

T50T01
TEDCO – Maryland Technology Development Corporation

Operating Budget Data

(\$ in Thousands)

	<u>FY 13</u> <u>Actual</u>	<u>FY 14</u> <u>Working</u>	<u>FY 15</u> <u>Allowance</u>	<u>FY 14-15</u> <u>Change</u>	<u>% Change</u> <u>Prior Year</u>
General Fund	\$8,173	\$18,573	\$18,573	\$0	
Contingent & Back of Bill Reductions	0	-185	0	185	
Adjusted General Fund	\$8,173	\$18,388	\$18,573	\$185	1.0%
Special Fund	10,400	0	0	0	
Adjusted Special Fund	\$10,400	\$0	\$0	\$0	
Adjusted Grand Total	\$18,573	\$18,388	\$18,573	\$185	1.0%

- The fiscal 2015 allowance includes a negative fiscal 2014 deficiency of \$185,000 in general funds under the Maryland Stem Cell Research Fund, due to cost containment.
- Absent the impact of the negative deficiency, the fiscal 2015 allowance for the Maryland Technology Development Corporation (TEDCO) is unchanged from the previous year's appropriation. Of the total amount, \$10.4 million is dedicated to the Stem Cell Research Fund; \$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 14 State-funded positions and 5 part-time contractual positions that are funded with nonbudgeted funds.

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

For further information contact: Jody J. Sprinkle

Phone: (410) 946-5530

Analysis in Brief

Major Trends

Follow-on Funding Exceeds Expectations: A measure of success of the corporation’s Technology Commercialization Fund is the extent to which recipients can secure follow-on funding. In fiscal 2013, recipients were able to secure downstream funding in excess of what was originally projected.

Issues

Maryland Stem Cell Research Program: In fiscal 2013, the Stem Cell Research Fund supported 31 research grants that were approved from 171 applications. Additionally, the first pre-clinical research grant was awarded from the fund in fiscal 2013. Legislation introduced in the 2014 session would require that the corporation include in its annual stem cell research report the results of State-funded research and the number of patients treated as a result of that research. **The Department of Legislative Services (DLS) recommends that TEDCO brief the budget committees on the activity under the Stem Cell Research program. Additionally, TEDCO should comment on the practical impact, should the proposed legislation be enacted.**

Progress of the Maryland Innovation Initiative: Fiscal 2015 marks the third year of the Maryland Innovation Initiative (MII), a grant program that is designed to combine the technology transfer expertise of TEDCO and the research expertise of universities to speed commercialization opportunities. To date, the corporation has received 158 applications for funding, of which 59 projects have been awarded funds. **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. The corporation should also comment on the early progress toward achieving the goal of creating 325 companies and doubling the system’s \$1.4 billion in research grants.**

Recommended Actions

1. Concur with Governor’s allowance.

Updates

TEDCO Capital Partners: In 2013, the corporation created a series of investment funds designed to provide venture investments for very specific types of recipients. The corporation continues to raise private capital to capitalize the funds. The first fund to be fully capitalized, the Propel Baltimore Fund, has made its first awards.

Major Grants: Committee narrative, included in the 2008 *Joint Chairmen's Report*, 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 – TEDCO – Maryland Technology Development Corporation

Analysis of the FY 2015 Maryland Executive Budget, 2014

T50T01

TEDCO – 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.

