

Kentucky Cabinet For Economic Development

Office of
Commercialization
and Innovation

Annual Report for
July 1, 2011
to June 30, 2012

Submitted to:

Governor Steve Beshear,
the Legislative Research Commission,
and the Kentucky Innovation Commission
pursuant to KRS 154.12-278

Submitted by:

Gene Fuqua, Executive Director
Office of Commercialization and Innovation
Kentucky Cabinet for Economic Development

Office of Commercialization and Innovation

The Office of Commercialization and Innovation (formerly the Department of Commercialization and Innovation) is responsible for leading the efforts of the Kentucky Cabinet for Economic Development in creating a knowledge-based economy throughout the Commonwealth.

This annual report has been prepared and submitted per KRS 154.12-278, Paragraph 3(b) . . .

“The duties of the [Office] of Commercialization and Innovation shall include but not be limited to:

“Monitor the return on investments and effectiveness of the Kentucky Innovation Act initiatives as set forth in the Strategic Plan for the New Economy as approved by the Kentucky Innovation Commission, January 7, 2002, or as revised, and report annually prior to November 1 to the Kentucky Innovation Commission, the Governor, and the General Assembly.”

Executive Director Gene Fuqua and his staff thank the Governor and the General Assembly for their support of the efforts by the Cabinet and Office.

Overview

The Office of Commercialization and Innovation (OCI), formerly the Department of Commercialization and Innovation, has the mission to implement innovation-driven economic development strategies that encourage the innovative use of knowledge resources and investments in talent and infrastructure. This innovation-driven model is intended to complement, not replace, traditional cost-driven economic development efforts where incentives are awarded to companies in the form of land, labor and capital to attract or retain jobs.

Innovation and commercialization are critical to our nation's prosperity. Since 1945, about half of the growth in the U.S. Gross Domestic Product is related to the development of new technologies. Research by the Boston Consulting Group shows that innovation is becoming even more important to productivity growth as 75 percent of the increase in U.S. productivity since 1995 can be traced to innovation alone.

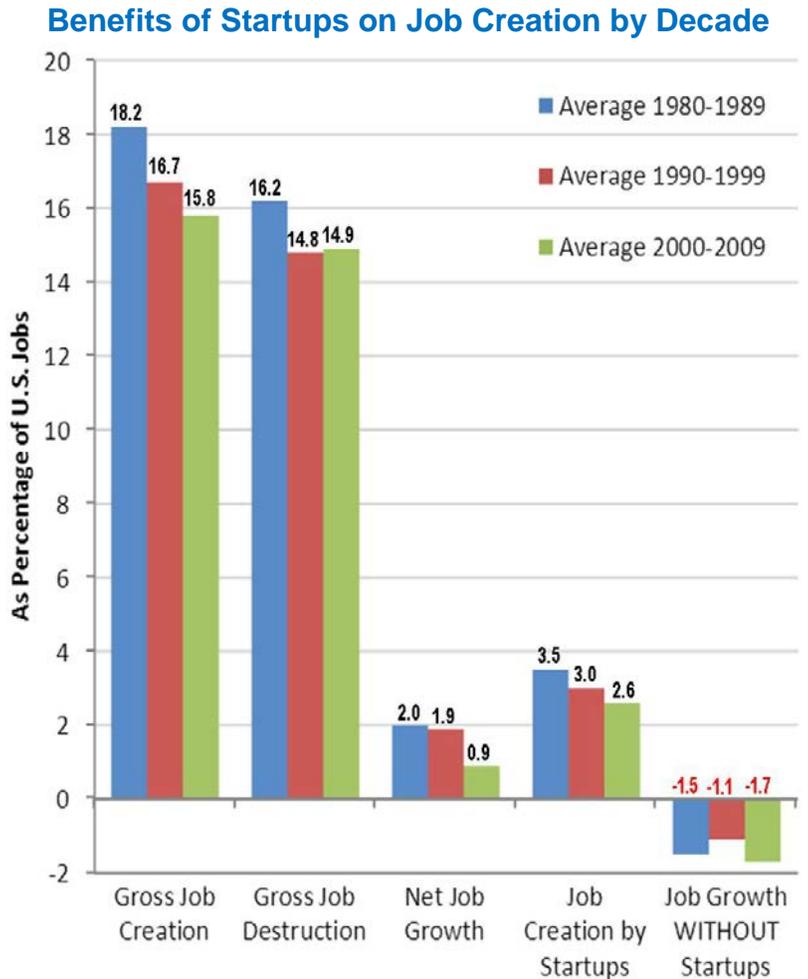
Innovation requires new ideas, which must be turned into new products, which depends greatly on start-up companies founded by entrepreneurs. These new companies, in turn, create new jobs. In fact, without startups, the Kauffman Foundation shows there would have been negative job growth in the U.S. between 1980 and 2009. (See chart above right.)

Start-up and early-stage companies in Kentucky have benefited from funding programs provided by the Cabinet for Economic Development (CED). This funding has facilitated the creation of thousands of jobs over the life of these programs, including more than 5,500 new jobs by the Innovation and Commercialization Center Program, 288 new jobs by the SBIR-STTR Matching Funds Program, and the projected creation of 860 new jobs by the High-Tech Program.

The high-tech jobs created directly by OCI-CED managed programs have also indirectly produced many more jobs in supporting sectors. The Milken Institute estimates that for every one job created in the biotechnology sector, for example, 5.7 jobs in other sectors are also created.

The following report summarizes the activities of OCI from July 1, 2011, through June 30, 2012.

Note: Starting in 2011, the OCI reporting period was changed to a Fiscal Year to align with the July-through-June Fiscal Year observed by other state agencies and organizations in the Commonwealth.



