

T50T01
Maryland Technology Development Corporation

Operating Budget Data

(\$ in Thousands)

	<u>FY 12</u> <u>Actual</u>	<u>FY 13</u> <u>Working</u>	<u>FY 14</u> <u>Allowance</u>	<u>FY 13-14</u> <u>Change</u>	<u>% Change</u> <u>Prior Year</u>
General Fund	\$15,673	\$8,173	\$18,573	\$10,400	127.2%
Adjusted General Fund	\$15,673	\$8,173	\$18,573	\$10,400	127.2%
Special Fund	0	10,400	0	-10,400	-100.0%
Adjusted Special Fund	\$0	\$10,400	\$0	-\$10,400	-100.0%
Adjusted Grand Total	\$15,673	\$18,573	\$18,573	\$0	0.0%

- The fiscal 2014 allowance shows significant general and special funds changes; however, this is entirely attributable to the use of Budget Restoration Funds that were required to restore funding to the Stem Cell Research Program in fiscal 2013. This action was necessary following the failure to enact the Budget Reconciliation and Financing Act of 2012 during the 2012 regular session.
- Absent the changes related to the source of funds, the fiscal 2014 allowance for the Maryland Technology Development Corporation (TEDCO) is unchanged from the fiscal 2013 working appropriation. Of the total amount, \$10.4 million is dedicated to the Stem Cell Research program; \$3.2 million is for the corporation's traditional technology development, transfer, and commercialization programs; and \$5.0 million is for the Maryland Innovation Initiative.
- The corporation does not report personnel data through the State budget system because its employees are not State employees; however, the corporation reports that it has 13.5 State-funded positions and 0.5 federally funded position.

Analysis in Brief

Major Trends

Follow-on Funding Remains Fairly Strong: A measure of success of the funding provided under the corporation’s Technology Commercialization Fund is the extent to which recipients can secure follow-on funding. In fiscal 2012, recipients continue to obtain significant follow-on investments.

Issues

Maryland Stem Cell Research Program: In fiscal 2012, the Stem Cell Research Fund supported 40 research grants that were approved from 179 applicants. At the direction of committee narrative included in the 2012 *Joint Chairmen’s Report* (JCR), the corporation has discovered that 27% of the projects previously funded by the fund show commercialization potential. Legislation introduced in the current legislative session would expand on that JCR report by requiring that the corporation include in its stem cell annual report the results of State-funded research and the number of patients treated as a result of the research. **The Department of Legislative Services (DLS) recommends that TEDCO brief the budget committees on the activity under the Stem Cell Research Fund, including a summary of its JCR response. Further, TEDCO should also comment on the practical impact should the current legislation be enacted.**

Progress of the Maryland Innovation Initiative: Chapter 450 of 2012 created the Maryland Innovation Initiative as a grant program that would combine the technology transfer expertise of TEDCO and the research expertise of universities to speed commercialization opportunities. To date, the corporation has received 40 applications for funding, of which 7 have been awarded grants. **DLS recommends that TEDCO update the budget committees on the progress of the Maryland Innovation Initiative, including the quality of the applications, and on its partnership with the participating universities.**

Corporation Recently Announced the Creation of “Affinity Funds”: Over the last several months, the corporation issued a series of announcements regarding the creation of a family of investment funds, or “affinity funds.” The corporation plans to offer four different investment funds, capitalized with private funds, which will provide venture investments for very specific types of recipients. **DLS recommends that TEDCO brief the budget committees on the creation of the affinity funds and the progress toward raising the private capital.**

Recommended Actions

1. Concur with Governor’s allowance.

Updates

Major Grants: Committee narrative, included in the 2008 JCR, requested a complete listing of award recipients for all deals closed or projects approved in fiscal 2008. The corporation is continuing to provide this information for subsequent years.

T50T01 – Maryland Technology Development Corporation

T50T01
Maryland Technology Development Corporation

Operating Budget Analysis

Program Description

The Maryland Technology Development Corporation (TEDCO) was launched in 1998 to help commercialize the results of scientific research and development conducted by higher education institutions, federal laboratories, and private sector organizations. TEDCO also aims to promote new research activity and investments that lead to business development in Maryland.

To achieve its goals, TEDCO provides non-equity investments to early-stage technology businesses, and it funds development and patenting of new technologies at research universities. TEDCO also develops linkages with federal research facilities in the State and helps companies pursue research funds from federal and other sources.

