

M. J. Murdock Charitable Trust

Partners in Science Program

High School - College/University Research Partnerships

Application Deadline is December 1

PARTNERS IN SCIENCE

Basic research in the natural sciences is the frontier on which new discoveries and explanations of nature arise. Such inquiries stimulate progress by providing the knowledge needed to create technology. Research is also the cornerstone of graduate education in the sciences, and even many undergraduates have opportunities to participate in hands-on investigations under the guidance of faculty mentors. While a smaller number of high school students have a chance to taste scientific inquiry, several organizations are now sponsoring summer research programs for precollege young people.

By contrast, although some high school science teachers have had the opportunity to participate in an undergraduate research program, many have been educated in a system which emphasizes textbook knowledge. As a result, they may not appreciate the way in which science progresses, and may not be able to convey the excitement of scientific discovery to their students. For these teachers the chance to be involved in scientific research would be an invaluable experience which might inspire superior classroom teaching.

PROGRAM GOALS

Providing high school teachers with opportunities to work at the cutting edge of science, and thus to revitalize their teaching and help them to appreciate the use of inquiry-based methods in the teaching of science, is a primary goal of the Partners In Science awards. The program enables teachers and academic scientists to collaborate in the advancement of science, with the goal that both will grow professionally in the process. High school teachers develop an improved image of themselves as scientists as well as a sense of being an integral part of the scientific community. Teachers will gain experience presenting their research at a regional science conference in August and a national science conference in January after each summer of research. Faculty mentors benefit not only from research assistance, but from contact with those shaping their future students. All partners develop a broader understanding of the linkages between high school and college science education.

After the two summers of research are completed, secondary goals of the Partners In Science program are to make high school science teaching more attractive, to help teachers guide able students toward careers in science, to develop new teaching strategies, and to foster long-term scholarly collaborations. The last is especially important and leads to a model of the teacher as active in science yet committed to the high school classroom.

ELIGIBILITY

Partners In Science awards are made to colleges and universities and to other qualified research institutions to enable high school science teachers to participate in full-time research for 8-10 weeks during the summer. Applications are accepted from researchers in the natural sciences at institutions located in areas where the Partners In Science program is available.

INSTITUTION

Applications must be submitted through a college or university or other qualified research institution which accepts responsibility for the administration of the award.

PRINCIPAL INVESTIGATORS

To apply, an investigator must hold a Ph.D. and must have an active research program as evidenced by grants and/or publications and hold an appointment in a natural science department at a college, university, or other qualified institution in the Pacific Northwest (Alaska, Idaho, Montana, Oregon, and Washington).

HIGH SCHOOL TEACHERS

High school teachers should possess academic qualifications in appropriate disciplines, in most cases a baccalaureate degree or the equivalent in chemistry, physics, biology, or earth science. Applicants must be a full-time teacher with a high school appointment and be teaching science. The teacher and high school would normally be within convenient commuting distance of the research host institution so that a research partnership may continue beyond the 8-10 week summer research periods.

There are no restrictions with regard to age, rank, or length of service of either teachers or mentors, but preference may be given to teachers who have not had a previous opportunity to do research, those who have had three or more years of teaching experience, and those who plan to continue teaching for several years, so the benefits of the program can be transferred back to the classroom.

FORMING PARTNERSHIPS

College or university/research institution mentors may identify qualified science teachers through direct contacts or through the program office of the Murdock Trust. Qualified high school teachers can also seek partnerships by contacting a mentor directly or through the Trust office. An information packet with a candidate statement form will be provided to interested high school teachers. Forms are also available from the Murdock Trust website.

Potential partners are strongly urged to meet to assess compatibility and the desirability of a joint effort and to develop specific goals for each 8-10 week summer research session before an application is submitted.

COLLEGE AND UNIVERSITY FACULTY/RESEARCH PERSONNEL APPLICATION

Qualified faculty members/research scientists (mentors) should request application packets from the Trust (as previously noted awards are made through, and must be endorsed by, a qualified institution of higher education or research institution), or download it from the Trust's website.

Applications are in two parts: a short three-page application form to be completed by the mentor; and a two-page teacher candidate statement to be completed by the teacher. Applications must include both parts, for the contributions of each partner will be considered in the review process.

BUDGETS

Awards are in the amount of \$15,000 apportioned over two years. The budget breakdown will be:

	1 st year	2 nd year
High school teacher stipend	\$5,000	\$5,000
Discretionary funds	1,000	1,000
Academic-year enrichment	500	500
Travel funds (annual conference)	1,000	1,000
Total	\$7,500	\$7,500

It is the Trust policy in this program, as in others, to disallow the use of Trust monies for "overhead" or "indirect" costs. The discretionary funds can be used for items directly needed in the research (supplies, equipment, or travel) or to enhance the teaching of the high school partner. Travel funds are designated for the high school teacher (and the mentor if funds permit) to attend the annual Partners In Science Conference. Each high school teacher will also have \$500 budgeted for academic-year enrichment. This may include, but is not limited to, books, software, and workshop and conference fees. (These conference fees are over and above those for the annual Partners In Science Conference.)

DEADLINE AND REVIEW PROCESS

The program deadline is December 1. Applications received by that date will be acted upon by March 1. Completed applications will be reviewed by a committee set up by the Murdock Trust. The committee will consider the qualifications of the partners, the appropriateness and presentation of the research problem, the quality of the research project proposed, the high school setting, and the high school teacher's perception of how the partnership might affect his or her teaching. Address inquiries, questions, and correspondence to:

**Partners In Science Program
M. J. Murdock Charitable Trust
P.O. Box 1618
Vancouver, WA 98668
Telephone (360) 694-8415 FAX: 360.694.1819
Website: www.murdock-trust.org**

PARTNERS IN SCIENCE SUPPLEMENTAL AWARDS

High school teachers who have completed two summers of research in the Partners In Science Program may apply for a Supplemental Award of up to \$7,000. These awards are made directly to the teacher's high school, and are for the purpose of implementing ideas from the research partnership in their classrooms. The Application deadline for these awards is November 1. More information about Supplemental Awards and application forms is available at the above address.

BACKGROUND OF PARTNERS IN SCIENCE

Research Corporation, a foundation for the advancement of science with headquarters in Tucson, Arizona, initiated this program in 1988 as an experimental venture to improve science education and increase the number of students choosing science as a career. In 1990 the

M. J. Murdock Charitable Trust joined Research Corporation in funding the program in the Pacific Northwest and providing some additional support services to partners in that region. When Research Corporation chose to withdraw from administering this program in order to focus their energies on other priorities, the Murdock Trust accepted the challenge of continuing the program in the Pacific Northwest. Under this arrangement, those applications submitted in fall 1999 were the first to be administered solely by the Trust.

The M. J. Murdock Charitable Trust was created by the will of the cofounder of Tektronix, Inc., the late Melvin J. (Jack) Murdock. Established in 1975 as a private foundation, the Murdock Trust endeavors to discover, develop, and support the most important and creative efforts for achieving benefits to society in a five-state region of the Pacific Northwest. Since its inception, the Trust has given a majority of its funds for the support of education and scientific research.

Current program information and application materials are available from:

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