Office of Commercialization and Innovation ACTIVITIES

Innovation and Commercialization Center Program

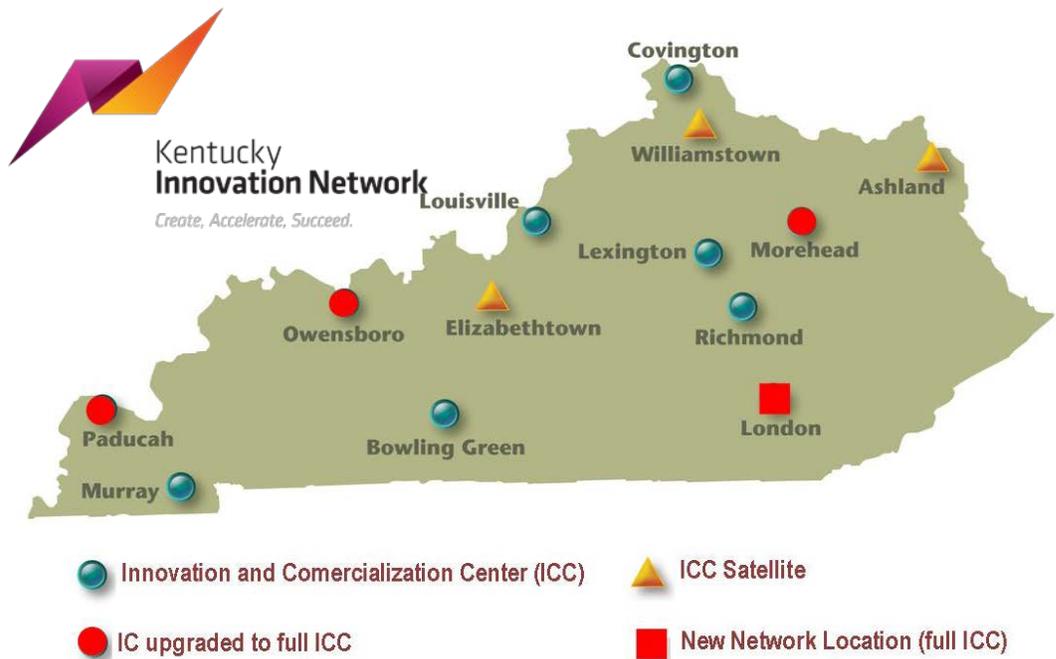
OCI manages the state’s network of regional Innovation & Commercialization Centers (ICCs) and their satellite offices. These centers operate to increase the quality of investments flowing to knowledge-based firms throughout Kentucky. The network also increases statewide knowledge of entrepreneurship, start-up processes, and investment practices, while providing value-added services to existing businesses, startups, and the investment community. The program is administered under contract to OCI by the Kentucky Science and Technology Corporation (KSTC). The goal of the program is to increase the likelihood that high-growth, knowledge-based businesses can be started in Kentucky and obtain both public and private investments to develop and grow.

Location	Director
Ashland	Mick Fosson
Bowling Green	Doug Rohrer
Covington	Casey Barach
Elizabethtown	Lisa Williams
Lexington	Warren Nash
London	Bill Schutters
Louisville	Tendai Charasika
Morehead	Johnathan Gay
Murray	Loretta Daniel
Owensboro	Madison Silvert
Paducah	Ian Blache
Richmond	Kristel Smith
Williamstown	Naashom Marx

A rebranding effort was initiated and scheduled to be implemented on July 1, 2012. The program will be renamed the Kentucky Innovation Network and provide full-service business assistance from 13 locations across the state, including a new ICC in London and three former Innovation Centers upgraded to full ICCs. By enhancing the services of several ICC locations, as well as adding the new London office, the Kentucky Innovation Network will be better able to provide service to the rapidly growing number of innovative thinkers and small businesses in all 120 counties across the Commonwealth.

The new ICC location in London helps extend the network’s reach into eastern Kentucky, while the newly upgraded locations in Morehead, Owensboro and Paducah ensure that these ICCs can offer the full range of network services.

A greater emphasis will be placed on providing clients with access to the entire network’s expertise and resources. When a client approaches his or her nearest network office, they will benefit from a statewide program that can bring a greater depth of experience and business connections than before.



The impact of the regional ICC Network offices is illustrated below. Counties with ICC technology client companies receiving investments from the Kentucky Enterprise Fund, Kentucky New Energy Ventures, Commonwealth Seed Capital Fund, and/or the OCI High-Tech Program are named and designated in the grey. The 2012 location of each ICC, IC and statewide ICC headquarters office is also noted on this map.



Performance Results Highlights (Per KSTC Fiscal 2012 Annual Report)

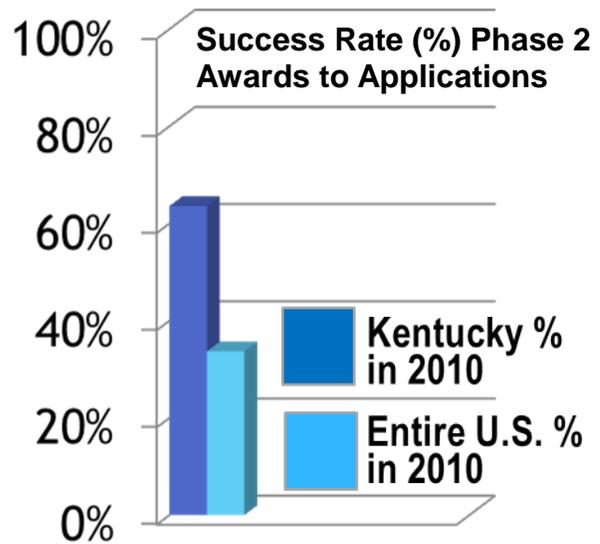
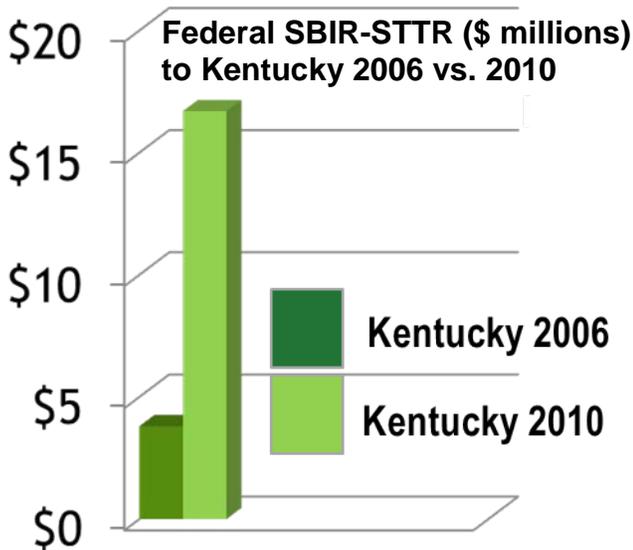
ICC Program Activities	FY2010	FY2011	FY2012	FY10-12
New Companies	129	147	198	474
Sales Revenues	\$537M	\$572M	\$458M	\$1.57B
Private Investments	\$150M	\$96M	\$127M	\$373M
New Jobs	606	750	811	2,167
Avg. Salary of Jobs	\$54,666	\$57,159	\$50,535	\$54,120
KY Investment per Job	\$3,621	\$2,461	\$2,422	\$2,835

Of the newly created jobs, 708 are paid positions with an average annual salary of \$50,535. Often, in the early stages of business development the founders do not pay themselves a salary, or they choose to defer their salary in order to keep operational costs low. Each paid job contributes to the Commonwealth’s tax-base at an estimated 6% (for state and local income taxes combined) of salary earned. With 708 paid jobs at an average salary of \$50,535 per job, estimated taxes garnered in FY12 from job creation assisted by the ICC Program is approximately \$2.1 million.