In 2001, TEDCO was authorized to create, manage, and provide funds for the statewide Maryland Technology Incubator Program. Technology business incubators offer start-up companies physical office space, research space, and an array of business services in hopes of generating new research and jobs.

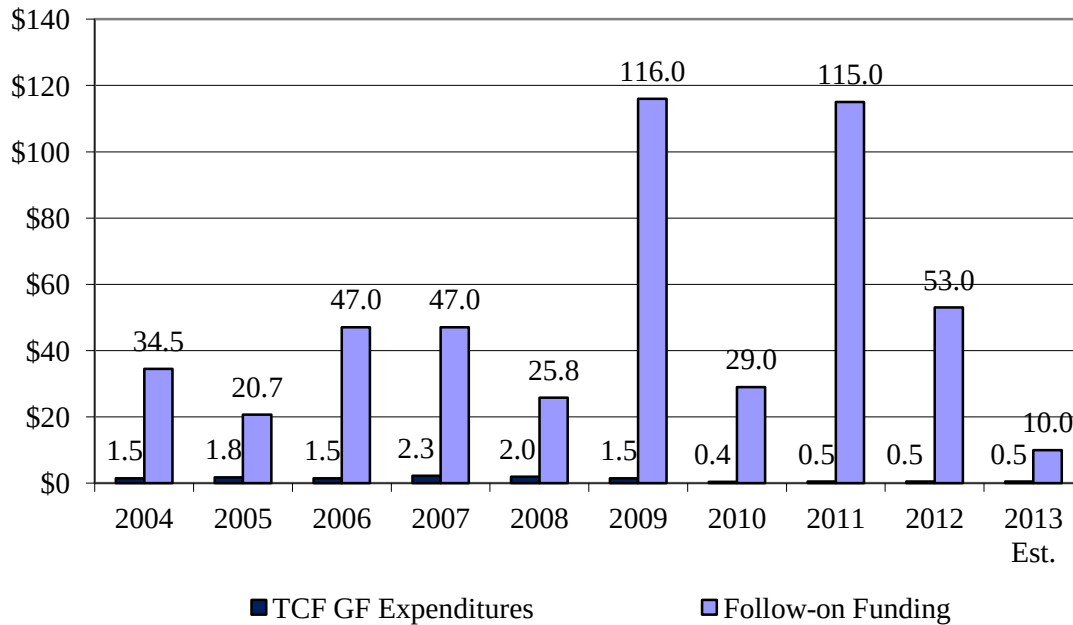
TEDCO supports stem cell research and development at Maryland's research universities and private sector research corporations in accordance with the Maryland Stem Cell Research Act of 2006. The Maryland Stem Cell Commission established an independent scientific peer review committee to review, evaluate, rank, and rate research based on procedures and guidelines that give consideration to scientific, medical, and ethical implications.

Performance Analysis: Managing for Results

1. Follow-on Funding Remains Fairly Strong

The Technology Commercialization Fund (TCF) – formerly known as the Maryland Technology Transfer and Commercialization Fund – provides seed investments to early stage technology companies that are economically viable but do not yet have the scope for a venture capital investment. The companies must partner with universities in Maryland or federal laboratories to receive funds or must be a tenant in a technology incubator. A measure of success for the TCF is the ability of funded start-ups to obtain follow-on funding for commercialization. The primary sources of follow-on funds include federal grants, venture capital and other equity investments, and Department of Business and Economic Development funds. TEDCO tracks leveraged funds for up to seven years for each TCF recipient. **Exhibit 1** shows follow-on funding for the TCF recipients relative to the amount of general fund investment in the program.

Exhibit 1
Follow-on Funding for Recipients of TEDCO Investments
Fiscal 2004-2013
(\$ in Millions)



GF: general fund
TCF: Technology Commercialization Fund
TEDCO: Maryland Technology Development Corporation

Note: Follow-on funding is measured for companies receiving TCF awards.

Source: Maryland Technology Development Corporation and Governor's Budget Books, Fiscal 2007-2014

This measure is of particular importance to the corporation because success in raising downstream funding is a key criterion in evaluating second award proposals. It should be noted that the TCF program is supplemented by nonbudgeted funds from the corporation's reserve funds and that follow-on funding reflects the impact of the entire investment by the corporation. However, as shown in Exhibit 1, general funds have declined from a high mark of \$2.3 million in fiscal 2007 to \$490,000 in fiscal 2013. It does not appear that this decline has significantly dampened follow-on funding for the corporation's grantees. In fact, follow-on funding attributed to the two most recent years is among the highest in recent history.

