

THE COMMONWEALTH TECHNOLOGY RESEARCH FUND:

**ADVANCING TECHNOLOGY AND ECONOMIC
DEVELOPMENT IN VIRGINIA BY INVESTING IN HIGHER
EDUCATION RESEARCH**



**ANNUAL REPORT
JULY 1, 2006 – JUNE 30, 2007**

**Submitted by the Fund Administrator:
Center for Innovative Technology
The Commonwealth of Virginia Innovative Technology Authority
October 1, 2007**

TABLE OF CONTENTS

Executive Summary	1
Background.....	1
Activities to Date	2
Administration	4
Appendix A	4

EXECUTIVE SUMMARY

In accordance with §2.2-2233.1.E of Title 22, Chapter 22, Article 3 of the Code of Virginia, this report regarding the Commonwealth Technology Research Fund (CTRF) is respectfully submitted. The CTRF was created to attract public and private research funding for institutions of higher education, in order to increase technological and economic development in Virginia. Awards from the Fund may be made to Virginia public institutions of higher education or their associated intellectual property foundations.

The CTRF was created in the 2000 session of the General Assembly. The CTRF's initial appropriations funded twelve projects between 2001 and 2003; the Commonwealth's investment totaled \$24.6 million. These CTRF projects were completed by June 30, 2006, and the 2006 CTRF Annual Report provides information on the awards and their outcomes. The CTRF did not receive additional funding until the FY2006 session of the General Assembly, when legislators appropriated \$2M for CTRF in the FY2007 budget. The following year, the General Assembly appropriated a \$1M for the CTRF, for a total of \$3M in new CTRF funding. As of June 30, 2006, those monies were unspent.

To ensure that CTRF monies would most effectively drive innovation, activities in FY2007 focused on governance and operations. Key activities included 1) developing updated guidelines, 2) forming and convening a nine-member Grant Allocation Committee to hone guidelines, review proposals and make award decisions, and 3) engaging with the research community and elected officials about CTRF activities and opportunities. In addition, the Fund administrator fielded inquiries from university administrators as well as industry and university researchers, and it received twelve proposals from four universities. Because guidelines will be updated in early FY2008, award decisions were not made in FY2007. (Note: Proposals may be resubmitted, and new proposals submitted, in conjunction with the new guidelines.)

The foundation laid in FY2007 will lead to a grant solicitation issued in Fall 2007. Proposal submissions, reviews, and award decisions are planned for the fall, with award decisions made by the end of December 2007.

BACKGROUND

The Commonwealth Technology Research Fund (CTRF) was created in the 2000 Session of the General Assembly to leverage federal and private investment in research at Virginia's public universities. The ultimate goal of this investment was to increase technological and economic development in Virginia. Based on the original legislation and amended legislation of March 2003, the Fund has four components:

- **Strategic Academic Enhancement Program:** This component was based on the evidence that top-ranked departments are disproportionately successful in attracting external research funds. This program provided funds to help strong departments in Virginia's universities become world-class research organizations. Funding under the strategic academic enhancement program was typically used for recruitment packages for

new faculty, purchase of specialized equipment, renovation of laboratories, funding for graduate research assistants, and similar activities.

- **Matching Funds Program:** Under this component, universities applied to the CTRF for matches to federal or private grant proposals that they were preparing to submit. These matching funds not only helped to qualify institutions for grant competitions, they also reflected the state's and institution's commitment to the project and influenced decision-makers regarding the feasibility and value of the proposed research.
- **Industry Inducement Program:** This component helped universities to upgrade their research capacities in key departments in order to attract specific companies to locate or expand in Virginia.
- **Commercialization Program:** This component enhanced the capability of the universities to commercialize technologies developed through their research.

As summarized in the 2006 CTRF Annual Report, twelve grants were made between 2001 and 2003, all of which were completed by June 30, 2006. Seven awards were made in July 2001, four in January 2002, and one in January 2003, for a total of \$24,574,630. Implementation costs (including honoraria for peer reviews) amounted to \$45,992, for a grand total of \$24,620,622 in expenses under the initial funding.

In its 2006 session, the General Assembly appropriated \$2 million in the state's FY 2007 budget for the Commonwealth Technology Research Fund. In its 2007 session, the General Assembly appropriated an additional \$1 million in the FY 2008 budget. FY2007 funding was designated by the General Assembly primarily to enhance the capability of institutions of higher education to commercialize technologies developed through their research. The budget called for funds to support collaborative, translational research aimed at the commercialization of discoveries, including pre-investment funding to support prototyping and proof-of-concept testing. FY2008 funds were to be used to enhance research opportunities at public institutions of higher education in accordance with 2.2-2233.1 C. of the Code of Virginia; this section of the Code calls out the four components named above.