With an OCI Program investment of \$1,964,353 in FY12, and estimated tax revenue of \$2,146,709 from new paid jobs created in FY12 alone, the Commonwealth achieves a positive return on investment in 11 months. This calculation is only one of many ways to determine return on investment. Personal income tax analysis was chosen to show there is a robust return on the state’s investment even when calculated conservatively.

SBIR-STTR Matching Funds Program

The Kentucky Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Matching Funds Program was implemented in November 2006 and continues to encourage small businesses to explore their technological potential and maximize profit from commercialization. The nationally advertised program, the first of its kind in the nation, matches both Phase 1 and Phase 2 federal awards received by Kentucky's small, high-tech businesses. This includes matching Phase 1 federal awards up to \$150,000 to support exploration of the technical merit or feasibility of an idea or technology. Phase 2 federal awards, which support full-scale research and development, are matched by Kentucky up to \$500,000 for up to two years. This has helped increase the number of Kentucky firms applying for, and receiving, federal awards:



State Rank for SBIR-STTR Funds

The unique Kentucky SBIR-STTR Matching Funds Program began in October 2006 when Kentucky ranked 44th out of 50 states in number of Phase 1 and Phase 2 SBIR and STTR awards received. Just two years later, in 2008, Kentucky ranked 28th.



Round	Date of Solicitation	Number of Applications	Number of Awards	Matching Funds Awarded	Federal Grant Funding
1-11	October 26, 2006- May 18, 2011	134	112	\$26,809,120	\$44,297,938
12	July 1, 2012 ¹ – August 1, 2011	8	3	\$759,478	\$1,370,347
13	October 1, 2011 – October 31, 2011	12	9	\$3,389,934	\$8,497,155
14	January 1, 2012 – January 31, 2012	7	4	\$1,086,979	\$2,662,268
15	April 1, 2012 – May 14, 2012 ²	11	9	\$1,509,593	\$2,815,843
Totals		172	137	\$33,555,104	\$59,643,551

Impact of the Kentucky SBIR-STTR Matching Funds Program (Rounds 1-15)

The Kentucky SBIR-STTR Matching Funds Program creates high-paying jobs, helps small businesses establish licensing agreements, and creates intellectual property.

Benefits to Date of Matching Funds Program (FY2006-2011)				
	Jobs Created	Licensing Agreements	Patents Filed	Out-of-State Firms Creating Kentucky Operations Due to Program
Rounds 1-15 To Date	288	8	91	16

Part-time jobs converted to full-time before totaling. Job definitions were not provided and all data was self-reported.

Firms That Established Operations in KY Due to Program

- Advanced Dynamics
- Transposagen Biopharmaceuticals
- NeoCytex Biopharma
- Turbo Wheelchairs
- Bexion Pharmaceuticals
- 3H Company
- ATI
- Louisville Bioscience
- nGimat
- Orthopeutics
- Exatherm
- Global Quality Corp.
- **Invenio Therapeutics**
- **Minerva Systems & Technologies**
- **TeleHealth Holdings**
- **Innovative Energy Solutions**

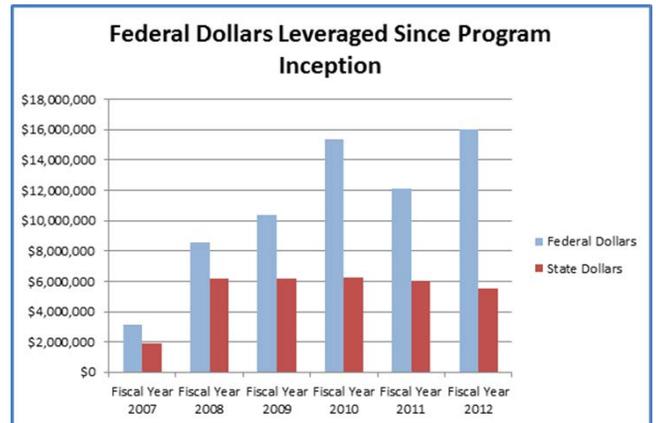
To:	From
Lexington	Utah
Lexington	Pennsylvania
Covington	Florida
Louisville	South Carolina
Covington	Ohio
Lexington	Virginia
Lexington	West Virginia
Louisville	Oregon
Lexington	Georgia
Lexington	Texas
Covington	Michigan
Covington	Ohio
Lexington	Ohio (FY 2012)
Lexington	Rhode Island (FY 2012)
Lexington	Texas (FY 2012)
Lexington	Illinois (FY 2012)

Improved Success in Obtaining Federal SBIR and STTR Awards

While Kentucky has improved to about the average success rate of all states in winning the Phase 1 grants, Kentucky has far surpassed all states in winning Phase 2 grants (63.6% vs. the 33.7% national average) and in winning the Fast-Track SBIR-STTR grants, where both Phase 1 and Phase 2 grant applications are submitted and reviewed together, (33.3% vs. the 16.4% national average).

Since 2007, Kentucky has leveraged \$1.78 in federal awards for every \$1.00 awarded in state matching awards (\$59,643,551 in federal versus \$33,555,104 in state awards). The 16 companies that relocated to

Kentucky have attracted federal funds from six federal agencies for a total of \$17,743,697 – funding that would have gone to other states if not for Kentucky’s program. The program is administered under contract to OCI by the Kentucky Science and Technology Corporation (KSTC).



SEE APPENDIX A FOR MATCHING FUNDS DATA (ROUNDS 1- 15)

