

EVALUATION OF THE LUCILLE P. MARKEY TRUST PROGRAMS IN THE BIOLOGICAL SCIENCES

The Lucille P. Markey Charitable Trust was created in 1983 as a 15-year, limited-term philanthropy in support of basic medical research. The Markey Trustees targeted grants to specific needs within the biomedical sciences where they believed funding could potentially make the biggest difference: 1) supporting young researchers in the biomedical sciences; 2) funding the establishment, re-organization, or expansion of major biomedical research programs or centers; and 3) providing training opportunities in translational research for graduate and medical students.



The Markey Trustees also provided an innovative model of philanthropy for others to follow:

- They distributed all of the assets of the Trust over a limited period of time, allowing more funds and larger awards to be distributed each year;
- They operated with a small core staff, reducing administrative costs; and
- They provide funds with a minimum of required reporting, freeing recipients from burdensome paperwork.

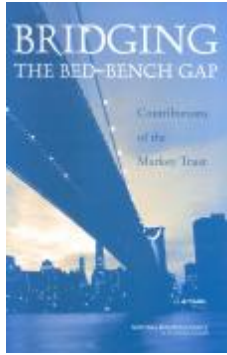
During this interval of 15 years, the Markey Trust spent over \$500 million on four programs in the basic biomedical sciences that support the education and research of graduate students,

postdoctoral fellows, junior faculty, and senior researchers.

Near the end of the Trust, the Markey Trustees asked the National Academies to conduct an evaluation of their grant programs, addressing two questions: Were these funds well spent? and What can others in the biomedical and philanthropic communities learn from the programs of the Markey Trust?

To answer these questions, the committee overseeing the project examined three clusters of grant programs: 1) the General Organizational Grants, intended to catalyze new ways to train Ph.D. and M.D. students in translational

research; 2) the Research Program Grants, which provided funding to institutions to support the work of senior investigators; and 3) the programs for Markey Scholars and Visiting Fellows, which supported young biomedical investigators in their early careers. In addition, they convened a major conference highlighting the research accomplishments of Markey Scholars and Visiting Fellows and a workshop to investigate methods used to evaluate funding of biomedical science by philanthropic donors. They produced five reports from these activities, described below.



Bridging the Bed-Bench Gap: Contributions of the Markey Trust (2004)

In the early 1980s experts in biomedical science expressed deep concern that a serious gap had developed between fundamental biological research and clinical research. In 1989, the Markey Trustees established a General Organizational grants program designed to address this gap through grants to institutions that would design curricula for and develop programs of two sorts: (1) those that provided significant opportunities for M.D.s to engage in basic research during and immediately following medical school and residency, and (2) those that provided significant clinical exposure for Ph.D.s while they were predoctoral or postdoctoral students. These grants were intended to close the widening gap between rapid advances in our understanding of the biological process and the translation of that knowledge into techniques for preventing diseases. This report examines the General Organizational Grant programs, identifies best practices, and provides observations for future philanthropic funders.

The Markey Scholars Conference: Proceedings (2004)

The National Academies hosted a scientific conference for Markey Scholars and Visiting Fellows in Rio Grande, Puerto Rico on June 28-30, 2002. The purpose of the conference was to enable the Scholars and Fellows to share their research experiences, just as they did at the annual Scholars Conferences previously conducted by the Markey Trust. All of the attending Scholars and Fellows submitted abstracts of their poster sessions. Six scholars, along with other experts in the biomedical sciences, made formal presentations. These proceedings consist of shortened versions of the individual presentations and the poster session abstracts.



Funding Biomedical Research Programs: Contributions of the Markey Trust (2006)

Through the establishment of Research Program grants, the Markey Trustees made a major commitment to the operation of research centers or programs in the fundamental questions of the biomedical sciences. The Trustees awarded 92 Research Program grants ranging in size from \$500,000 to \$12.6 million for a total of \$323 million. The awards were made to institutions with a major commitment to the life sciences and to assist in the establishment, reorganization, or expansion under able investigators of significant biomedical research centers or programs. Using information from Markey archives, materials from grant recipients, and site visits to a sample of institutional grant recipients, the authoring committee describes the impact that Markey grants made on the centers and programs funded by these grants, along with the unique aspects of the Markey approach to funding that may be applicable to other funders of biomedical research programs.



Enhancing Philanthropy's Support of Biomedical Scientists: Proceedings of a Workshop on Evaluation (2006)

This volume contains the proceedings of a workshop held in June 2005 to investigate methods used to evaluate funding of the biomedical scientists by philanthropic and public funders. In addition to the Markey Trust, representatives from the Howard Hughes Medical Institute, the American Heart Association, the Doris Duke Charitable Foundation, the National Institutes of Health, and six other funders of biomedical scientists presented information on evaluation methodologies and outcomes.

Evaluation of the Markey Scholars Program (2006)

This report examines the career paths and research outcomes of the Markey Scholars in Biomedical Science and the Markey Visiting Fellows, funded by the Markey Trust between 1985 and 1995. The Markey Scholars program funded outstanding biomedical researchers for up to seven years focusing on the transition from the postdoctorate to junior faculty status. The goal of the program was to ensure maximum productivity, intellectual growth, and independent research among grantees. The Trustees assembled a committee of distinguished scientists who selected about 16 Scholars from among approximately 175 applicants each year from 1985 to 1991. The Markey Visiting Fellows program provided two years of postdoctoral funding at U.S. institutions for outstanding young researchers in the biomedical sciences from the United Kingdom and Australia. Visiting Fellow awards were granted to 26 researchers from the U.K. between 1986 and 1991 and to ten researchers from Australia between 1989 and 1993.



In the case of the 113 Markey Scholars, the report compares indicators of achievement for the Scholars with those for individuals who were unsuccessful applicants for the Scholars award, as well as detailing the Scholar selection process. The study found that the Markey Scholars had a higher level of citations per individual and article and received more R01 grants than the biomedical scientists. Of the 77% of the Scholars employed in academia, all were tenured. They achieved higher rank, had a shorter time to tenure, and were located in higher ranked institutions than those in the comparison groups (see Table 4-1). The report provides a series of recommendations for structuring future programs that support biomedical scientists who are navigating this critical career transition point.

TABLE 4-1 Differences Among Markey Scholars, Top-Ranked, and Competitive Candidates in Academia on Selected Outcome Measures

Outcome Measure	Markey Scholar	Top-Ranked Candidate	Competitive Candidate	Significant Difference
Number	87	55	49	—
Percentage Promoted and Tenured	100	63	57	Yes ^a
Percentage in Top-Tier Universities	60	24	10	Yes ^a

^aMarkey Scholars are significantly different from both top-ranked and competitive candidates.

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For More Information

Copies of the five reports in this series are available from the National Academy Press (NAP); (800) 624-6242 or (202) 334-3313, or visit the NAP website at www.nap.edu. For more information on this project, contact staff at (202) 334-3317 or visit the Policy and Global Affairs website at www.nationalacademies.org/pga/.