



**2011 - 2012
Research Report
to
UKRF Board of Directors**

**James W. Tracy
Vice President for Research**

05 June 2012

2011 – 2012 Highlights

- Electronic Internal Approval Form (e-IAF) fully implemented
 - >90% compliance in first use cycle
- New Public Health Service Final Rule on Financial Conflicts of Interest (42 CFR Part 50)
 - Online Disclosure Statement
 - Full implementation by 24 August 2012
- New F&A rate proposal submitted to DHHS
 - Current on-campus research 48.5%
 - Proposed 52.0%

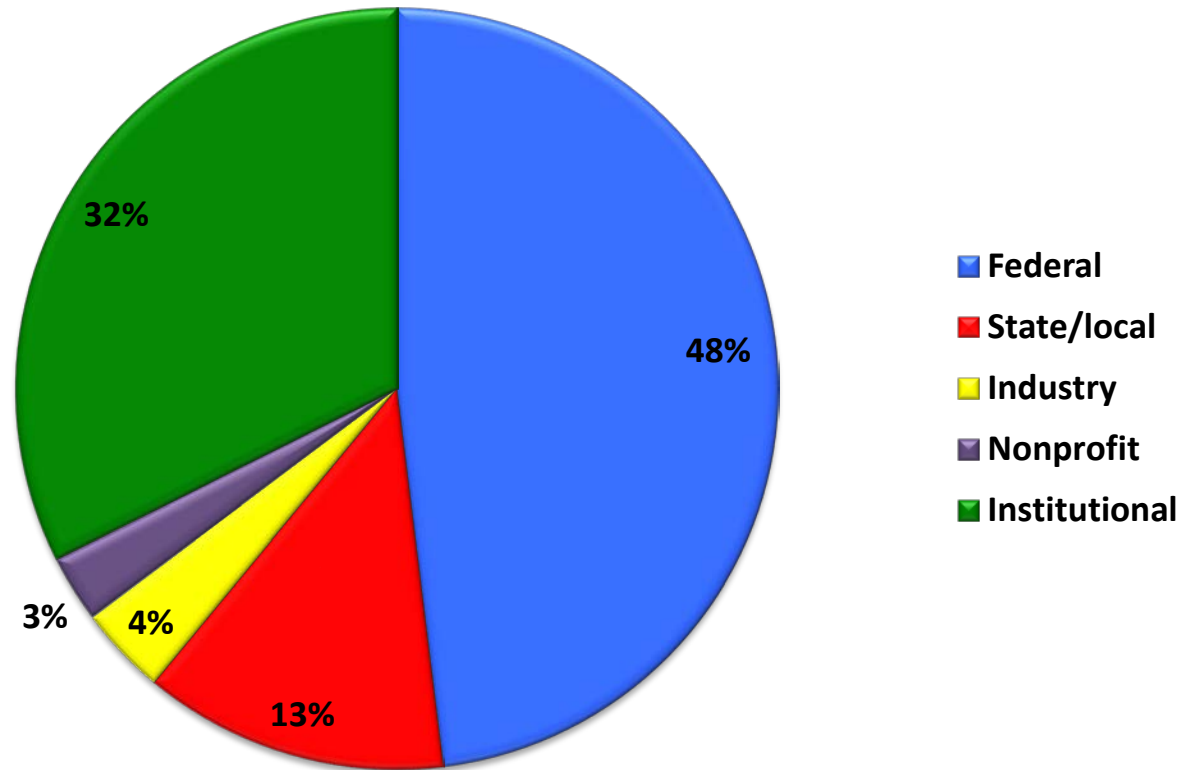
2011 – 2012 Highlights

- AAALAC site visit (animal program)
 - Cited for occupational health program
 - Work on a fully functional program had already started.
- Research construction projects
 - Bio-Pharm 4th & 5th floors done
 - CAER Lab #2 (NIST funded) done
 - Rodent core facility on target for Fall 2012
- Review of the Office of Commercialization & Economic Development completed
- Report on enhancing the research enterprise completed

2011 – 2012 Highlights

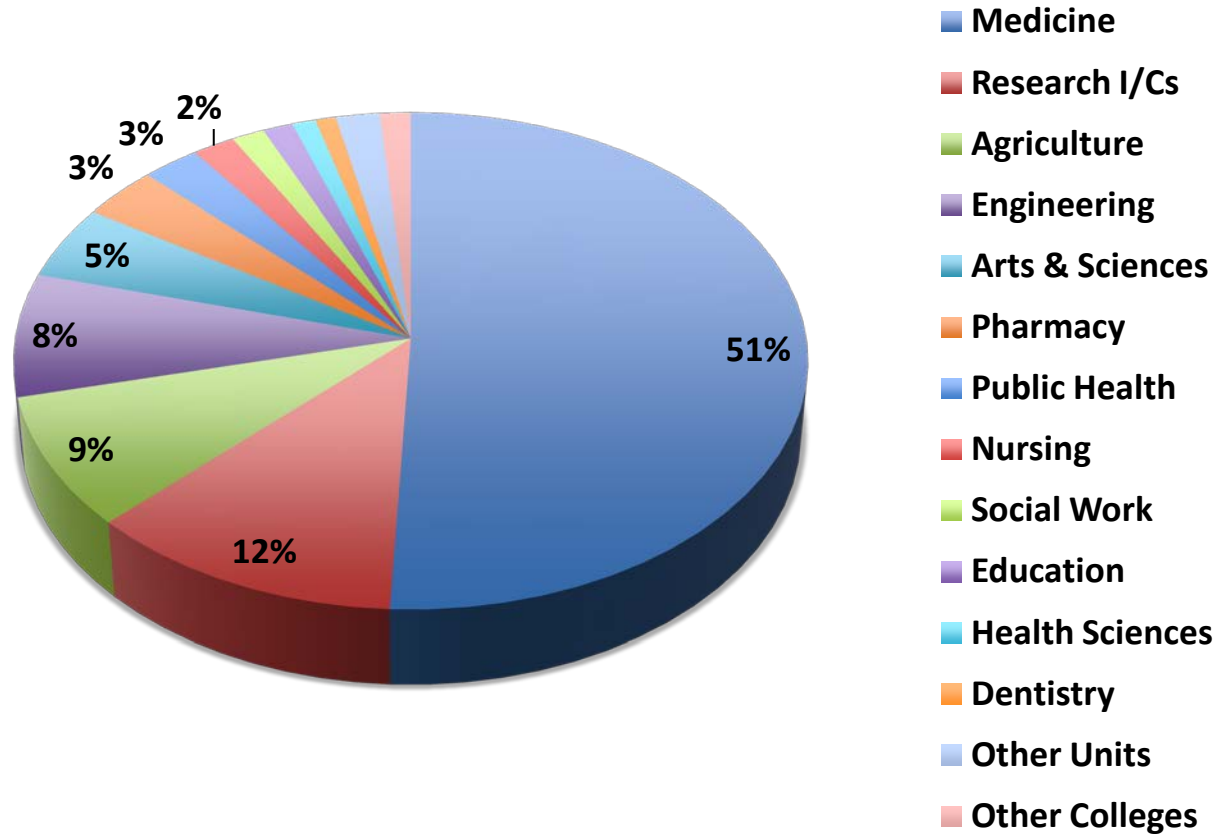
- NIH Clinical & Translational Science Award (CTSA) received in June 2011
 - Dr. Phil Kern and colleagues
 - One of 60 CTSA's in the U.S.
- Final ARRA Report
 - 503 applications submitted
 - 184 awards (37% success rate)
 - Total funding: \$108.4 million
 - All but two projects will end by September 2012