Commonwealth Seed Capital

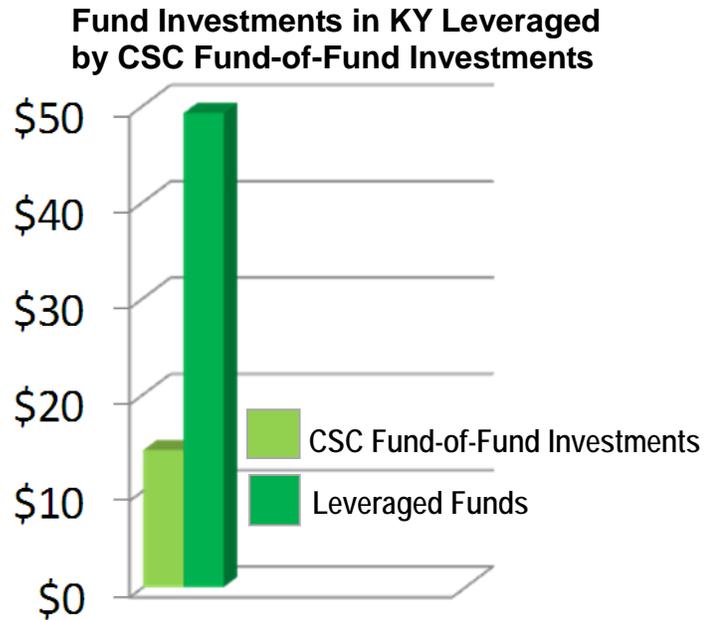
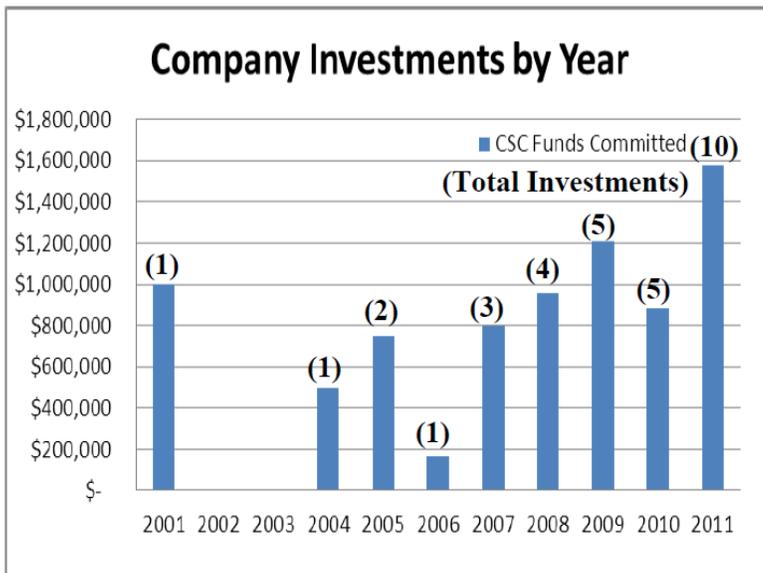
Commonwealth Seed Capital, LLC (CSC) was established by the Economic Development Partnership Board and is an independent, non-profit fund that makes investments in early-stage Kentucky business entities to facilitate the commercialization of innovative ideas and technologies. CSC invests in companies that have a significant Kentucky presence, the prospect for substantial growth, and the potential to generate an appropriate rate of return.

CSC Activities in 2011:

Total Number of Investments: 12 (ten companies and two funds)
 Total Amount of Investments: \$2,575,000

All years, as of December 31, 2011:

- \$7.8 million was invested in companies since June 2001
- \$14.2 million invested in venture funds has resulted in investments by the funds of \$49,181,452 into 39 Kentucky companies
- \$4.01 million in distributions from investments was received since 2005



SEE APPENDIX B FOR DETAILS OF CSC PORTFOLIO

Kentucky New Energy Ventures Fund

The Kentucky New Energy Ventures Fund (KNEV) was created during an Extraordinary Session of the 2007 Kentucky General Assembly, which enacted House Bill 1 for the purpose of enabling Kentucky-based companies to undertake research, development, and commercialization in the field of alternative fuels and renewable energy. For example, Wellhead Energy Systems, in Somerset, received KNEV funds to help develop its GridFox units that convert natural gas into electricity onsite at remote (“stranded”) wells, which lack pipeline access.

The Kentucky Science and Technology Corporation (KSTC) manages the \$5 million KNEV fund for investment in promising renewable and alternative energy companies in the Commonwealth under contract to OCI. Since 2008, 21 grants (\$630,000 committed) and seven investments (\$2.56 million committed) have been awarded to companies for a total of \$3,190,000 in KNEV funding. Of the 28 awards, 20 (71%) went to rural-based companies (based outside of Fayette and Jefferson counties).

SEE APPENDIX C FOR LIST OF KNEV FUND AWARDEES

High-Tech Program

OCI administers the High-Tech Program from which funds are used to support projects. All funding must be approved by the Kentucky Economic Development Finance Authority (KEDFA). For July 2011 through June 2012, the total funding was \$3,780,000, including three high-tech companies for 23 high-tech jobs with an average salary over \$63,000.

\$14,993,000 for 45 Active Companies

Projecting 860 jobs by the end of 2015 at an average salary of \$65,924

\$112,731,037 for 89 Projects

Examples of High-Tech Projects Funded: Kentucky BioAlliance; Metacyte Accelerator; Coldstream Redundant Power (Kentucky Technology Inc.); Louisville Nucleus; SBIR-STTR Matching Funds Program; Kentucky New Energy Ventures Fund; Center for Pharmaceutical Science and Technology; Cardiovascular Innovation Institute; EKU Business and Technology Center; MedCenter 3; Bowling Green Center for R&D; Murray Business and Innovation Center; Kentucky Highlands Investment Corp. Incubator; Kentucky-Argonne Battery Manufacturing R&D Center and the WKU Research Foundation.

Technology Focus Area (Since February 2001)	No. of Firms
Human Health and Development	9
Information Technology and Communications	13
Biosciences	12
Energy & Environmental Technology	3
Advanced Manufacturing and Materials Science	8
TOTAL	45

Projects Funded from the High-Tech Program July 1, 2011 to June 30, 2012

Project	Technology Focus Area	High-Tech Jobs to be created	Average Salary	Award
Allylix	Biosciences	8	\$68,000	\$200,000
CirrusMio	Info. Technology	10	\$69,500	\$100,000
Ferm Solutions	Biosciences	5	\$43,000	\$75,000
University of Louisville Nucleus Project	Biosciences	N/A	N/A	\$3,000,000
WKU Research Foundation	Info. Technology	N/A	N/A	\$100,000
Hosting/Sponsoring National Institutes of Health SBIR-STTR Conference	Human Health & Development	N/A	N/A	\$60,000
Idea Festival 2011	N/A	N/A	N/A	\$10,000
MidAmerica Healthcare Venture Forum 2011	Human Health & Development	N/A	N/A	\$10,000
UL Cardinal Challenge Launch Packet	N/A	N/A	N/A	\$10,000
Governor's Entrepreneurs Scholar Program	N/A	N/A	N/A	\$50,000
Nucleus Project (iHub) Grand Opening	Bioscience	N/A	N/A	\$100,000
University Industry Demonstration Partnership Sponsor (University of Kentucky)	N/A	N/A	N/A	\$5,000
Kentucky BioAlliance Executive Director	Bioscience	N/A	N/A	\$60,000
TOTAL		23		\$3,780,000

SEE APPENDIX D FOR DETAILS OF MOST RECENT HIGH-TECH PROGRAM AWARDS

Annual BIO State Pavilion and Governor's Reception

In June 2012, OCI and other Cabinet personnel coordinated the state's activities at the annual Biotechnology Industry Organization (BIO) international convention in Washington, DC, which attracted over 16,000 attendees. Ten economic development organizations and biotech start-up companies from across the Commonwealth exhibited in the Kentucky State Pavilion to promote their technologies and Kentucky's advantages for business. The 12th annual Kentucky Governor's Reception was held for invited guests, which provided many opportunities to promote the state's biotech activities. Governor Steve Beshear and a team of state officials attended and met with companies and officials from other nations interested in doing business with and/or within the state. Governor Beshear conducted media interviews to promote the advantages that Kentucky offers to biotech and other high-tech companies.