ACTIVITIES TO DATE

In order that the Fund take full advantage of its ability to drive innovation in the Commonwealth, FY2007 focused on governance and operations. Secretary of Technology Aneesh Chopra took a great interest in the Fund as a tool to substantially expand "top down" and "bottom up" research and development. In the case of "top down" R&D, the CTRF was viewed as a catalyst to collaborative R&D between Virginia research institutions and Fortune 500 companies that perform limited or no research and development in Virginia. It was envisioned that collaborative R&D could result in significant economic impact in Virginia. In the case of "bottom up" R&D, the awards from the Fund would advance R&D concepts of university researchers, including through intellectual property commercialization performed by the best and brightest at Virginia's institutions of higher education.

Fund Guidelines were updated and were issued in November 2006. The Office of the Secretary of Technology and the Center for Innovative Technology prepared the guidelines in collaboration with the State Council of Higher Education for Virginia and the Virginia Economic Development Partnership.

In addition, the Virginia Research and Technology Advisory Commission provided input on the guidelines. Guidelines were discussed at the Commission's September 2006 meeting, and draft guidelines were presented to the Commission at its November 2006 Quarterly Meeting. At that meeting, Secretary Chopra expressed his intent to create a Grant Allocation Committee (GAC) of approximately nine members who would review proposals and recommend award decisions. Secretary Chopra proposed that three members of VRTAC serve on the GAC: Mark Frantz, Terry Leslie, and Del. Joe May. These individuals would be joined by a representative from the Virginia Economic Development Partnership and the State Council for Higher Education in Virginia, as required by Code, and other members of the local research and technology community. Guidelines were released electronically to the research community following VRTAC's November 2006 Quarterly Meeting.

In March 2007, the GAC had its full complement of members. A membership list is provided as Appendix A. Secretary Chopra hosted the Grant Allocation Committee's first meeting in Richmond on May 9.

CIT received twelve proposals from four universities prior to the Grant Allocation Committee's May 9 meeting; proposals spanned disciplines from aerospace, biotechnology and health care, to nanotechnology. Proposals were submitted by Eastern Virginia Medical School, George Mason University, Old Dominion University, and the University of Virginia. In addition, CIT received expressions of interest in submitting proposals from other researchers at those and other universities, including Virginia Commonwealth University and Virginia Tech. GAC members received and reviewed proposals prior to the meeting. The initial review did not result in funding allocations.

On May 9, the Committee determined that the Commonwealth's effective use of CTRF monies would be best served if it considered additional evaluation criteria. CIT advised the research community that proposals would be reinvited after the GAC finalized and issued additional evaluation criteria. The GAC planned to complete its work on additional evaluation criteria at an early August meeting. The meeting date was selected in order to precede the upcoming board meeting of the Innovative Technology Authority, as the agenda will include a review of the CTRF guidelines and additional evaluation criteria.

In May, the Senate Finance Committee's Education Subcommittee requested a briefing on CTRF at its June 7 meeting in Hopewell. Secretary Chopra provided background information and outlined activities and his vision for the Fund via phone and electronically, and Peter Jobse, the president of CIT, provided the June 7 briefing. Mr. Jobse's briefing included the CTRF's purpose and funding history, FY2007-8 funding and opportunities, the CTRF process and GAC members, and a discussion of R&D as a key lever to innovation.

Eligible Disciplines

The guidelines provided that the following disciplines were eligible for awards. The Chairman of the Innovative Technology Authority (ITA) could authorize awards in other disciplines, provided that such action was reported as required by legislation.

- Aerospace
- Biotechnology
- Energy
- Environmental and information technologies
- Healthcare
- Homeland Security/Defense
- High performance manufacturing
- Modeling and Simulation
- Microelectronics
- Nanotechnology
- Telecommunications
- Transportation

The November 2006 Guidelines proposed that the disciplines of healthcare, microelectronics, modeling & simulation, and nanotechnology be added to those named in legislation as eligible for awards

ADMINISTRATION

Administrative activities in FY 2007 focused on updating the Fund's Guidelines, inviting and receiving proposal submissions, disseminating information and responding to inquiries from universities, industry, and government representatives, and supporting the CTRF Grant Allocation Committee. The Center for Innovative Technology and the Office of the Secretary of Technology provided this administrative support.

Appendix A

COMMONWEALTH TECHNOLOGY RESEARCH FUND GRANT ALLOCATION COMMITTEE MEMBERS

The Honorable Aneesh P. Chopra (chair)
Virginia Secretary of Technology

Mr. Mark A. Frantz
General Partner
RedShift Ventures

Dr. Krishna Kodukula
Executive Director
SRI International, Center for Advanced Drug Research (CADRE)

Dr. Daniel J. LaVista
Executive Director
State Council of Higher Education for Virginia (SCHEV)

Mr. Terrence C. Leslie
University and Academic Relations Manager
Micron Technologies

Dr. Robert E. Lindberg
National Institute of Aerospace
President and Executive Director

The Honorable Joe T. May
Virginia House of Delegates, and
Chairman and Chief Technology Officer
EIT, Inc.

Mr. Gary McLaren
Deputy Director
Virginia Economic Development Partnership

Ms. Cheryl Moore
Chief Operating Officer, Janelia Farm Research Campus
Howard Hughes Medical Institute