FY11 R&D Expenditures reported to NSF (\$373 million)

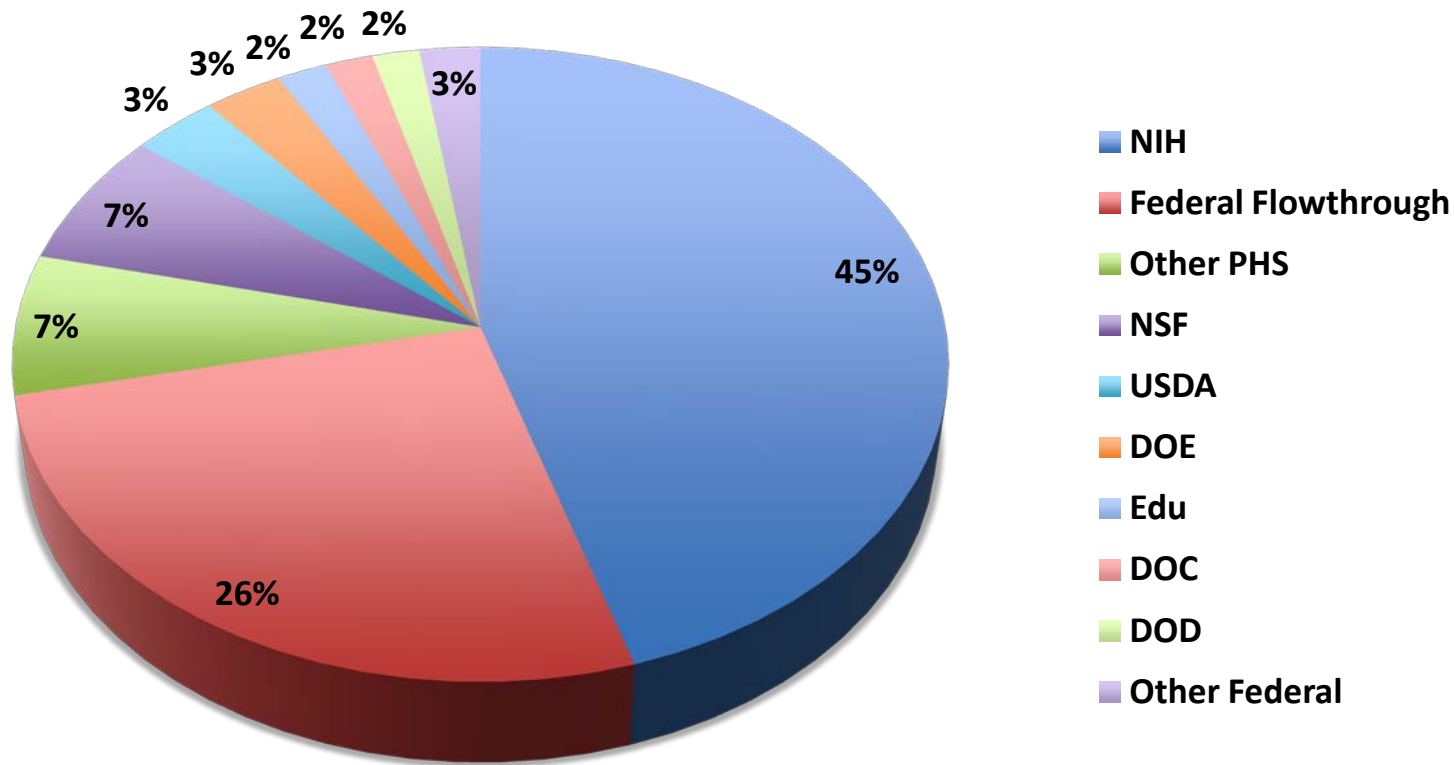


FY11 Sponsored Project Expenditures