Kentucky's expanded presence at international events, including BIO, is enhancing the Commonwealth's reputation throughout the global high-tech community – and paying off when high-tech companies, such as nGimat and Orthopeutics, choose to move to Kentucky. nGimat met with state officials at BIO 2009 in Atlanta and Orthopeutics met with state officials at BIO 2010 in Chicago. Both companies have since established operations in Kentucky.



Past Exhibitors in the Kentucky BIO Pavilion

- Advanced Genomic Technology
- Allylix
- bioLOGIC
- Center for Predictive Medicine
- Coldstream Laboratories
- Commerce Lexington
- Enzymax
- Four Tigers
- GLI
- Hollison Technologies
- Kentucky BioAlliance
- KTRDC
- Naprogenix
- NaugaNeedles
- Neuronetrix
- Northern Kentucky Tri-ED
- Scout Diagnostics
- Novera Pharmaceuticals
- OrthoData Technologies
- ParaTechs s
- Peptides International
- Potentia Pharmaceuticals
- Rhinocyte
- SureGene
- Transposagen Biopharmaceuticals
- University of Kentucky
- University of Louisville
- Western Kentucky University



Statewide Business Plan Competition

A fifth annual statewide “Idea State U” business concept and business plan competition was held April 20-21, 2012, among a combined 23 graduate and undergraduate student teams from Kentucky’s public universities. The program supports entrepreneurship and the development of new high-growth ventures in Kentucky. The teams earned a combined \$100,000 in cash prizes and awards, making this one of the top state-sponsored business plan competitions in the nation. To compete, some of the universities expanded their business school programs and/or created entirely new internal competitions to produce entries for the state competition. Each year a Governor’s Innovation Award is presented to the team having the entry that demonstrates the most innovative and outside-the-box thinking.

One entry in 2012 was by a venture developing a line of domestically grown chia seeds that can be fed to horses to help prevent colic and laminitis. Another venture plans to develop its patented method of detecting lung cancer by capturing and analyzing volatile organic compounds in a patient’s breath.

The following are some of the more than 20 companies that had formed their Idea State U ventures as legal businesses in Kentucky following the competition.

Awesome Touch: Interactive touchscreen displays that can be projected onto any surface

Partum Group: Patented medical device for use in hospital delivery rooms

WebNoise: Helps businesses learn what customers are posting online about product or service experiences

The Butter Factory: Retail store selling natural products imported from Ghana

Kentucky Chia: Line of chia seeds modified to grow in Kentucky; can prevent equine colic and laminitis in horses

NerdRage Games: Interactive online gaming modules

Tag-A-Pet: Offers “smart tags” and a website to help retrieve lost pets

Cuddle Clones: Custom-made plush toys that consumers can design using an interactive web tool



Schools that have participated in Idea State U competitions:

- **University of Louisville**
- **University of Kentucky**
- **Morehead State University**
- **Northern Kentucky University**
- **Eastern Kentucky University**
- **Western Kentucky University**
- **Kentucky State University**
- **Murray State University**

APPENDIX A: SBIR-STTR Matching Funds Recipients: Rounds 1-15

Award Date	Company (in reverse chronological order)	Technology Area	Matching Grant
7/1/12	Noveratech	Human Health and Development	\$150,000
7/1/12	Regenerex LLC	Biosciences	\$150,000
7/1/12	Vindico NanoBio Technology Inc.	Biosciences	\$150,000
7/1/12	Brockman Hastings LLC	Human Health and Development	\$150,000
7/1/12	Innovative Energy Solutions	Environmental and Energy Technologies	\$252,810
7/1/12	Invenio Therapeutics	Biosciences	\$150,000
7/1/12	InfoBeyond LLC	Information Technology and Communications	\$256,783
7/1/12	TeleHealth Holdings LLC	Human Health and Development	\$100,000
7/1/12	TeleHealth Holdings LLC	Human Health and Development	\$150,000
4/1/12	Minerva Systems and Technologies LLC	Information Technology and Communications	\$337,018
4/1/12	Wilson's Cedar Point Farms	Biosciences	\$99,961
4/1/12	Sequela LLC	Human Health and Development	\$150,000
4/1/12	Alcomed Inc.	Biosciences	\$500,000
1/1/12	Amelgo LLC	Biosciences	\$100,000
1/1/12	Regenerex LLC	Biosciences	\$500,000
1/1/12	AMT Nano	Materials Science and Advanced Manufacturing	\$90,000
1/1/12	customKYnetics Inc.	Human Health and Development	\$494,458
1/1/12	Transposagen Biopharmaceuticals Inc.	Human Health and Development	\$500,000
1/1/12	Invenio Therapeutics	Human Health and Development	\$434,480
1/1/12	nGimat	Materials Science and Advanced Manufacturing	\$374,996
1/1/12	Tier1 Performance Solutions Inc.	Information Technology and Communications	\$396,000
1/1/12	Bexion Pharmaceuticals Inc.	Biosciences	\$500,000
10/1/11	ParaTechs Corporation	Human Health and Development	\$459,478
10/1/11	AllTranz Inc.	Biosciences	\$150,000
10/1/11	W-Z BioTech LLC	Human Health and Development	\$150,000
7/1/11	ATI, Inc.	Materials Science and Advanced Manufacturing	\$98,748
7/1/11	3H Company	Environmental and Energy Technologies	\$232,212
7/1/11	Advanced Genomic Technology	Health and Human Development	\$500,000
4/1/11	nGimat	Materials Science and Advanced Manufacturing	\$500,000
4/1/11	Orthopeutics	Health and Human Development	\$359,400
4/1/11	NaugaNeedles	Materials Science and Advanced Manufacturing	\$375,758
2/1/11	Alkymos	Biosciences	\$500,000
2/1/11	Advanced Energy Materials	Environmental and Energy Technologies	\$150,000
2/1/11	Alcomed	Health and Human Development	\$150,000
2/1/11	Scout Diagnostics	Biosciences	\$435,600
2/1/11	Global Quality Corp.	Information Technology and Communications	\$364,990
2/1/11	Louisville Biosciences	Biosciences	\$249,913
2/1/11	Bexion Pharmaceuticals	Health and Human Development	\$500,000
11/1/10	Transposagen Biopharmaceuticals	Biosciences	\$499,936
11/1/10	SureGene	Health and Human Development	\$365,579
11/1/10	Exatherm	Health and Human Development	\$500,000
11/1/10	ParaTechs Corp.	Health and Human Development	\$111,002
11/1/10	customKYnetics	Health and Human Development	\$147,783
11/1/10	NuForm Materials	Materials Science and Advanced Manufacturing	\$149,996
11/1/10	InfoBeyond Technology	Information Technology and Communications	\$99,000
7/1/10	Advanced Dynamics	Information Technology and Communications	\$364,999