Proposed Budget

The fiscal 2014 allowance is budgeted as a State general fund grant of \$18.6 million. Of this amount, \$10.4 million is dedicated to the Stem Cell Research Program, matching the amount appropriated in the current fiscal year. Also in the fiscal 2014 allowance is \$5.0 million for the Maryland Innovation Initiative. The remaining \$3.2 million in general funds is for the corporation's technology development and transfer programs. By program, the allowance is flat when compared to the fiscal 2013 working appropriation.

Exhibit 2 summarizes the components of the corporation's general fund budget by program. The corporation does not submit personnel details through the State budget process, but the agency reports that it has 13.5 State-funded positions, 2.0 of which are dedicated to the Stem Cell Research Program.

The corporation plans no changes to the funding of its programs. However, within programmatic funds, there are a few operational changes. Specifically, within the technology transfer programs, there is an increase of \$90,000 due to the addition of 1 position to manage the Maryland Innovation Initiative. That increase was mitigated by some cost sharing of laboratory showcases with the federal government and a decrease in outside accounting assistance.

The corporation supplements its general fund budget with its own nonbudgeted resources. For example, according to the corporation's audited financial statements, in fiscal 2012, TEDCO contributed about \$1.4 million of its own funds to the \$15.7 million in general fund support. An additional \$3.7 million of the corporation's funds remain in reserves.

Exhibit 2
TEDCO General Fund Budget
Fiscal 2011-2014
(\$ in Thousands)

	<u>2011</u>	<u>2012</u>	<u>Working</u> <u>2013</u>	<u>Allowance</u> <u>2014</u>
Operations				
Program Development and Outreach	\$198	\$170	\$0	\$0
Technology Transfer Programs and Services	1,303	1,250	952	952
Business Incubation	657	655	412	412
Executive Management and Overhead	310	307	919	919
Operations Subtotal	\$2,468	\$2,383	\$2,283	\$2,283
Investments				
Maryland Technology Transfer and Commercialization Fund	\$490	\$490	\$490	\$490
University Technology Development Fund	0	0	0	0
University Intellectual Property Support Fund	0	0	0	0
Maryland Industrial Partnership Program	500	400	400	400
Maryland Innovation Initiative			5,000	5,000
Investments Subtotal	\$990	\$890	\$5,890	\$5,890
Total	\$3,458	\$3,273	\$8,173	\$8,173
Stem Cell Research Fund	10,400	12,400	10,400	10,400
Grand Total	\$13,858	\$15,673	\$18,573	\$18,573

TEDCO: Maryland Technology Development Corporation

Source: Maryland Technology Development Corporation

General Funds Support Two of TEDCO's Technology Transfer Programs

In fiscal 2013, the corporation reorganized its technology transfer programs. According to the corporation, the change reflects a renewed focus on entrepreneurship and financial sustainability. There are three main programs, two of which are funded, at least in part, with general funds.

Technology Commercialization Fund: This program, formerly the Maryland Technology Transfer and Commercialization Fund, awards seed funding to early-stage companies that partner with universities or federal laboratories in Maryland or to companies that are tenants in technology incubators. The allowance includes \$490,000 in general funds for this program. TCF awardee companies must have a commercialization strategy to qualify. Awards have been increased from