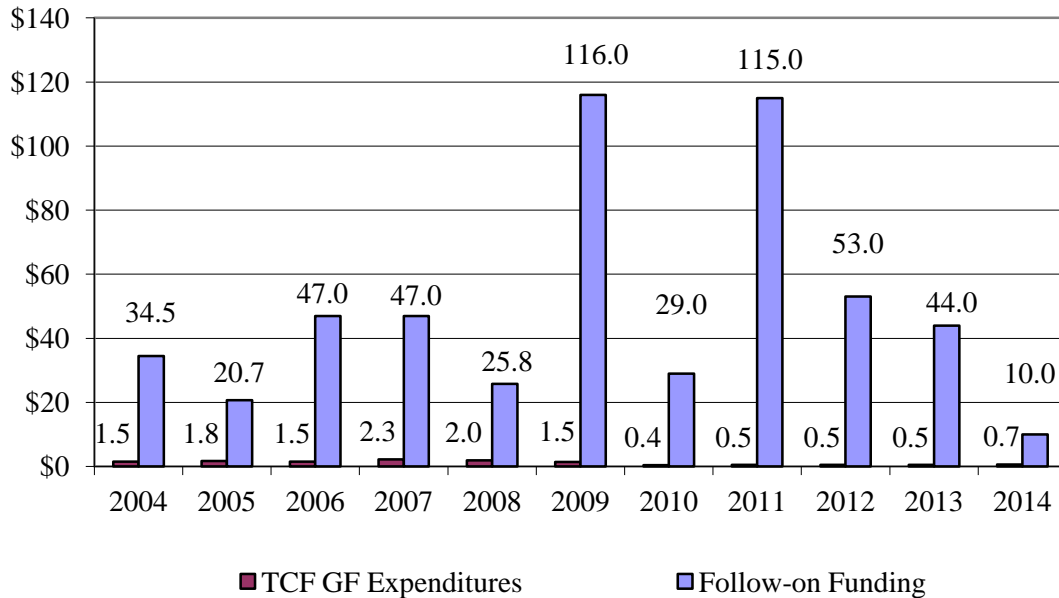
TEDCO supports stem cell research and development at Maryland's research universities and private sector research corporations in accordance with the Maryland Stem Cell Research Act of 2006. The Maryland Stem Cell Commission established an independent scientific peer review committee to review, evaluate, 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 Exceeds Expectations

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 scale needed for a venture capital investment. The companies must partner with universities in Maryland or federal laboratories to receive funds, must be a tenant in a technology incubator, or a participant in TEDCO's Rural Business Innovation Initiative. 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 (DBED) 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 2004-2014
(\$ in Millions)



GF: general fund
 TCF: Technology Commercialization Fund

Note: Follow-on funding is measured for companies receiving Technology Commercialization Fund awards.

Source: Maryland Technology Development Corporation; 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 exceeded the corporation’s estimates for fiscal 2013 by \$34.0 million. The corporation should consider adjusting its projections upward, given the history of success under the program. Additionally, this measure only tracks the cumulative total of downstream funding. This data may be skewed if a small number of grant recipients are inordinately successful in obtaining follow-on funding. It does not necessarily measure the long-term success rate of the companies that benefit from the program’s funding. The corporation should consider the inclusion of additional performance measures that would mitigate any distortion of the data, including the number of companies that have stayed in operation in the State for seven or more years.

Fiscal 2014 Actions

Proposed Deficiency

The fiscal 2015 allowance includes a negative fiscal 2014 deficiency of \$185,000 in general funds under the Maryland Stem Cell Research Program for cost containment. The corporation may replace these funds with its own nonbudgeted funds to provide grants for stem cell research.

Proposed Budget

The fiscal 2015 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 2015 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. Absent the negative deficiency, by program, the allowance is flat when compared to the fiscal 2014 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 14 State-funded positions, 2.0 of which are dedicated to the Stem Cell Research Program.

Although total funding for the corporation's traditional technology commercialization programs are unchanged from fiscal 2014, the corporation is expected to make some programmatic funding changes. The changes reflect a more precise accounting of how funds are actually spent but also reflect a renewed focus on technology transfer and entrepreneurship. The funds for technology transfer operations are increasing, partially due to the increased duties related to managing the Maryland Innovation Initiative. That increase was mitigated by some cost reductions in the business incubation programs. Additional funds have also been dedicated to the TCF as shown in Exhibit 2. It should be noted that the corporation supplements its general fund budget with its own nonbudgeted resources.

Exhibit 2
TEDCO General Fund Budget
Fiscal 2012-2015
(\$ in Thousands)