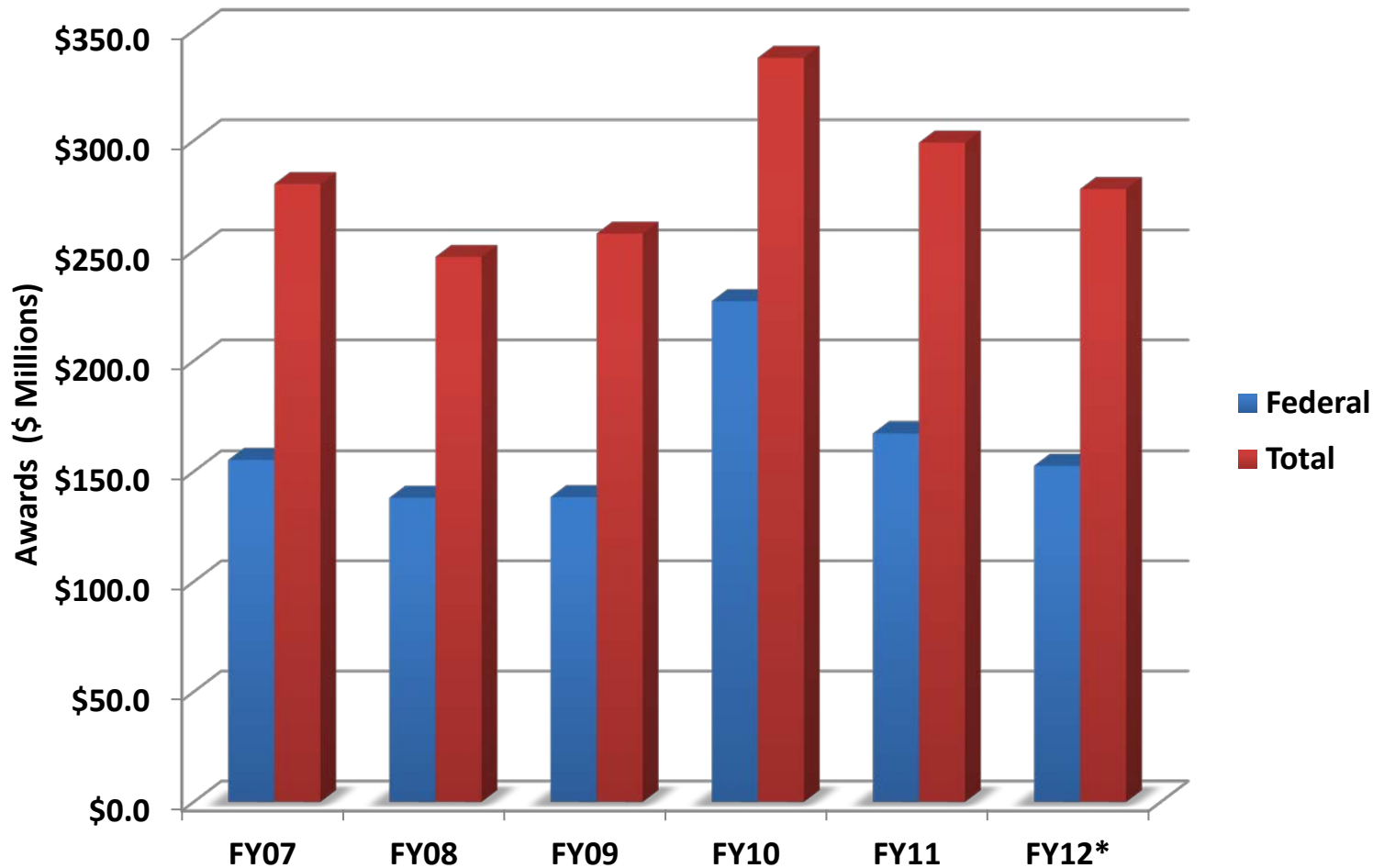
\$345.1 million



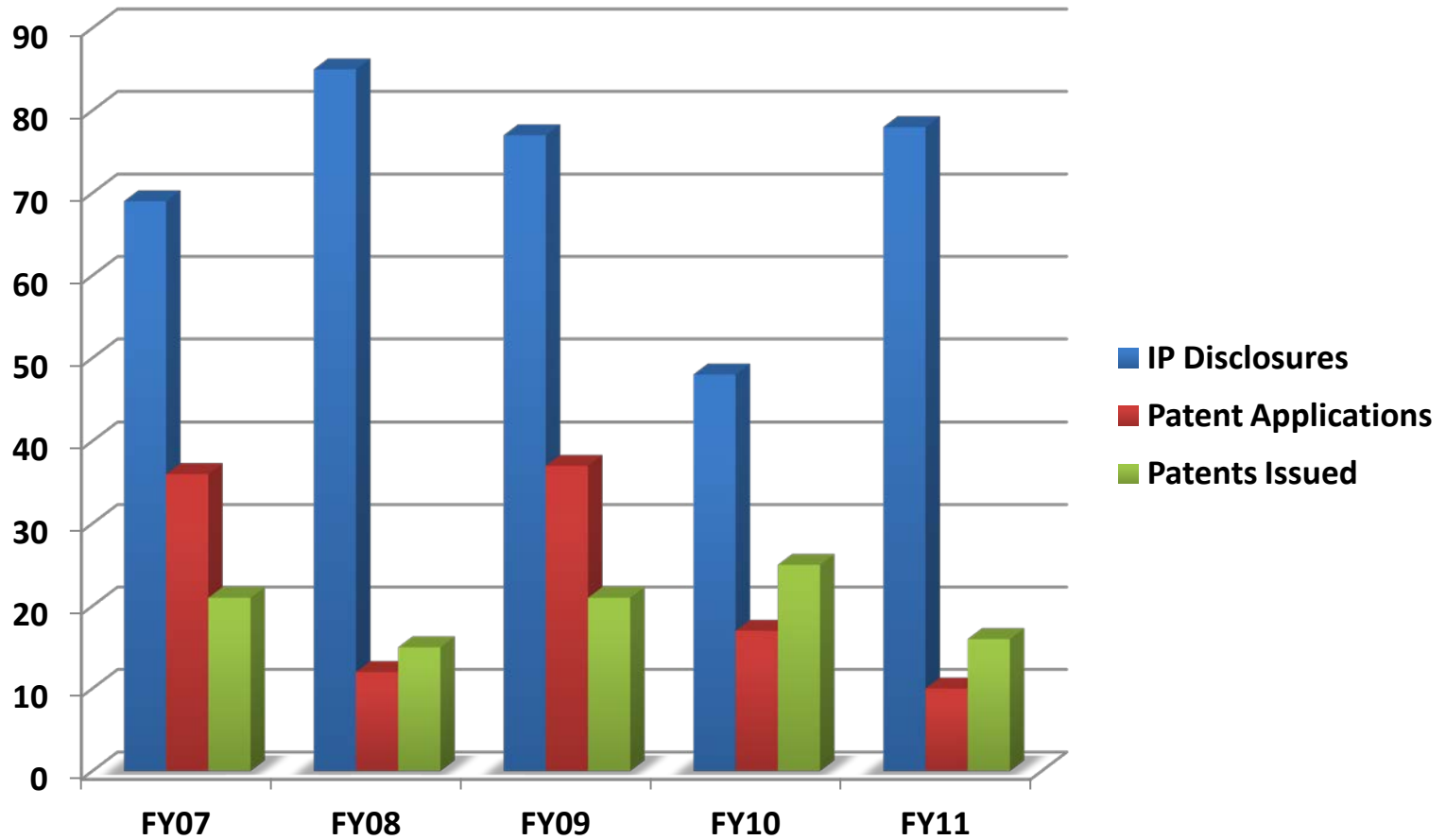
FY11 Sponsored Projects Federal Expenditures



