Introduction

In 1974, a modest program for funding new and innovative research was initiated at the Oak Ridge National Laboratory. It was called the "Seed Money" program because of its emphasis on new ideas having potential for growth. Originally, it was unique among the United States Department of Energy's National Laboratories. Today, it is still in operation, but has since become part of a larger program, called Exploratory R&D, which is being carried out at all the Department's National Laboratories.

The creation of the Seed Money program was prompted by two observations in research. First, it was noted that many of the more exciting and productive scientific discoveries often arose unexpectedly in the midst of research focused on other objectives. While it was tempting to divert existing resources to pursue new ideas as they arose, frequently this was not possible. Previous commitments had to be met and discretionary funds were usually not available.

Second, it was observed that in large, mission-oriented research programs, such as those stemming from Congressional appropriations, new ideas and tangential pursuits, while meritorious, often had difficulty finding timely support among traditional program sponsors. Resources in the near-term were often already fully committed, or the idea itself was so new or tangential that it often fell outside of a program manager's primary area of responsibility.

Acknowledging that new ideas may have been overlooked as a result, the Department's Oak Ridge Operations Office, in collaboration with the Laboratory, established the Seed Money program to address this need. Under this program, the Department authorized the Laboratory to use a small portion of general operating funds for the purpose of "early exploration of creative scientific and technological concepts arising in the course of the Laboratory's work."

The Seed Money program's primary objective is to encourage the research staff, through the availability of special funds, to pursue new ideas and approaches. Of particular interest are promising ideas that either fall outside the scope of existing programs or demonstrate a unique proof-of-principle. Both serve as a means for attracting new interest and outside support for promising avenues of research.

In recent years, the Seed Money program has been funded at approximately $1 million per year. By the end of 1985, over 200 projects had been supported at an average cost of about $43,000 per project. The average duration of a project is about 1 year.

The program is managed exclusively by the Laboratory, including the evaluation and selection of proposals. Rotating appointments among the Laboratory's professional staff provide both the managers of the program and the scientists and engineers for peer review and selection of proposals. Selection criteria include the proposal's novelty, technical quality, and potential for continued funding. Each year, the approval rate has normally run about 60 percent, a rate that continues to encourage researcher interest and the generation of new ideas.

The Seed Money program, of course, operates within the larger and supporting environment of the Laboratory as a whole. This enables Seed Money researchers to make use of an extensive complement of unique facilities and resources available through the support of other programs. In this context, the accomplishments of the Seed Money program may be attributable, in part, to research support from others both prior and subsequent to each Seed Money effort. In a sense, this infrastructure provided both the Seeds and the nurturing environment in which the Seeds could grow.

Having set this context, the results of the program are impressive. Follow-on research,