARRATIVE – Provide a well-focused description of your research and its goals, including its importance to the broader research field of which it is a part. Describe in detail the relationship of this research to

previous work done by others, its significance, your method and its originality, and any innovative features. Provide argument for the feasibility of the research methods proposed and discuss the role that students will play in the research. (Why should other research workers in related fields be interested in the results of your work?) This narrative should be directed primarily to the experts who will review the proposal. Bear in mind that hypothesis-driven research is strongly preferred. Diagrams and graphs may be uploaded within the NARRATIVE section, but must be in acceptable/high resolution. The maximum length of the Narrative section is 3½ pages. REFERENCES (½ page at the end of the NARRATIVE) A bibliography should be provided only of those works referenced by number in the NARRATIVE.

SUPPORT LETTERS – Provide letters only from collaborators who will contribute significantly to the project. If there is more than one letter, upload the letters in a single PDF file.

SUGGESTED REVIEWERS – List at least eight (8) experts who are qualified to review the scientific quality of the proposed research. (At least six must be persons with whom the investigator(s) has not worked professionally.) Describe briefly the type and duration of the relationship for each person who has worked with the investigator. The form will request the following information for the eight (8) experts: (1) Title [eg., Dr.]; (2) First Name; (3) Last Name; (4) Email; (5) Position/Title; (6) Department; (7) Institution; (8) City, ST; (9) Have you worked with this person? [Yes or No]; (10) Describe briefly the type and duration of the relationship for each person who has worked with the investigator.

II. Submitting an Application

1. A completed **Application** includes the three-page, online application plus the following items.
2. An uploaded **Narrative Description of the Research along with References** (see instruction above; no more than 4 pages total). It is advisable for the PIs to upload documents as PDF files and please double check to ensure that the formatting, figures, and pictures remain intact.
3. An uploaded scanned PDF document of **Support Letters** from significant collaborators and special approvals [e.g. animal care and use, human subjects review . . . etc.]. If there is more than one letter, upload the letters in a single PDF file.
4. A form (within the online app) of **Suggested Reviewers** (see instructions above) that contains a list of at least eight (8) expert reviewers who are qualified to review the scientific quality of the proposed research. At least six must be persons with whom the investigator(s) has not worked professionally. Describe briefly the type and duration of the interaction between the PI and the suggested reviewer.
5. An uploaded signed **cover letter** (PDF document) **from the Natural Sciences Department Chair or the Science Division Chair** explaining how the proposed research will contribute to the advancement of student-faculty collaborative research and science education in the Department and Division.
6. A uploaded scanned PDF of the **IRS document showing your 501(c)(3) tax exemption ruling and your 509(a) or 170(b) public charity ruling for the current legal name**. Often, but not always, these rulings appear in the same IRS document.

7. An uploaded, scanned PDF document of the **institution's currently dated and signed letter from the Chief Executive Officer certifying that your organization's IRS rulings are still correct**—specifically referring to both the 501(c)(3) tax exempt ruling and the 509(a) or 170(b) public charity ruling—and explicitly stating the following: “no modifications are planned or pending.”
8. If appropriate, an uploaded, scanned PDF document of the latest certificate of membership if your institution is tax exempt under a group ruling for a central organization.
9. If appropriate, an uploaded, scanned PDF document of the IRS recognition of any recent name change to the present legal name.

All of the above documents that constitute a complete application should be submitted / uploaded online.

Note: For institutions making multiple applications, each complete proposal must be submitted separately.