2012 Annual Report to Governor Steve Beshear, the Legislative Research Commission,
and the Kentucky Innovation Commission pursuant to KRS 154.12-278.

Award Date	Company (in reverse chronological order)	Technology Area	Matching Grant
7/1/10	Vindico NanoBio Technologies	Health and Human Development	\$100,000
7/1/10	Advanced Genomic Technologies	Biosciences	\$100,000
7/1/10	Talon Technologies	Materials Science and Advanced Manufacturing	\$99,996
7/1/10	3H Company	Environmental and Energy Technologies	\$267,786
7/1/10	Orthopeutics	Biosciences	\$408,000
7/1/10	nGimat	Materials Science and Advanced Manufacturing	\$500,000
3/1/10	NaugaNeedles	Materials Science and Advanced Manufacturing	\$100,000
3/1/10	Atkins and Pearce	Environmental and Energy Technologies	\$99,983
3/1/10	Oraceuticals	Biosciences	\$100,000
3/1/10	Vision Dynamics	Materials Science and Advanced Manufacturing	\$100,000
3/1/10	TiER1 Performance Solutions	Information Technology and Communications	\$395,000
1/1/10	Topasol	Materials Science and Advanced Manufacturing	\$251,000
1/1/10	Pharmacogenetics Diagnostic Laboratory	Biosciences	\$375,000
1/1/10	NuForm Materials	Materials Science and Manufacturing	\$314,000
1/1/10	SCR	Health and Human Development	\$430,000
1/1/10	ApolImmune	Biosciences	\$430,000
1/1/10	Four Tigers	Human Health and Development	\$100,000
1/1/10	3H Company	Environmental and Energy Technologies	\$99,989
1/1/10	Transposagen Biopharmaceuticals	Human Health and Development	\$100,000
1/1/10	NaugaNeedles	Materials Science and Manufacturing	\$100,000
10/1/09	SureGene	Human Health and Development	\$361,939
10/1/09	EndoProtech	Human Health and Development	\$270,000
10/1/09	Vision Dynamics	Materials Science and Manufacturing	\$250,000
10/1/09	Louisville Biosciences	Biosciences	\$99,801
10/1/09	Adaptive Intelligent Systems	Materials and Advanced Manufacturing	\$449,966
6/1/09	Advanced Dynamics	Information Technology and Communications	\$99,917
5/1/09	ParaTechs	Human Health and Development	\$100,000
4/1/09	Transposagen Biopharmaceuticals	Biosciences	\$100,000
4/1/09	NeoCytex Biopharmaceuticals	Biosciences	\$100,000
3/1/09	TiER1 Performance Solutions	Information Technology and Communications	\$99,982
3/1/09	Synergetic Technologies	Materials Science and Advanced Manufacturing	\$99,666
2/1/09	ATI	Materials Science and Advanced Manufacturing	\$99,838
2/1/09	3H Company	Environmental and Energy Technologies	\$99,998
1/1/09	Bexion Pharmaceuticals	Biosciences	\$99,965
11/1/08	Advanced Intelligent Systems	Materials Science and Advanced Manufacturing	\$100,000
11/1/08	ApolImmune	Biosciences	\$100,000
10/1/08	ApolImmune	Biosciences	\$500,000
10/1/08	Naprogenix	Biosciences	\$199,000
10/1/08	SCR	Human Health and Development	\$500,000
10/1/08	Pharmacogenetics Diagnostic Laboratory	Biosciences	\$500,000
9/1/08	Adaptive Intelligent Systems	Materials Science and Advanced Manufacturing	\$599,678
9/1/08	customKYnetics	Human Health and Development	\$741,809
9/1/08	Mersive Technologies (D)	Information Technology and Communications	\$499,564
9/1/08	Turbo Wheelchairs Company	Human Health and Development	\$741,924
7/1/08	Allylix	Biosciences	\$100,000
7/1/08	NeoCytex Biopharmaceuticals	Biosciences	\$100,000
7/1/08	Sequela	Human Health and Development	\$965,273

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Award Date	Company (in reverse chronological order)	Technology Area	Matching Grant
7/1/08	Tova Industries	Information Technology and Communications	\$80,000
6/1/08	Alkymos	Human Health and Development	\$99,646
6/1/08	Atkins & Pearce	Materials Science and Advanced Manufacturing	\$88,900
6/1/08	Stallion Therapeutics	Human Health and Development	\$100,000
4/1/08	customKYnetics	Human Health and Development	\$100,000
4/1/08	Direct i2i	Information Technology and Communications	\$100,000
4/1/08	Peptides International	Biosciences	\$100,000
4/1/08	Adaptive Intelligent Systems	Materials Science and Advanced Manufacturing	\$100,000
3/1/08	Novera	Biosciences	\$846,500
3/1/08	Topasol	Materials Science and Advanced Manufacturing	\$99,100
3/1/08	NuForm Materials	Materials Science and Advanced Manufacturing	\$98,602
2/1/08	Vision Dynamics	Materials Science and Advanced Manufacturing	\$99,589
1/1/08	Assenti	Biosciences	\$374,985
1/1/08	Transposagen Biopharmaceuticals	Biosciences	\$1,000,000
1/1/08	Tribo Flow Separations	Biosciences	\$100,000
1/1/08	Advanced Dynamics	Information Technology and Communications	\$599,990
12/1/07	Alltranz	Human Health and Development	\$100,000
11/1/07	Pharmacogenetics Diagnostic Laboratory	Biosciences	\$100,000
11/1/07	Advanced Dynamics	Information Technology and Communications	\$99,999
10/1/07	SCR	Health and Human Development	\$100,000
10/1/07	Naprogenix	Biosciences	\$498,460
10/1/07	Naprogenix	Biosciences	\$100,000
10/1/07	ParaTechs	Biosciences	\$743,666
10/1/07	ApolImmune	Biosciences	\$100,000
7/1/07	Hosting.com (D)	Information Technology and Communications	\$100,000
7/1/07	Sequela	Health and Human Development	\$100,000
7/1/07	Scout Diagnostics	Health and Human Development	\$99,843
6/1/07	Wilson's Cedar Point Farms	Biosciences	\$79,729
5/1/07	Advanced Dynamics	Information Technology and Communications	\$99,900
4/1/07	Regenerex	Human Health and Development	\$100,000
4/1/07	Topasol	Materials Science and Advanced Manufacturing	\$78,000
4/1/07	Neathery Technologies	Environmental and Energy technologies	\$70,000
3/1/07	Oraceuticals	Health and Human Development	\$100,000
3/1/07	Naprogenix	Health and Human Development	\$100,000
3/1/07	Lumenware	Information Technology and Communications	\$100,000
3/1/07	Adaptive Intelligent Systems	Materials Science and Advanced Manufacturing	\$69,999
3/1/07	ParaTechs	Biosciences	\$80,000
3/1/07	Potentia Pharmaceuticals	Health and Human Development/Biosciences	\$100,000
3/1/07	SureGene	Health and Human Development	\$100,000
3/1/07	ECM Biosciences	Biosciences	\$100,000
3/1/07	ApolImmune	Biosciences	\$100,000
3/1/07	Mersive Technologies (D)	Information Technology and Communications	\$98,222
3/1/07	SCR	Human Health and Development	\$100,000
3/1/07	customKYnetics	Human Health and Development	\$100,000
Total for 137 State Matching Grants:			\$33,555,104