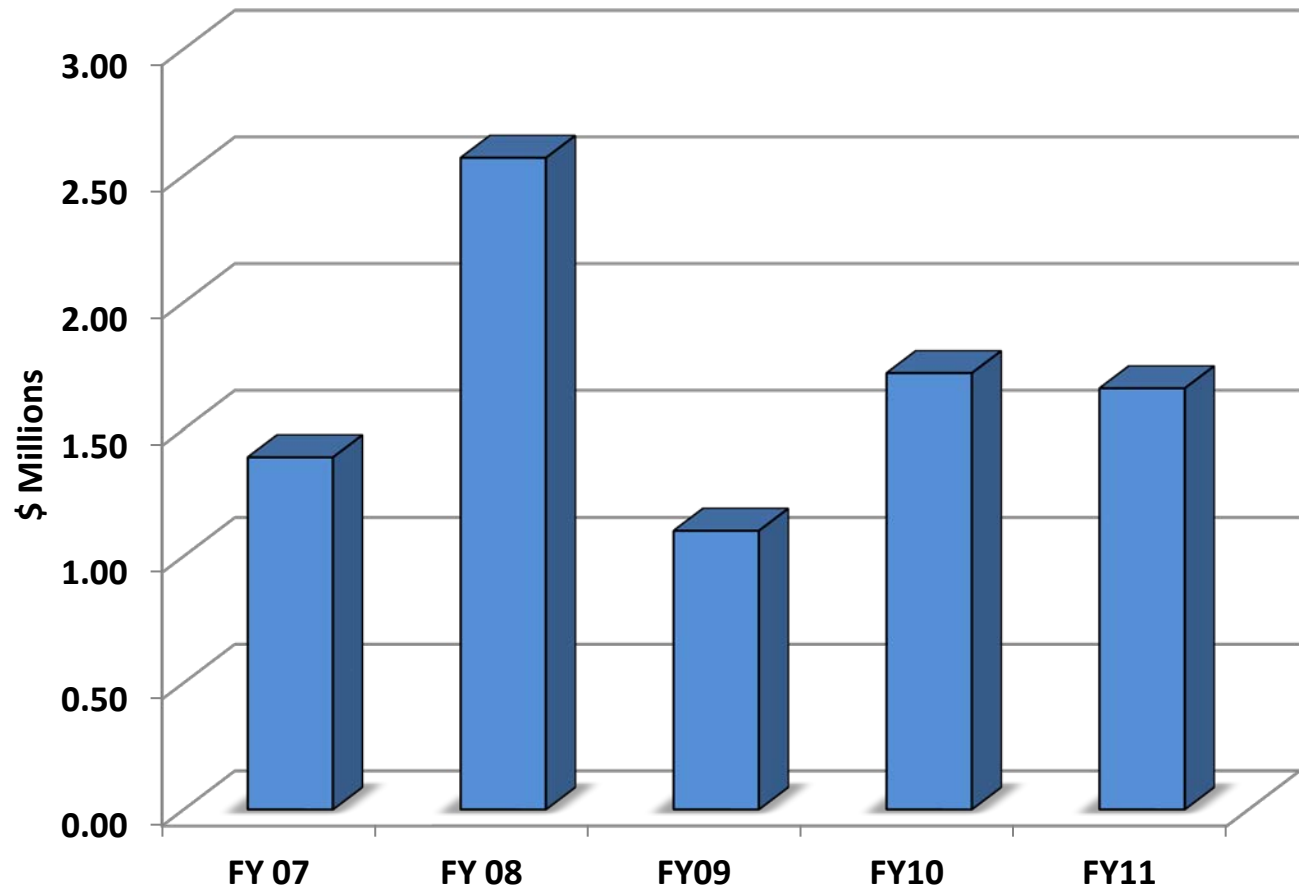
Sponsored Project Awards



Intellectual Property Activity



Licensing Revenue

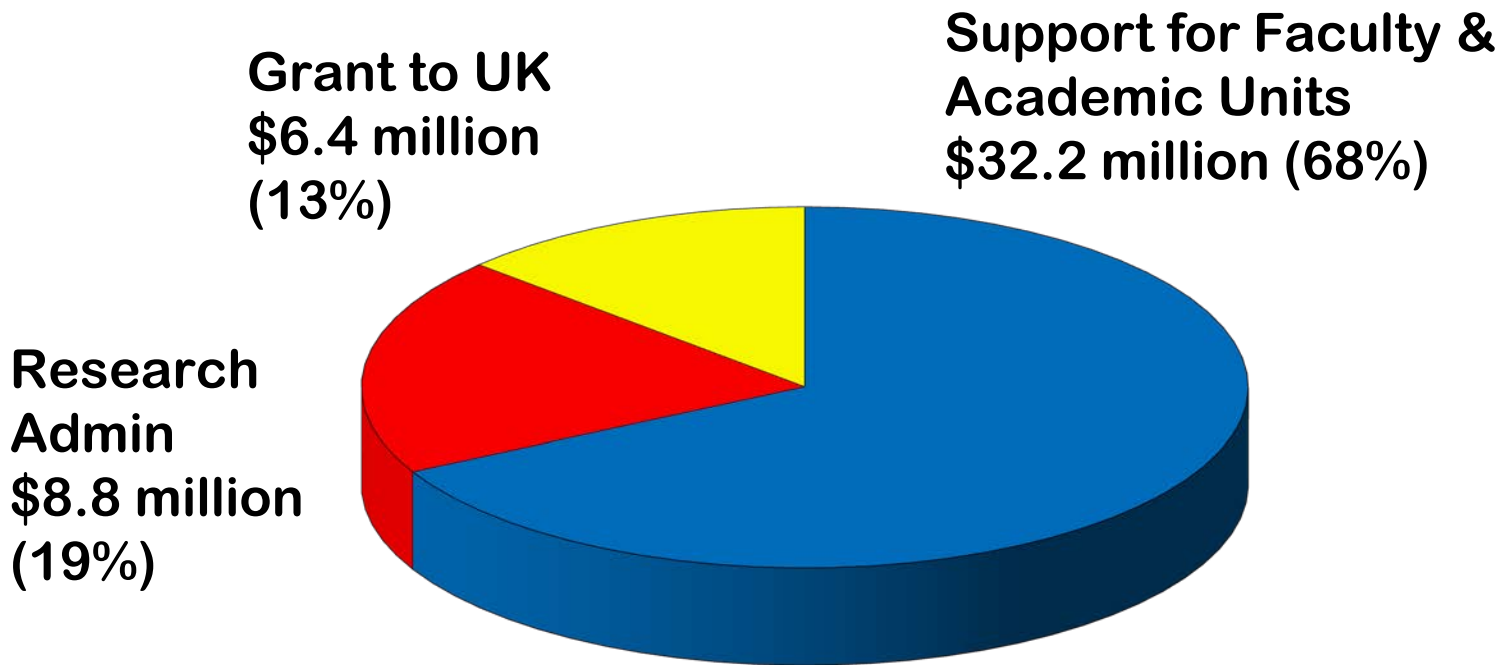


As reported in the UK Financial Statement

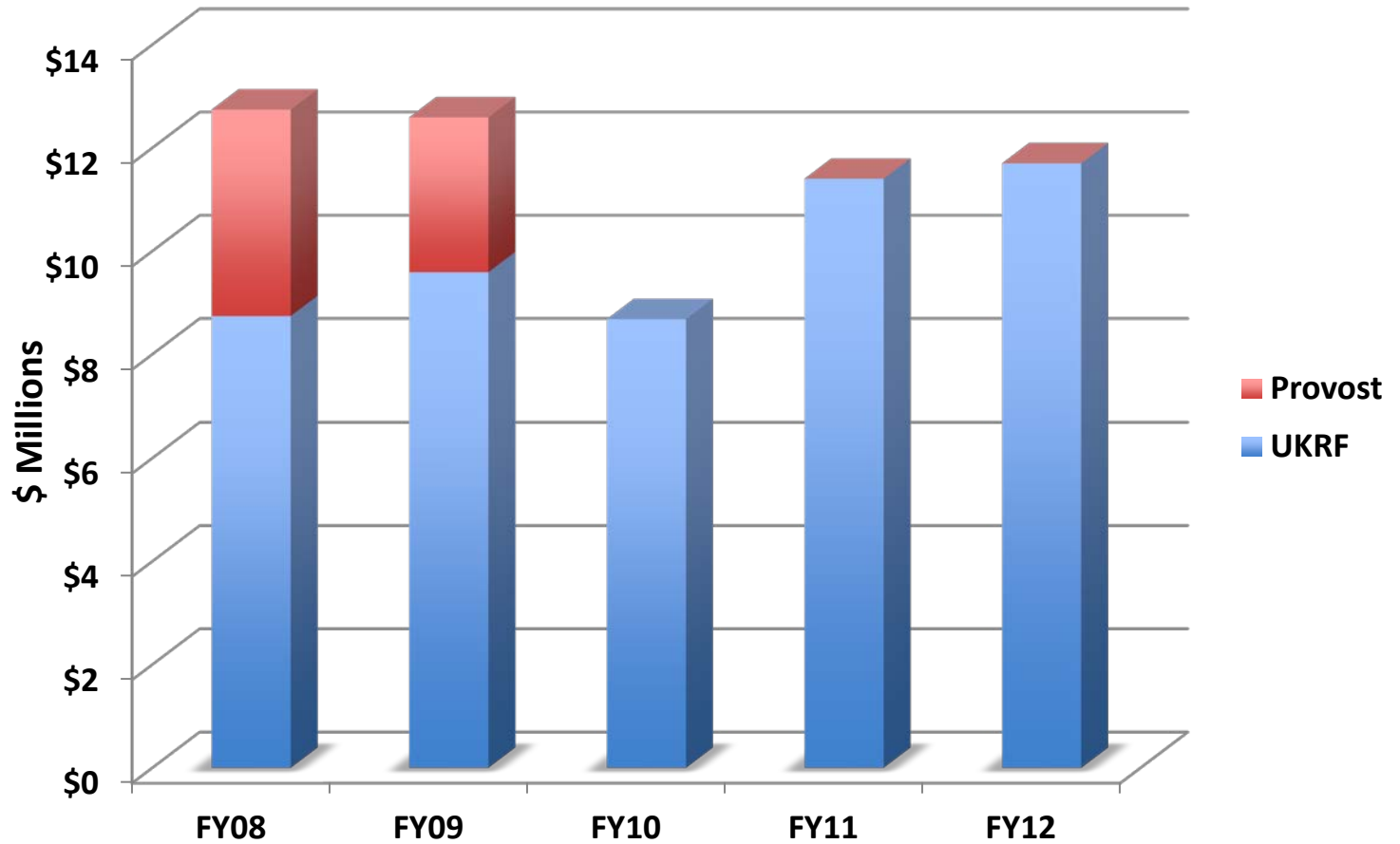
Challenges to Research

- **Federal R&D budget uncertainty**
- **Congressional earmark ban continues**
- **F&A rate negotiation**
- **Increased compliance expectations**
- **Research space constraints**
- **Aging shared research equipment**