Operations	<u>2012</u>	<u>2013</u>	<u>Working</u> <u>2014</u>	<u>Allowance</u> <u>2015</u>
Program Development and Outreach	\$170	\$0	\$0	\$0
Technology Transfer Programs and Services	1,250	952	952	1,061
Business Incubation	655	412	412	250
Executive Management and Overhead	307	919	919	800
<i>Operations Subtotal</i>	<i>\$2,383</i>	<i>\$2,283</i>	<i>\$2,283</i>	<i>\$2,111</i>
Investments				
Maryland Technology Commercialization Fund	\$490	\$490	\$490	\$662
University Technology Development Fund	0	0	0	0
University Intellectual Property Support Fund	0	0	0	0
Maryland Industrial Partnership Program	400	400	400	400
Maryland Innovation Initiative		5,000	5,000	5,000
<i>Investments Subtotal</i>	<i>\$890</i>	<i>\$5,890</i>	<i>\$5,890</i>	<i>\$6,062</i>
Total	\$3,273	\$8,173	\$8,173	\$8,173
Stem Cell Research Fund	\$12,400	\$10,400	\$10,400	\$10,400
Grand Total	\$15,673	\$18,573	\$18,573	\$18,573

Source: Maryland Technology Development Corporation

General Funds Support Two of TEDCO’s Primary Programs

The corporation’s primary programs focus on technology commercialization and seed funding for start-up technology companies. Two of these programs are funded, at least in part, with general funds (Technology Commercialization Fund and the Maryland Innovation Fund).

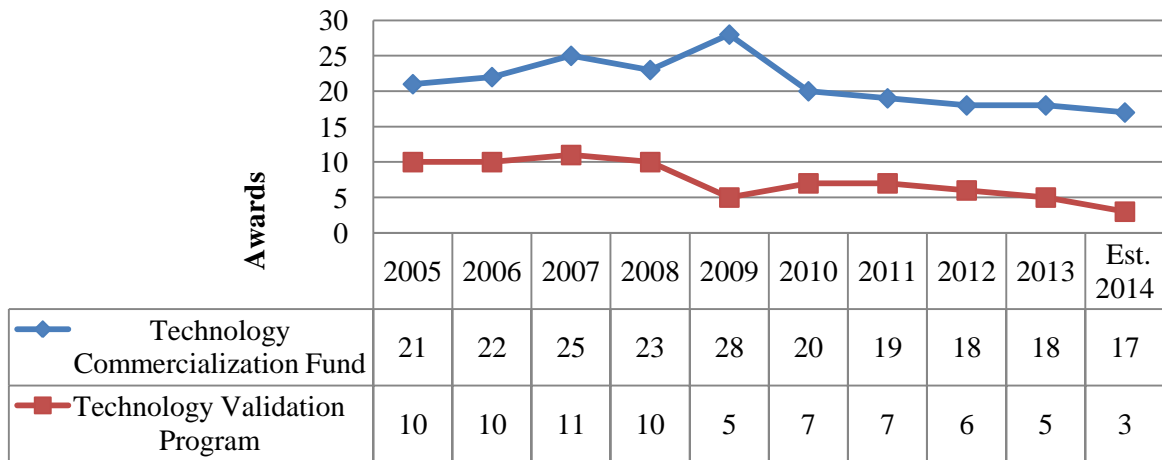
Technology Commercialization Fund: This program, formerly the Maryland Technology Transfer and Commercialization Fund, awards seed funding to early-stage companies that partner with universities or federal laboratories in Maryland, to companies that are tenants in technology

incubators, or to participants in TEDCO’s Rural Business Innovation Initiative. The allowance includes \$662,000 in general funds for this program. This is an increase in funding from the fiscal 2014 working appropriation. TCF awardee companies must have a commercialization strategy to qualify. Awards have been increased from \$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 marked 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 have been the only programs (other than the Stem Cell Research Program) that report awards through the State’s Managing for Results (MFR) 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.

**Exhibit 3
TCF and TVP Awards
Fiscal 2005-2014 Est.**



TCF: Technology Commercialization Fund
TVP: Technology Validation Program

Source: Governor’s Budget Books, Fiscal 2006-2015

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 2015 allowance includes \$5 million in general funds for this program. The program is discussed in further detail in the Issues section of this analysis.

Rural Business Innovation Initiative: This program is designed to provide technical and business assistance to small companies and early-stage technology-based companies in rural Maryland, as defined by the Rural Maryland Council. The goal of the program is to help companies overcome business and technical hurdles and advance to the next growth level. Assistance to companies is provided by a regional mentor. The corporation supports the program with approximately \$360,000 in nonbudgeted funds. In fiscal 2013, 186 companies received mentoring services and 11 received technical assistance awards.