(D) = Company defaulted on agreement. The Cabinet is pursuing legal remedies.

APPENDIX B: Commonwealth Seed Capital Funding (through June 30, 2012)

KEDFA has contributed \$26.8 million to CSC since June 2001. As of June 30, 2012, CSC had funded \$19.6 million of its \$23.8 million in committed capital. This table shows CSC's active investments as of June 30, 2012.

Investment (Year of Investment)	Commitments
<i>Company Investments</i>	
Adaptive Technologies (2007)	\$ 200,000
Advanced Cancer Therapeutics (2009 / 2010)	\$ 500,000
ApoVax (formerly ApoImmune) (2005 / 2009)	\$ 500,000
Alltranz (2007 / 2010)	\$ 400,000
Allylix (2005)	\$ 500,000
Equinext LLC (2011 / Pending)	\$ 200,000
Gun Media Holdings, LLC (Pending)	\$ 100,000
IF Technologies (2009 / 2011)	\$ 500,000
InfoMinded Kentucky, LLC dba Try It Local (2012)	\$ 200,000
INOR (2012)	\$ 250,000
Intrepid BioInformatics (2010)	\$ 125,000
Jacobs Automation (2011 / 2012)	\$ 450,000
Louisville Bioscience (Pending)	\$ 200,000
NX PharmaGen (2011 / Pending)	\$ 350,000
Orthodata (2008)	\$ 250,000
ParkVu (2010 / 2011 / 2012)	\$ 570,000
Pradama (2007)	\$ 250,000
Rhinocyte (2008 / 2009 / 2011)	\$ 525,000
Seikowave (2011 / 2012)	\$ 200,000
Therix Medical Development (2011)	\$ 100,000
Vivorte (2011 / Pending)	\$ 350,000
Subtotal - Company Investments	\$ 6,720,000
<i>Fund Investments</i>	
Appalachian Micro Equity Fund (Pending)	\$ 500,000
Bluegrass Angel Venture Fund (2005)	\$ 1,000,000
Bluegrass Angel Venture Fund II (2010)	\$ 716,000
Chrysalis Ventures II, LP (2002)	\$ 2,000,000
Chrysalis Ventures III, LP (2007)	\$ 3,000,000
Chrysalis Ventures IV, LP (Pending)	\$ 500,000
Kentucky Seed Capital Fund, LP (2005)	\$ 1,000,000
River Cities Capital Fund III, LP (2002)	\$ 2,000,000
River Cities Capital Fund IV, LP (2008)	\$ 2,000,000
Triathlon Medical Venture Partners II, LP (Pending)	\$ 1,000,000
UpTech Fund I (2012)	\$ 100,000
Yearling Fund I, LP (2005)	\$ 500,000
Yearling Fund II, LP (2011)	\$ 500,000
Subtotal - Fund Investments	\$ 14,816,000
TOTAL	\$ 21,536,000

APPENDIX C: Kentucky New Energy Ventures Fund Awardees through June 30, 2012

Company Name	Technology Focus	County	Grant/ Investment	Award	Private Matching Investment	Status
Wind Energy Corporation	Wind	Hardin	Investment	\$750,000	\$3,750,000	Active
Louisville Clean Energy	Biofuels	Jefferson	Investment	\$250,000	\$4,350,000	Active
Neathery Technologies	Biofuels	Fayette	Grant	\$30,000	\$30,000*	Completed
Kentucky Renewable Energy	Biofuels	McCracken	Grant	\$30,000	\$30,000*	Completed
Thermobaric Energy Systems	Alternative Energy	Hopkins	Grant	\$30,000	\$30,000*	Completed
RE Strategies	Biofuels	Woodford	Grant	\$30,000	\$30,000*	Completed
Kozo Saito, UKRF	Biofuels	Fayette	Grant	\$30,000	\$30,000*	Completed
Genesis Development of Kentucky	Wind	Pike	Grant	\$30,000	\$30,000*	Completed
Kentucky BioFuels	Biofuels	Daviess	Grant	\$30,000	\$30,000*	Completed
Apple Hearth & Home	Wind	Jefferson	Grant	\$30,000	\$30,000*	Agreement Terminated
CNG Energy	Alternative Energy	Pike	Grant	\$30,000	\$30,000*	Agreement Terminated
Planta BioProducts	Biofuels	Daviess	Grant	\$30,000	\$30,000*	Withdrawn
Pilus Energy	Biofuels	Kenton	Investment	\$250,000	\$250,000	Award Withdrawn
Highland Biofuels	Biofuels	Carter	Investment	\$500,000	\$660,000	Active
Critical Energy Corporation	Solar	Wolfe	Grant	\$30,000	\$30,000*	Completed
Nooyen Manufacturing	Biofuels	Montgomery	Grant	\$30,000	\$30,000*	Agreement Terminated
XtremeCarbons	Alternative Energy	Fayette	Grant	\$30,000	\$30,000*	Completed
West Wind Power	Wind	Jefferson	Grant	\$30,000	\$30,000*	Completed
Commonwealth Biofuels	Biofuels	Garrard	Grant	\$30,000	\$30,000*	Completed
East Kentucky Biodiesel	Biofuels	Floyd	Grant	\$30,000	\$30,000*	Completed
Oorjaa (formerly PHYchip)	Alternative Energy	Jefferson	Grant	\$30,000	\$30,000*	Agreement Terminated
Topasol	Solar	Fayette	Grant	\$30,000	\$30,000*	Completed
Bio Energy Farms	Biofuels	Franklin	Grant	\$30,000	\$30,000*	Completed
Southeast Biofuels	Biofuels	Montgomery	Grant	\$30,000	\$30,000*	Completed
Wellhead Energy Systems	Biofuels	Pulaski	Investment	\$500,000	\$1,500,000	Active
2nd Generation Wind	Wind	Jessamine	Grant	\$30,000	\$30,000*	Agreement Terminated
ecoPower Generation	Biofuels	Perry	Investment	\$250,000	\$1,664,250	Active
Commonwealth Biofuels	Biofuels	Garrard	Investment	\$60,000	\$60,000	Active