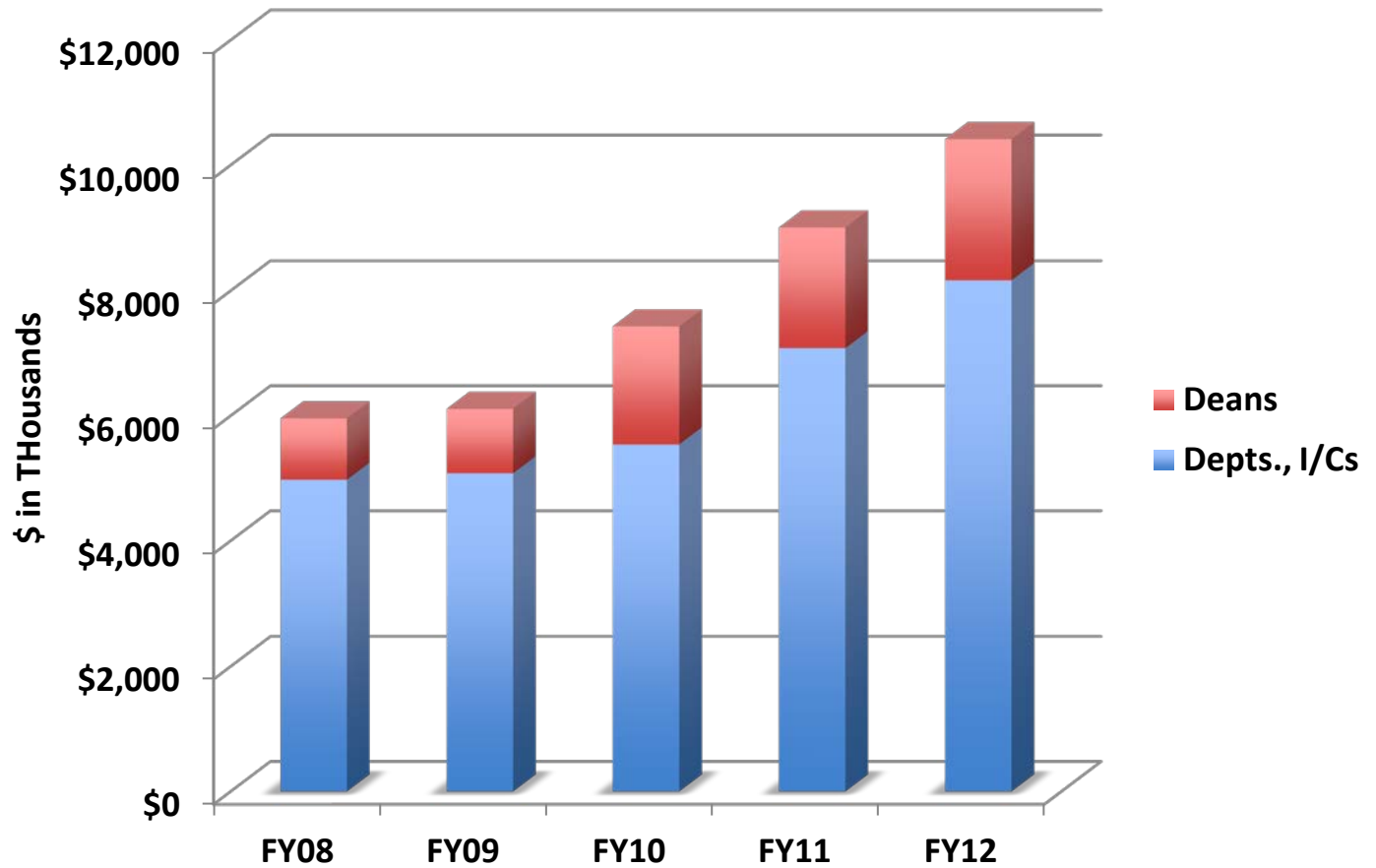
FY2011 UKRF Expenditures (\$47.4 million)



Faculty Start-up Commitment



F&A Return to Units



Realized F&A Income

FY2009	\$44.5 million
FY2010	\$50.6 million
FY2011	\$52.8 million
FY2012	\$50.3 million*
*Projected as of 30 April 2011	
FY2013	\$45 million (est.)



Proposed FY2013 Budget

Tab G

FY 2011-2012 License Agreements

1. Minova North America Inc. for "improvements relating to cementitious compositions" developed by Dr. Tom Robl (Center for Applied Energy Research).
2. Kentucky Specialty Grains LLC for "early flowering chia" developed by Dr. David Hildebrand and Dr. Timothy Phillips (Plant and Soil Sciences).
3. Direct i2i Technologies LLC for "long-range iris sensing" developed by Dr. Ruigang Yang (Center for Visualization and Virtual Environments).
4. Kentucky Chia LLC for "early flowering chia" developed by Dr. David Hildebrand and Dr. Timothy Phillips (Plant and Soil Sciences).
5. Pioneer Inc. for "full-length transcript (FLT) promoters from figwort mosaic caulimovirus (FMV)" developed by Dr. Indu Maiti (Kentucky Tobacco Research and Development Center).
6. Biospherics Inc. for "use of d-tagatose as a lipid lowering agent" developed by Dr. Robert Lodder (Pharmacy).
7. PhylloTech LLC for "use of phylloplanins as antibiotics, selective fungicides, and in enhancing microbial resistance in crop plants" developed by Dr. George Wagner and Dr. Ryan Shepherd (Plant and Soil Sciences).
8. MosquitoMate Inc., for "transfected mosquito vectors" developed by Dr. Stephen Dobson (Entomology).