T50T01 – Maryland Technology Development Corporation

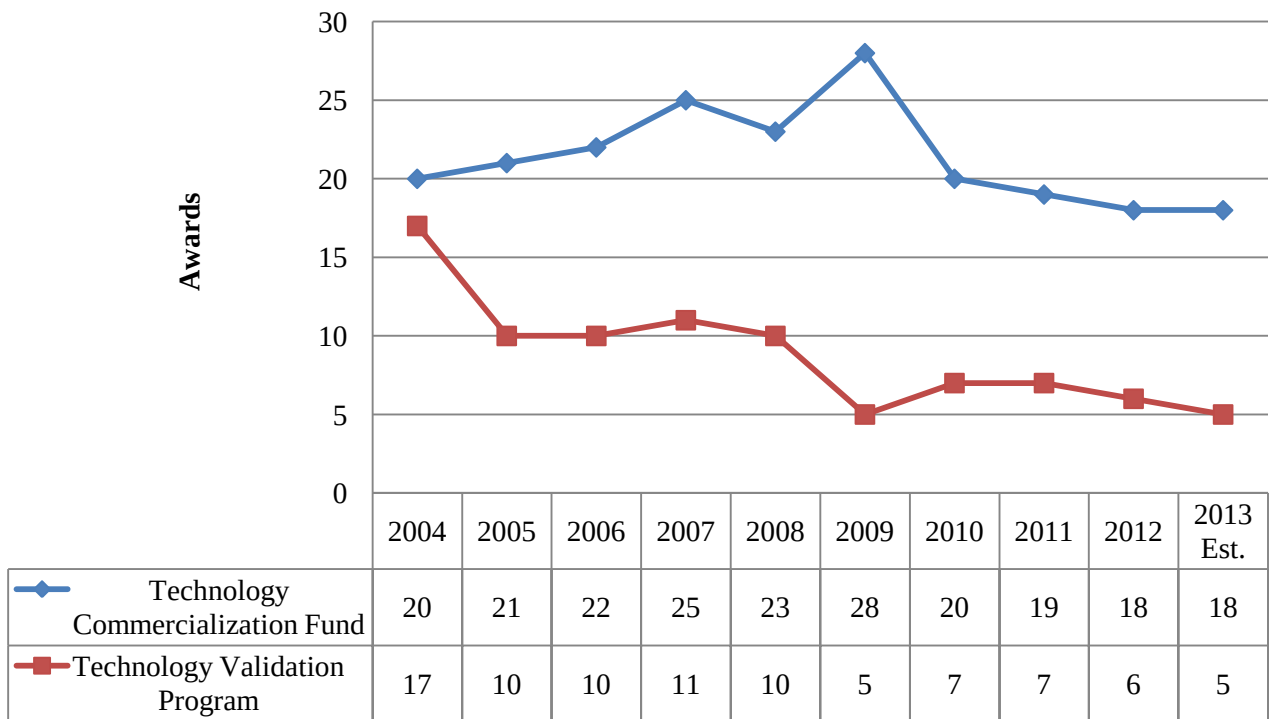
\$75,000 to \$100,000 in non-equity investments per company. The corporation advises that it will supplement the general funds with approximately \$1 million of its nonbudgeted funds.

Technology Validation Program: This program, formerly the University Technology Development Fund, provides funds for proof-of-principle studies that confirm the commercial viability of a technology and/or market analyses to establish that a technology meets a significant market need. Initial awards can be up to \$50,000. General funds for the program ceased in fiscal 2010; however, the corporation advises that it will support the program with about \$300,000 of its own nonbudgeted funds.

Exhibit 3 shows the number of program awards under both of these programs. These are the only programs (other than the Stem Cell Research Program) that report awards through the State's Managing for Results process. Funding is concentrated in the TCF program. A decline in the Technology Validation Program is evident as general funds were eliminated from the corporation's budget.

Maryland Innovation Initiative: This program may (1) provide grant funding to a qualifying university, qualifying university-based entrepreneur, or other start-up entity to promote the commercialization of technology developed in whole or in part by a qualifying university; (2) pursue grant funding for the initiative or its qualifying universities; (3) develop and implement guidelines for technology transfer; and (4) identify projects at qualifying universities that may be viable for commercialization. The fiscal 2014 allowance includes \$5 million in general funds for this program. The program is discussed in further detail in the Issues section of this analysis.

Exhibit 3
TCF and TVP Awards
Fiscal 2004-2013 Est.



TCF: Technology Commercialization Fund
TVP: Technology Validation Program

Source: Maryland Technology Development Corporation

Maryland Industrial Partnership Program

The fiscal 2014 allowance includes \$400,000 in general funds for the Maryland Industrial Partnership Program. This has been a consistent level of funding since fiscal 2012. This program is designed to accelerate commercialization by matching funds for university-based research projects that help companies develop new products. Prior to fiscal 2010, these funds were budgeted in the Maryland Higher Education Commission and passed through to the University of Maryland. Given TEDCO's expertise with technology commercialization, it was deemed a better fit to be overseen by the corporation. However, in fiscal 2010, the funds remained a pass-through grant to University

T50T01 – Maryland Technology Development Corporation

System of Maryland (USM) institutions, and TEDCO was able to exert little control over how the funds were spent.

In the 2010 session, the legislature added language to the fiscal 2011 budget bill that expressed the intent of the General Assembly that the Maryland Industrial Partnership Program be expanded to include all State four-year public institutions, not just University of Maryland institutions. Since the enactment of this language, the corporation has been much more involved in the dissemination of these grants. Two members of the TEDCO staff are included in both the review and approval process.

It should be noted that the funding level for the program has been reduced in recent years. The program's funding was \$1 million in fiscal 2009.