The fiscal 2014 budget bill included language that restricted \$500,000 in funds under the budget of DBED to be used only, if transferred by budget amendment, by TEDCO for the Rural Business Innovation Initiative. The Administration chose not to transfer the funds for the restricted purpose and instead withdrew the \$500,000 in general funds as cost containment.

Maryland Industrial Partnership Program

The fiscal 2015 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 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 USM 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 processes.

Legislative Leadership Proposals Impact TEDCO

In January 2014, the leadership of the General Assembly of Maryland announced a series of initiatives to “support increased business and economic development in the State of Maryland.” Two of the proposed initiatives directly involve TEDCO.

SB 603/HB 740 of 2014 establishes the Cybersecurity Investment Fund. The legislation creates the fund within TEDCO to provide early stage seed funding for emerging technology companies that focus on cybersecurity and cybersecurity technology product development. The fund is modeled on the corporation’s Technology Commercialization Fund and aims to encourage downstream investments in the targeted early-stage companies.

Secondly, the proposal includes a program that would provide in-depth sustained executive mentorship of entrepreneurs. It is envisioned that the mentor would provide one-on-one guidance on the management skills needed for company growth. The program would be an expansion of TEDCO’s current Maryland Entrepreneur Resource List program. The current program provides a list of experienced entrepreneurs to voluntarily mentor or provide leadership to early stage companies or new entrepreneurs.

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; therefore, the commission has adopted conflict of interest guidelines to help members avoid inappropriately influencing commission decisions.

The fiscal 2015 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 \$10.4 million in fiscal 2013. The fund received 171 applications for funding and approved 31: 10 investigator-initiated research grants; 10 exploratory research grants; 10 post-doctoral grants and 1 pre-clinical research grant. Applications for the current fiscal year will be reviewed by an independent scientific review panel by March 2014.

Exhibit 4
Stem Cell Research Fund
History of Funded Awards
Fiscal 2007-2013

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
Investigator Initiated	7	11	6	5	9	9	10
Exploratory	17	32	31	20	13	17	10
Post-doctoral Fellowships	0	15	21	16	14	14	10
Pre-clinical or Clinical	0	0	0	0	0	0	1
Total Grants	24	58	58	41	36	40	31
Annual General Funds (\$ in Millions)	\$15.0	\$23.0	\$18.0	\$12.4	\$10.4	\$10.4	\$10.4
Applications	86	122	147	141	180	179	171
Percent Funded	28%	48%	39%	29%	20%	22%	18%

Source: Maryland Technology Development Corporation

Legislation has been introduced in the 2014 session (SB 467) that would expand the information to be included in the Stem Cell Annual Report to include the results of the State-funded research and the number of patients treated as a direct result of the research. To address concerns about the publication of proprietary information, the bill includes an exemption to the report: any information that is proprietary or confidential would jeopardize intellectual property or would inhibit the grant recipient's ability to publish or commercialize the research results.

The Department of Legislative Services (DLS) recommends that TEDCO brief the budget committees on the activity under the Stem Cell Research program. Additionally, TEDCO should comment on the practical impact should the proposed 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.

T50T01 – TEDCO – Maryland Technology Development Corporation

The fiscal 2015 allowance includes \$5 million in general funds for the initiative. University participation from five institutions will add \$800,000 to the total funding. 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.

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.

The corporation attempts to award funds multiple times a year. In the first year of the program (fiscal 2013), the corporation awarded 28 grants. Of these awards, 8 were awarded to start-up companies, and 20 were awarded to university projects. To date, the program has received 158 applications and has funded 59 projects. According to the corporation's project summary report as of January 31, 2014, total awards were dispersed as follows:

- The Johns Hopkins University – 25
- Morgan State University – 2
- University of Maryland, College Park – 14
- University of Maryland, Baltimore – 13
- University of Maryland Baltimore County – 5

The awardees may use the funds (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.

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. The corporation should also comment on the early progress toward achieving the goal of creating 325 companies and doubling the system's \$1.4 billion in research grants. Finally, DLS recommends that TEDCO begin to report performance measures on the MII through the State's MFR process, including the number of start-ups formed and any other success factors that are deemed relevant.