Update of FY 2010-2011 License Agreements

1. NuForm Materials LLC for "technology and methodology for the production of high-quality polymer filler" and "super pozzolan from fly ash and method for hydraulically separating carbon and classifying coal combustion ash." NuForm is conducting research to develop the polymer filler and fly ash.
2. NuForm Materials LLC for "methodology and technology for the production of improved coal-derived fly ash for the production of metal matrix composites." NuForm is conducting research to develop metal matrix composites.
3. Seikowave Inc. for "real-time structured light measurement systems." Seikowave is developing sensor products based on the licensed technology.
4. Frontier Biopharm Inc. for "drug reference standards." Frontier is presently developing drug assays utilizing the reference standards.
5. Alternate Energy LLC for "a method for producing fuel briquettes from high-moisture fine coal or blends of high-moisture fine coal and biomass." Alternate Energy is in the process of building a production facility for production of fuel briquettes using the licensed technology.
6. Medical Scan Technologies Inc. for "lock and hold structured light illumination for use in the dermatological field." Medical Scan Technologies is developing the licensed technology for use in the dermatology field.
7. Therix Medical Inc. for "pediatric/geriatric garment designed to help prevent flathead syndrome and other positional issues." Therix is attempting to sublicense the technology to a producer.
8. Summit Biosciences Inc. for "compositions and methods for intranasal delivery of tricyclic cannabinoids." Summit is developing intranasal cannabinoid delivery systems.
9. Imperial Innovations Ltd for "scanning ion conductance microscopy." Imperial is developing a scanning ion conductance microscope.
10. Direct i2i Technologies LLC for "multi-projector calibration and display software." Direct i2i is developing the licensed technology for use in projection systems.
11. Track-Five Diagnostics Inc. for "methods for predicting cancer response to EGFR inhibitors." Track-Five is developing cancer diagnostics based on the licensed technology.

FY 2011-12 Top Five Licenses by Revenue

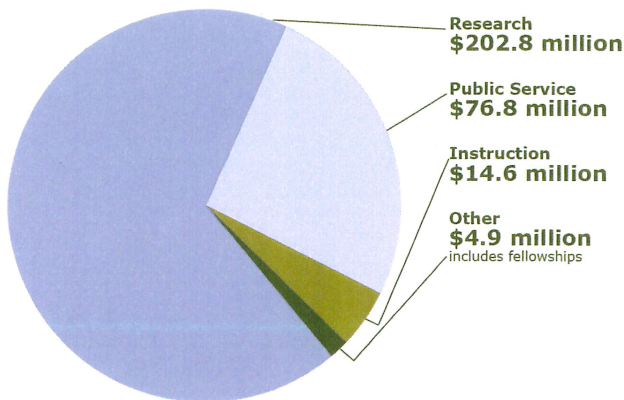
1. New Ace Pharmaceuticals, Inc. - \$198,294
(Inventors are Thomas Tobin and David Granstrom, Department of Veterinary Science. Technology is a treatment for EPM)
2. ATMI - \$166,045
(Inventor is Alex Terentiev formerly of the Department of Physics. Technology is magnetic levitating stirrer.)
3. Niadyne, Inc. - \$103,565
(Inventors are Drs. Mike Jacobson and Elaine Jacobson, Department of Pharmaceutical Sciences in the College of Pharmacy. Technology is various niacin compounds and their use in the treatment of skin disorders.)
4. Becton Dickinson, Inc. - \$94,298
(Inventor is Tom Chambers, Department of Veterinary Science. Technology is Calvenza, an equine vaccine)
5. pSivida, Inc. - \$53,694
(Inventors are Dr. Paul Pearson, Dr. Thomas Smith, Dr. Paul Ashton, and Dr. David L. Blandford of the Department of Ophthalmology. The technology is a sustained release drug delivery device.)

Research 2011

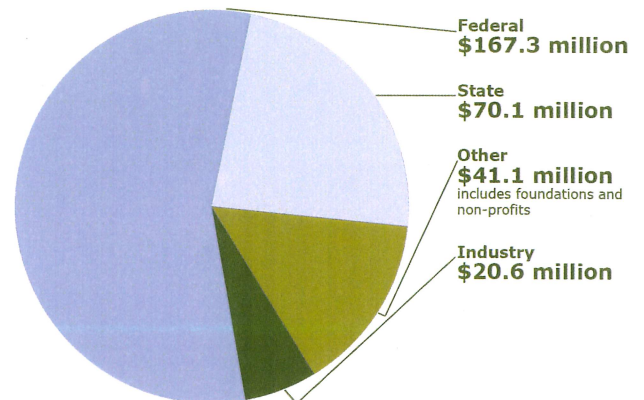
www.research.uky.edu



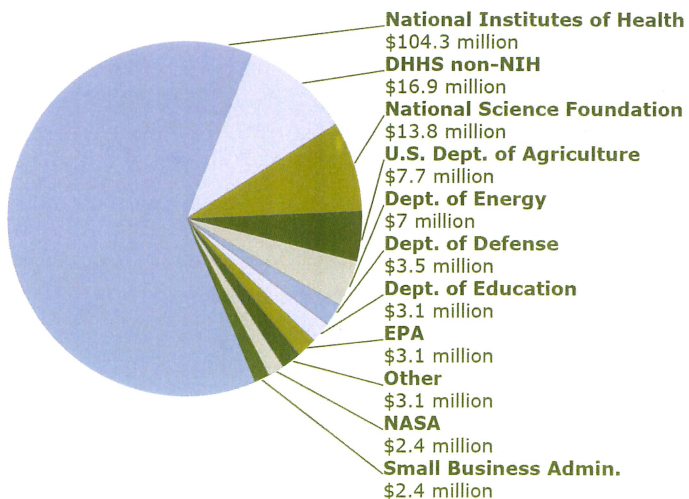
**University of Kentucky
Research Funding Categories**
FY 11 Grant & Contract Awards \$299.1 million