Issues

1. Maryland Stem Cell Research Program

The Stem Cell Research Fund was established by Chapter 19 of 2006 to support stem cell research and development at Maryland research institutions or private companies. The Stem Cell Research Commission reviews the proposed research process for applicant projects and makes recommendations to the TEDCO board about research grant awards. The research commission includes 15 members, as directed by statute, who include the Attorney General or designee, patient advocates, individuals with experience in biotechnology, scientists who work for USM and The Johns Hopkins University and do not engage in stem cell research, bioethicists, and individuals with expertise in biomedical ethics as it relates to religion. Several commission members work at institutions that are applying for funding, and so the commission has adopted conflict of interest guidelines to help members avoid inappropriately influencing commission decisions.

The fiscal 2014 allowance includes \$10.4 million in general funds to support grants under the Stem Cell Research Fund. The commission is authorized to award four types of grants; the fourth of which was just introduced in 2012:

- **Investigator-initiated Research Grants** are designed for investigators with preliminary data and well established research in the stem cell field. The maximum annual grant amount is \$200,000 a year, for up to three years.
- **Exploratory Research Grants** are designed for investigators who are new to the stem cell field and for exploratory projects without preliminary data. The maximum annual grant amount is \$100,000 a year, for up to two years.
- **Post-doctoral Research Grants** are for exceptional pre-doctoral students and post-doctoral fellows who wish to conduct post-doctoral research on human stem cells in the State with maximum support of \$55,000 a year, for up to two years.
- **Pre-clinical or Clinical Research Grants** are for for-profit companies that wish to conduct research using human stem cells to further medical therapies. Applicants for **pre-clinical** research grant awards may request up to \$500,000 of direct costs, for up to three years. Applicants for **clinical** research grant awards may request up to \$750,000 of direct costs, for up to three years.

Exhibit 4 shows the history of the general funds and grant awards under the program. Most of the available funds are granted for exploratory research. Since their introduction in fiscal 2008, post-doctoral research grants are growing in popularity. Because the maximum awards are smaller, it allows the corporation to provide more grants with the same or reduced amount of funding. Funding for the program was \$12.4 million in fiscal 2012. The fund received 179 applications for funding and

Exhibit 4
Stem Cell Research Fund
History of Funded Awards
Fiscal 2007-2012

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Investigator Initiated	7	11	6	5	9	9
Exploratory	17	32	31	20	13	17
Post-Doctoral Fellowships	0	15	21	16	14	14
Total Grants	24	58	58	41	36	40
Annual General Funds (\$ in Millions)	\$15	\$23	\$18	\$12.4	\$10.4	\$12.4
Applications	86	122	147	141	180	179
Percent Funded	28%	48%	39%	29%	20%	22%

Source: Maryland Technology Development Corporation

approved 40: 9 investigator-initiated research grants; 17 exploratory research grants; and 14 post-doctoral grants. Applications for the current fiscal year will be reviewed by an independent scientific review panel by March 2013.

Report on Results from Grant Recipients

The fiscal 2012 *Joint Chairmen's Report* (JCR) included narrative asking the corporation to report to the budget committees on the results of the research of previous stem cell grant recipients. The narrative reads as follows:

“The budget committees understand that the Maryland Technology Corporation (TEDCO) is conducting an internal review of previous grant recipients from the Maryland Stem Cell Research Fund. The review will examine research results with the goal of identifying the projects with the greatest commercialization potential. The budget committees request that TEDCO report on the results of its internal review, including, to the extent possible, the results of funded research. The corporation shall report to the budget committees by December 1, 2012.”

The corporation submitted its report on January 4, 2013. Over the last year, it has reviewed all previously funded projects, re-read the researcher progress reports, held one-on-one conversations with researchers, and established new processes to address any issues that were discovered.

In general, the corporation found that 27% of all awards show some potential for commercialization. It has identified 38 awardees that are working with companies and 30 awardees that have applied for patents. Further, the report cited specific examples of such successes. However, the report is not exhaustive.

It should be noted that legislation has been introduced in the 2013 session (SB 368/HB 779) that would expand the information to be included in the Stem Cell Annual Report to include the results of State-funded research and the number of patients treated as a direct result of the research.

The Department of Legislative Services (DLS) recommends that TEDCO brief the budget committees on the activity under the Stem Cell Research Fund, including a summary of its JCR response. Further, TEDCO should also comment on the practical impact should the current legislation be enacted.