Recommended Actions

1. Concur with Governor's allowance.

Updates

1. TEDCO Capital Partners

In the fall/winter of 2012/2013, TEDCO issued a series of announcements regarding the creation of a family of investment funds, or “TEDCO Capital Partners.” 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. To date, the fund has made five investments.
- The Chesapeake Regional Innovation Fund is currently raising \$20.0 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 Veterans Opportunity Fund is currently raising \$10.0 million in private equity capital to provide funds for entrepreneurs who served in the U.S. Military.
- Orange Knocks Fund is in the process of raising \$20.0 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.

2. Major Grants

Committee narrative included in the 2008 *Joint Chairmen’s Report* 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 of 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 2013

	<u>Award Amount</u>
Incubator Assistance	
Bethesda Green	\$3,000
Bowie Business Innovation Center	3,000
Chesapeake Innovation Ctr	6,000
Emerging Technology Ctr @Canton	19,000
Emerging Technology Ctr @Eastern	22,000
Towson Global	6,000
Bwtech@UMBC	13,000
Bwtech@UMBC Cyber	6,000
Bwtech@UMBC Renewable Energy	6,000
Neotech/Md Ctr for Entre. (Howard Cty)	16,000
Tech Advancement (College Park)	16,000
Technology Assistance Center	3,000
Technical Innovation Center (Hagerstown)	6,000
	\$125,000
Rural Business Innovation Initiative	
InfoPathways	\$7,500
ConnectR	7,150
ConnectR	400
Luminescent MD, LLC	5,086
BikeToo	7,500
Meadowridge Farm	6,000
Universal Lounger	800
Chesapeake Proactive	8,000
Reflective Light Science	8,500
Under 21	721
Pothole Pros	10,281
	\$61,938
Joint Technology Transfer	
Ocean Power Technology	\$75,000
20/20 Gene System	75,000
Signal Storage Innovations, LLC	82,795
NanoDerm Sciences, Inc.	75,000
Cascade Biotherapeutics	75,000
	\$382,795

T50T01 – TEDCO – Maryland Technology Development Corporation

Maryland Innovation Initiative

JHU – Allen	\$99,818
Diagnostic anSERS	100,000
UMCP – Weresley	100,000
JHU – Marr	100,000
Morgan State Univ – Aslan	100,000
Cardio Solv Ablation Technologies	97,000
UMCP – Raghavan	125,000
UMB – Tang	125,000
JHU – Nguyen	100,000
JHU – Raman	99,556
UMB – Shirtliff	100,000
UMBC – Marten	100,000
JHU – Kalloo	100,000
UMBC – Zhu	100,000
UMCP – Yu	100,000
Otomagnetics	100,000
JHU – McVeigh	99,459
SilcsBio, LLC	99,928
JHU– Kirkness	100,000
	\$1,945,761

Patent Assistance Program

JPLC Associates	\$10,000
	\$10,000

**Technology Commercialization
Fund**

KYDES Pharmaceutical	\$75,000
Unbound Concepts	75,000
RKA Enter sLLC dba Foodem.com	75,000
Woofound, Inc.	75,000
Circulomics, Inc.	75,000
Same Grain, Inc.	75,000
Cordex Systems, LLC	75,000
Brain Sentry, LLC	75,000
Clear Guide Medical, LLC	75,000
Vasoptic Medical, Inc.	75,000
ConverGene, LLC	75,000
PregMama, LLC	75,000
Magpie Sensing, LLC	74,990
Weinberg Medical Physics, LLC	60,000
Authentik Solutions, LLC	75,000
Common Curriculum, Inc.	100,000