*Denotes that company's private matching investment funds are in-kind contributions

APPENDIX D-1: New Companies Funded from the High-Tech Program by OCI since July 1, 2011

Companies funded in FY2011 include (in alphabetical order):

Allylix: Allylix Inc. is a renewable chemicals company with research laboratories located on the Coldstream Research Campus in Lexington. The company develops terpene products and their derivatives for use in the flavor and fragrance, food ingredient, agricultural and biofuel markets. A metabolic engineering and fermentation platform allows Allylix to produce renewable terpene chemicals through yeast-based fermentation.

CirrusMio: CirrusMio, Inc. is a new subsidiary of Virginia-based Metaformers, Inc. CirrusMio will focus on developing cloud-based Software as a Service (SaaS) solutions for public sector clients. CirrusMio's core solution is a cloud-based portal for organizations to effectively communicate and collaborate with their user community. Applications include enabling project leaders to manage human and financial resources and allow transparent operations for projects.

Ferm Solutions: Ferm Solutions, Inc. is a leading research, product development, engineering, manufacturing and technical service provider to the fuel and potable ethanol industry. The company combines engineering and microbiology technologies to create a "one-stop-shop" for proprietary methodologies and consumable products used to make ethanol.

**APPENDIX D-2: Companies and projects funded by OCI prior to July 1, 2011,
and in active monitoring status as of June 30, 2012**

Company (Fiscal Year of Award)	Focus Area	High-Tech Jobs to be created	Average Salary	Award
Alltech (2006)	B	40	\$54,375	\$1,000,000
ApoVax (formerly ApolImmune) (2006)	B	30	\$40,000	\$500,000
Secat (2006)	AM/MS	3	\$50,000	\$850,000
US World Meds (2007)	B	76	\$91,130	\$1,300,000
Aspen (2007)	AM/MS	40	\$50,000	\$500,000
Peptides International (2007)	B	7	\$56,000	\$175,000
Tap Logic (2007)	IT	68	\$47,785	\$500,000
Alltranz (2007)	B	30	\$80,000	\$500,000
Creosalus (2008)	B	41	\$80,000	\$750,000
BAE Systems (2008)	AM/MS	58	\$72,241	\$750,000
SureGene (2008)	HHD	30	\$97,000	\$510,000
Corevalus Systems (2008)	IT	18	\$66,000	\$300,000
Smoothstone IP Communications (2008)	IT	20	\$67,000	\$500,000
3DR Laboratories (2008)	IT	10	\$62,000	\$250,000
dbaDIRECT (2008)	IT	19	\$75,000	\$469,000
Leancor (2008)	IT	14	\$55,000	\$350,000
Matrix Engineering (2008)	EET	20	\$55,500	\$500,000
Advanced Cancer Therapeutics (2008)	HHD	11	\$103,000	\$187,000
Sud-Chemie (2009)	EET	20	\$72,000	\$500,000
Lending Cycle (2009)	IT	7	\$61,000	\$59,500
Transposagen Biopharmaceuticals (2009)	B	13	\$57,500	\$325,000
MedX12 (2009)	IT	14	\$61,500	\$160,000
NaugaNeedles (2009)	AM/MS	7	\$64,000	\$120,000
PHD Diagnostics (2009)	HHD	10	\$51,000	\$200,000
Gryphon Environmental ()	EET	7	\$50,000	\$100,000
Jacobs Automation (2010)	AM/MS	9	\$65,000	\$150,000
Laboratory and Biodiagnostics (LabDx) (2010)	HHD	18	\$64,500	\$250,000
Louisville Bioscience (2010)	HHD	18	\$70,000	\$250,000
Summit Biosciences (2010)	HHD	17	\$ 64,000	\$250,000
HFL Sport Science (2010)	B	25	\$ 47,400	\$425,000
Xhale, Inc (2010)	HHD	5	\$ 55,000	\$87,500
Connected Patients (2010)	IT	8	\$ 61,000	\$100,000
ParaTechs Corporation (2010)	B	7	\$ 55,000	\$120,000
Bexion, LLC (2011)	HHD	7	\$77,000	\$155,000
Corning (2011)	AM/MS	28	\$72,000	\$250,000
Escent Technologies, LLC (2011)	IT	13	\$70,000	\$200,000
Frogdice (2011)	IT	7	\$49,000	\$80,000
Hitcents (2011)	IT	10	\$53,000	\$150,000
nGimat, LLC	AM/MS	18	\$58,500	\$250,000
Transposagen Biopharmaceuticals (2011)	B	16	\$58,750	\$250,000
Vivorte, LLC (2011)	HHD	7	\$72,000	\$120,000
ZoomEssence, Inc. (2011)	AM/MS	11	\$67,000	\$175,000
Project (Fiscal Year of Award)				
Sloan Center for Sustainable Aluminum Ind. (2005)		N/A	N/A	\$150,000
Energy + Env Cabinet-Argonne Battery Lab (2010)				\$3,500,000
Kentucky Highlands Investment Corp. (2009)				\$100,000
Kentucky Technology Inc. (2009)		N/A	N/A	\$5,500,000
TOTALS		837		\$23,868,000
HHD = Health & Human Development; IT = Information Technology & Communications; B = Biosciences; EET = Energy & Environmental Technology; AM/MS = Advanced Manufacturing / Material Science.				

APPENDIX D-3: Companies Withdrawing During the Reporting Period

Pure Power Technologies

Martek

NaugaNeedles (2011 Award)

Pharmacogenetics Diagnostic Laboratory

Kentucky Highlands Investment Corporation (2012)

Remington