2. Progress of the Maryland Innovation Initiative

The Maryland Innovation Initiative (MII), created by Chapter 450 of 2012, is designed to combine the technology transfer expertise of TEDCO and the research expertise of universities to speed commercialization opportunities. It was born, in part, of USM's 10-year technology transfer plan that has a goal of creating 325 companies and doubling the system's \$1.4 billion in research grants.

The initiative consists of a member of the State government, two members of the private sector with experience commercializing technology in the State, and one representative each from five specified nonprofit research universities located in the State. To qualify for participation in the initiative, each university must provide funds annually to the initiative to carry out the initiative's established purpose.

In a supplemental budget for fiscal 2013, \$5 million was added to TEDCO's appropriation for the initiative. University participation from five institutions will add \$800,000 to the total funding. The funds may be used to (1) provide grant funding to a qualifying university, qualifying university-based entrepreneur, or other start-up entity to promote the commercialization of technology developed in whole or in part by a qualifying university; (2) pursue grant funding for the initiative or its qualifying universities; (3) develop and implement guidelines for technology transfer; and (4) identify projects at qualifying universities that may be viable for commercialization.

Grant funding may be awarded (1) to support pre-commercial research on intellectual property; (2) to defray costs of evaluating the feasibility of a technology becoming commercialized through a start-up company; (3) to defray the direct costs of developing early stage technology through a start-up company; (4) to assess intellectual property issues, including licensing and patents; or (5) for any other costs that the initiative's participating members determine are appropriate, given the initiative's purpose.

Applications are accepted on a monthly basis. To date, the MII board has received 40 applications, of which 12 have been awarded funding. The corporation expects to be able to fund the entire budgeted amount by the end of fiscal 2013.

To date, four of the five institutions have contributed their share of the program's funding for fiscal 2013. The corporation advises that it expects the fifth school to contribute its funding very soon. The agreement with the institutions includes a provision that awards are contingent on the full financial participation of the school. Also, TEDCO and the institutions agreed to an arrangement where schools may be reimbursed up to 50% of their contribution for costs associated with the program – notably, the salaries of site miners. Site miners are university employees with technical and business expertise that can identify the most commercially viable research.

Of the 12 awards, 6 are for technologies associated with The Johns Hopkins University, 1 with Morgan State University, 3 with the University of Maryland, College Park (one of which is a collaboration with the University of Maryland, Baltimore), 1 with the University of Maryland, Baltimore, and 1 with the University of Maryland Baltimore County.

The fiscal 2014 allowance includes an additional \$5 million in general funds. An additional \$800,000 is again expected from the institutions.

DLS recommends that TEDCO update the budget committees on the progress of the MII, including the quality of the applications, and on the partnership with the participating universities.

3. Corporation Recently Announced the Creation of “Affinity Funds”

In the fall/winter of 2012/2013, TEDCO issued a series of announcement regarding the creation of a family of investment funds, or “affinity funds.” Generally, TEDCO will be offering four different investment funds, capitalized with private funds, which will provide venture investments for very specific types of recipients.

- The Propel Baltimore Fund was created through a partnership between TEDCO, the Abell Foundation, and the France-Merrick Foundation. The fund, which has capital commitments of \$4.3 million, will provide up to \$220,000 as an angel investment in early-stage technology companies located in Baltimore City. The first awards from the fund are imminent.
- The Chesapeake Regional Innovation Fund is currently raising \$20 million in private equity capital to provide seed capital for start-ups and emerging technology companies that focus on innovations in energy, life sciences, and security. The corporation expects to be able to provide funding at some point in calendar 2013.
- The Veterans Opportunity Fund is currently raising \$10 million in private equity capital to provide funds for entrepreneurs who served in the U.S. Military.

T50T01 – Maryland Technology Development Corporation

- Orange Knocks Fund is in the process of raising \$20 million in private equity capital to provide seed funding for cybersecurity technologies.

To date, only the Propel Baltimore Fund is completely capitalized. Each fund will provide equity investments with the goal of monetary returns to the private investors and to TEDCO. TEDCO will earn a management fee for the administration of each fund.

DLS recommends that TEDCO brief the budget committees on the creation of the affinity funds and the progress toward raising the private capital.

Recommended Actions

1. Concur with Governor's allowance.

Updates

1. Major Grants

Committee narrative included in the 2008 JCR requested a complete listing of award recipients for all deals closed or projects approved in fiscal 2008. The corporation is continuing to provide this information for subsequent years. **Exhibit 5** shows such awards for all TEDCO's programs, including those funded by general, nonbudgeted, and federal funds. Some programs, such as the Stem Cell Research Program, award funds by multiple years; therefore, funding levels do not necessarily match appropriation amounts.