T50T01 – TEDCO – Maryland Technology Development Corporation

	TimberRock Ebergy Solutions, Inc.	75,000
		\$1,284,990
Tech Start		
	LoTis Technologies	\$7,500
	UMCP/Eric Hoppmann	15,000
	Silcs Bio	10,490
	UMCP – Chin, Caffrey, Raghavan	7,500
		\$40,490
UTDF		
	UMB – Eric Goldberg	\$49,950
	JHU – John Wong	49,978
		\$99,928
ACTIVATE		
	Path Forward Center	\$25,000
		\$25,000
Total		\$3,914,685
 Stem Cell Research Fund		
Investigator-Initiated		
The Johns Hopkins University	All	\$618,290
The Johns Hopkins University	Brodsky	690,000
The Johns Hopkins University	Dawson	690,000
The Johns Hopkins University	Gilad	679,049
The Johns Hopkins University	Jang	690,000
University of Maryland, Baltimore	Kaushal	690,000
The Johns Hopkins University	Lee	689,999
The Johns Hopkins University	Sharkis	690,000
The Johns Hopkins University	Tung	684,930
University of Maryland, Baltimore	Zalzman	690,000
		\$6,812,268
Exploratory		
The Johns Hopkins University	Bulte	\$226,223
The Johns Hopkins University	Christian	230,000
The Johns Hopkins University	Guerrero-Cazares	230,000
The Johns Hopkins University	Jia	230,000
The Johns Hopkins University	Ko	230,000
University of Maryland, Baltimore	Koh	200,000
The Johns Hopkins University	Lee	227,536
University of Maryland, Baltimore	Sanchez	200,696

T50T01 – TEDCO – Maryland Technology Development Corporation

University of Maryland, Baltimore	Trudeau	230,000
Kennedy Krieger Institute	Wagner	230,000
		\$2,234,455

Post-doctoral Fellowship

The Johns Hopkins University	Almad	\$110,000
The Johns Hopkins University	Andersen	110,000
The Johns Hopkins University	Cai	110,000
The Johns Hopkins University	Delaspre	110,000
The Johns Hopkins University	Fan	110,000
The Johns Hopkins University	Huo	110,000
The Johns Hopkins University	Li	110,000
University of Maryland, College Park	Nandal	110,000
The Johns Hopkins University	Xu	110,000
The Johns Hopkins University	Zimmerlin	110,000
		\$1,100,000

Pre-Clinical

The Stem Cell Suture Company	Schon	\$559,000
		\$559,000

Stem Cell Total **\$10,705,723**

JHU: The Johns Hopkins University
UMB: University of Maryland, Baltimore
UMBC: University of Maryland Baltimore County
UMCP: University of Maryland, College Park

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 2013					
Legislative Appropriation	\$8,173	\$10,400	\$0	\$0	\$18,573
Deficiency Appropriation	0	0	0	0	0
Budget Amendments	0	0	0	0	0
Reversions and Cancellations	0	0	0	0	0
Actual Expenditures	\$8,173	\$10,400	\$0	\$0	\$18,573
Fiscal 2014					
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: The fiscal 2014 working appropriation does not include deficiencies or contingent reductions. Numbers may not sum to total due to rounding.

**Object/Fund Difference Report
TEDCO – Maryland Technology Development Corp**

<u>Object/Fund</u>	<u>FY 13 Actual</u>	<u>FY 14 Working Appropriation</u>	<u>FY 15 Allowance</u>	<u>FY 14 - FY 15 Amount Change</u>	<u>Percent Change</u>
Objects					
12 Grants, Subsidies, and Contributions	\$ 18,573,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
Total Objects	\$ 18,573,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
Funds					
01 General Fund	\$ 8,173,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
03 Special Fund	10,400,000	0	0	0	0.0%
Total Funds	\$ 18,573,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%

Note: The fiscal 2014 appropriation does not include deficiencies. The fiscal 2015 allowance does not include contingent reductions.

Fiscal Summary
TEDCO – Maryland Technology Development Corp

<u>Program/Unit</u>	<u>FY 13 Actual</u>	<u>FY 14 Wrk Approp</u>	<u>FY 15 Allowance</u>	<u>Change</u>	<u>FY 14 - FY 15 % Change</u>
01 Tech. Development, Transfer and Commercialization	\$ 3,173,192	\$ 3,173,192	\$ 3,173,192	\$ 0	0%
03 Maryland Stem Cell Research Fund	10,400,000	10,400,000	10,400,000	0	0%
04 Maryland Innovation Initiative	5,000,000	5,000,000	5,000,000	0	0%
Total Expenditures	\$ 18,573,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
General Fund	\$ 8,173,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%
Special Fund	10,400,000	0	0	0	0.0%
Total Appropriations	\$ 18,573,192	\$ 18,573,192	\$ 18,573,192	\$ 0	0%

Note: The fiscal 2014 appropriation does not include deficiencies. The fiscal 2015 allowance does not include contingent reductions.