Exhibit 5
Maryland Technology Development Corporation
Award Recipients
Fiscal 2012

	<u>Award Amount</u>
Incubator Assistance	
Frederick Innovative Technology Center	\$12,000.00
Emerging Technology Center	30,000.00
Chesapeake Innovation Center	7,000.00
Towson Global	9,000.00
Bwtech@UMBC	9,000.00
Bwtech@UMBC Cyber	7,000.00
Bwtech@UMBC Energy	9,000.00
Garrett Information Enterprises	7,000.00
Neotech/Howard County EDA	12,000.00
Silver Spring Innovation Center	8,937.50
Shady Grove Innovation Center	17,937.50
Rockville Innovation Center	11,937.50
Germantown Innovation Center	11,937.50
Technology Advancement	9,000.00
Technical Innovation Center (Hagerstown)	9,000.00
Emerging Technology Center-Feasibility	10,000.00
Emerging Technology Center-Facility Logistics	7,500.00
	\$188,250.00
Rural Business Initiative	
Breacher Boy	\$4,030.00
NewAgriculture	6,300.00
Boob Tube	4,760.00
Knaggs Guitars	7,500.00
Computer Technology Services, Inc.	7,500.00
GlycoPure	6,200.00
WeLearn Education Software	7,500.00
DERP Technologies, LLC	7,500.00

T50T01 – Maryland Technology Development Corporation

	<u>Award Amount</u>
ILS Bio	7,500.00
Burley Paks	4,785.00
Maryland Small Farm Cooperative, Inc.	7,500.00
	\$71,075.00
Joint Technololgy Transfer	
Emerging Science and Technology Group	\$75,000.00
GenArraytion	75,000.00
QuickSilver Analytics Inc.	75,000.00
BioFactura Inc.	75,000.00
	\$300,000.00
Technology Commercialization Fund	
Nexercise Inc	\$75,000.00
Tocreo Labs LLC	75,000.00
GlycoPure Inc	75,000.00
Vii Network	75,000.00
Assay Biomarker Inc.	75,000.00
Emerald Sky Technologies LLC	74,885.00
O’Traces LLC	75,000.00
Curiosityville	75,000.00
Rel-MD, Inc.	46,000.00
Smart Imaging Systems Inc.	75,000.00
Subject 7 LLC	75,000.00
	\$795,885.00
Technology Validation Program	
JHU – Boss Medical	\$50,000.00
JHU – Canning	50,000.00
JHU – Popel	50,000.00
Weiss	50,000.00
JHU – Khanna	50,000.00
UMB – Margaret Koh	50,000.00
	\$300,000.00
Tech Start	
Takeuchi, Xie, and Varma	\$13,246.00
NexImmune	15,000.00
UMCP – Motayed	13,600.00
	\$41,846.00
ACTiVATE	
Path Forward Center	\$25,000.00
	\$25,000.00
Totals	\$1,722,056.00

T50T01 – Maryland Technology Development Corporation

		<u>Award Amount</u>
Stem Cell Research Fund		
Investigator-initiated		
The Johns Hopkins University	Bulte	\$683,864.00
The Johns Hopkins University	Dawson	690,000.00
The Johns Hopkins University	Elisseeff	690,000.00
University of Maryland, Baltimore	Gong	600,000.00
University of Maryland, Baltimore	Griffith	689,958.00
Elixirgen, LLC	Ko	690,000.00
The Johns Hopkins University	Lee	690,000.00
The Johns Hopkins University	Ming	690,000.00
The Johns Hopkins University	Wang	690,000.00
		\$6,113,822.00
Exploratory		
The Johns Hopkins University	Brandacher	229,905.00
The Johns Hopkins University	Canto-Soler	230,000.00
The Johns Hopkins University	Janowski	230,000.00
Johns Hopkins School of Public Health	Ji	230,000.00
The Johns Hopkins University	Karim	229,640.00
University of Maryland, Baltimore	Kingsbury	230,000.00
The Johns Hopkins University	Kwon	230,000.00
The Johns Hopkins University	Pomper	230,000.00
Johns Hopkins School of Public Health	Ramalingam	230,000.00
The Johns Hopkins University	Rosen	230,000.00
University of Maryland, Baltimore	Scheibner	230,000.00
University of Maryland, College Park	Song	230,000.00
University of Maryland, Baltimore	Stains	229,412.00
University of Maryland, College Park	Telugu	228,259.00
The Johns Hopkins University	Venkatesan	230,000.00
Hugo W. Moser Research Institute at Kennedy Krieger	Ying	230,000.00
University of Maryland, Baltimore	Zhan	230,000.00
		\$3,907,216.00

T50T01 – Maryland Technology Development Corporation

		<u>Award Amount</u>
Post-doctoral Fellowship		
University of Maryland, Baltimore	Awad	\$110,000.00
The Johns Hopkins University	Bar-Shir	110,000.00
The Johns Hopkins University	Choi	110,000.00
The Johns Hopkins University	Donnelly	110,000.00
The Johns Hopkins University	Ghiaur	110,000.00
The Johns Hopkins University	Huri	110,000.00
The Johns Hopkins University	Kang	110,000.00
The Johns Hopkins University	Kim	110,000.00
The Johns Hopkins University	Liu	110,000.00
The Johns Hopkins University	Makri	110,000.00
The Johns Hopkins University	Rossi	110,000.00
The Johns Hopkins University	Tsang	110,000.00
The Johns Hopkins University	Weng	110,000.00
The Johns Hopkins University	Zeng	110,000.00
		\$1,540,000.00
Stem Cell Totals		\$11,561,038.00

EDA: Economic Development Authority
JHU: The Johns Hopkins University
UMBC: University of Maryland Baltimore County

Source: Maryland Technology Development Corporation

Current and Prior Year Budgets

Current and Prior Year Budgets Maryland Technology Development Corporation (\$ in Thousands)

	<u>General Fund</u>	<u>Special Fund</u>	<u>Federal Fund</u>	<u>Reimb. Fund</u>	<u>Total</u>
Fiscal 2012					
Legislative Appropriation	\$15,673	\$0	\$0	\$0	\$15,673
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	0	0	0	0	0
Reversions and Cancellations	0	0	0	0	0
Actual					
Expenditures	\$15,673	\$0	\$0	\$0	\$15,673
Fiscal 2013					
Legislative Appropriation	\$18,573	\$0	\$0	\$0	\$18,573
Budget Amendments	0	0	0	0	0
Working					
Appropriation	\$18,573	\$0	\$0	\$0	\$18,573

Note: Numbers may not sum to total due to rounding.

Audit Findings

Audit Period for Last Audit:	July 1, 2009 – May 21, 2012
Issue Date:	October 2012
Number of Findings:	1
Number of Repeat Findings:	1
% of Repeat Findings:	100%
Rating: (if applicable)	n/a

Finding 1: **TEDCO lacked adequate monitoring procedures and controls over stem cell research and technology development grants.**

*Bold denotes item repeated in full or part from preceding audit report.

**Object/Fund Difference Report
Maryland Technology Development Corporation**

<u>Object/Fund</u>	<u>FY 12 Actual</u>	<u>FY 13 Working Appropriation</u>	<u>FY 14 Allowance</u>	<u>FY 13 - FY 14 Amount Change</u>	<u>Percent Change</u>
Objects					
12 Grants, Subsidies, and Contributions	\$ 15,673,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
Total Objects	\$ 15,673,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
Funds					
01 General Fund	\$ 15,673,192	\$ 8,173,192	\$ 18,573,192	\$ 10,400,000	127.2%
03 Special Fund	0	10,400,000	0	-10,400,000	-100.0%
Total Funds	\$ 15,673,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%

Note: The fiscal 2013 appropriation does not include deficiencies. The fiscal 2014 allowance does not include contingent reductions.

Fiscal Summary
Maryland Technology Development Corporation

<u>Program/Unit</u>	<u>FY 12 Actual</u>	<u>FY 13 Wrk Approp</u>	<u>FY 14 Allowance</u>	<u>Change</u>	<u>FY 13 - FY 14 % Change</u>
01 Tech. Development, Transfer and Commercialization	\$ 3,273,192	\$ 3,173,192	\$ 3,173,192	\$ 0	0%
03 Maryland Stem Cell Research Fund	12,400,000	10,400,000	10,400,000	0	0%
04 Innovation Initiative	0	5,000,000	5,000,000	0	0%
Total Expenditures	\$ 15,673,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
General Fund	\$ 15,673,192	\$ 8,173,192	\$ 18,573,192	\$ 10,400,000	127.2%
Special Fund	0	10,400,000	0	-10,400,000	-100.0%
Total Appropriations	\$ 15,673,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%

Note: The fiscal 2013 appropriation does not include deficiencies. The fiscal 2014 allowance does not include contingent reductions.