**University of Kentucky
Research Funding Sources**
FY 11 Grant & Contract Awards \$299.1 million



**University of Kentucky
Federal Grant & Contract Awards**
FY 11 \$167.3 million



Research Stats & Rankings

- Grants and contracts totaled \$299,110,000
- Federal agencies awarded \$167.3 million
- Stimulus dollars (a.k.a. ARRA funding) made up \$30 million of the federal funding total
- State agencies awarded \$70.1 million
- Industry awarded \$20.6 million
- The National Science Foundation (NSF) ranks UK 30th among public universities and 49th among public and private universities (based on FY 09 research expenditures)

Sponsored Project Awards Received Through Fiscal Year 2012 as of 4/30/2012

	New Accounts	Adjustments to Existing Accounts	Total
<u>Office of the President</u>			
<u>Commercialization & Economic Development</u>			
Commercialization & Economic Development	\$142,880.	\$0.	\$142,880.
Business Development	\$168,550.	\$0.	\$168,550.
Small Business Development Center	\$1,571,178.	\$259,014.	\$1,830,192.
<u>Commercialization & Economic Development Totals:</u>	\$1,882,608.	\$259,014.	\$2,141,622.
<u>Exec VP for Health Affairs</u>			
Exec VP for Health Affairs	\$604,832.	\$-50,000.	\$554,832.
<u>Exec VP for Health Affairs Totals:</u>	\$604,832.	\$-50,000.	\$554,832.
<u>Office of the President Totals:</u>	\$2,487,440.	\$209,014.	\$2,696,454.
<u>Administration</u>			
<u>Sr VP for Administration</u>			
Capital Project Management	\$6,011,597.	\$0.	\$6,011,597.
<u>Sr VP for Administration Totals:</u>	\$6,011,597.	\$0.	\$6,011,597.
<u>Campus Services</u>			
Office of Emergency Management	\$0.	\$-110,328.	\$-110,328.
UK Police	\$203,087.	\$0.	\$203,087.
<u>Campus Services Totals:</u>	\$203,087.	\$-110,328.	\$92,759.
<u>Administration Totals:</u>	\$6,214,684.	\$-110,328.	\$6,104,356.
<u>Provost Units</u>			
<u>Research</u>			
VP for Research	\$0.	\$30,138.	\$30,138.
KY Geological Survey	\$505,275.	\$13,623.	\$518,898.
Appalachian Center	\$0.	\$-485,553.	\$-485,553.
Interdisc Human Development Institute	\$13,374,376.	\$4,590,270.	\$17,964,646.
Computational Sciences	\$267,688.	\$0.	\$267,688.
KY Water Resources Institute	\$98,670.	\$432,945.	\$531,615.
Ctr for Applied Energy Research	\$8,867,488.	\$4,157,047.	\$13,024,535.
Magnetic Resonance Imaging System Cntr	\$0.	\$116,188.	\$116,188.
Div of Laboratory Animal Research	\$484,475.	\$0.	\$484,475.
<u>Research Totals:</u>	\$23,597,972.	\$8,854,658.	\$32,452,630.
<u>Dentistry</u>			
Dentistry	\$195,000.	\$0.	\$195,000.
Dentistry Research & Graduate Studies	\$1,777,589.	\$403,126.	\$2,180,715.
Oral Health Science	\$194,958.	\$100,000.	\$294,958.
Oral Health Practice	\$611,286.	\$25,650.	\$636,936.
<u>Dentistry Totals:</u>	\$2,778,833.	\$528,776.	\$3,307,609.
<u>Nursing</u>			
Nursing	\$1,104,331.	\$420,802.	\$1,525,133.
<u>Nursing Totals:</u>	\$1,104,331.	\$420,802.	\$1,525,133.
<u>Medicine</u>			
Area Health Educ Ctr	\$990,988.	\$0.	\$990,988.
Spinal Cord & Brain Injury Res Ctr	\$1,148,613.	\$2,165,185.	\$3,313,798.
Graduate Center for Toxicology	\$1,637,794.	\$3,016,957.	\$4,654,751.
McDowell Cancer Network	\$3,519,908.	\$5,152,087.	\$8,671,995.
Sanders-Brown Center on Aging	\$2,174,047.	\$6,226,664.	\$8,400,711.

	New Accounts	Adjustments to Existing Accounts	Total
Provost Units			
<u>Medicine</u>			
Rural Ky Healthcare	\$3,022,652.	\$-5,219.	\$3,017,433.
Center on Drug and Alcohol Research	\$7,427,756.	\$1,732,069.	\$9,159,825.
Anatomy & Neurobiology	\$1,722,035.	\$2,550,091.	\$4,272,126.
Emergency Medicine	\$0.	\$194,117.	\$194,117.
Behavioral Science	\$1,088,351.	\$2,506,708.	\$3,595,059.
Graduate Center for Nutritional Sciences	\$611,147.	\$968,756.	\$1,579,903.
Molecular & Cellular Biochemistry	\$3,774,802.	\$3,013,471.	\$6,788,273.
Internal Medicine	\$6,785,608.	\$7,404,194.	\$14,189,802.
Microbiology, Immunology & Molecular Gen	\$1,879,107.	\$2,159,082.	\$4,038,189.
Family Practice & Community Medicine	\$798,484.	\$2,098,625.	\$2,897,109.
Obstetrics & Gynecology	\$467,504.	\$791,473.	\$1,258,977.
Pathology & Lab Medicine	\$547,304.	\$0.	\$547,304.
Pediatrics	\$2,352,657.	\$2,498,103.	\$4,850,760.
Molecular & Biomedical Pharmacology	\$95,000.	\$1,809,952.	\$1,904,952.
Physiology	\$2,813,224.	\$4,384,202.	\$7,197,426.
Psychiatry	\$10,665.	\$122,226.	\$132,891.
Surgery	\$861,178.	\$443,347.	\$1,304,525.
Neurology	\$47,083.	\$573,905.	\$620,988.
Surgery - Neurosurgery	\$761,424.	\$405,227.	\$1,166,651.
Ophthalmology	\$1,124,061.	\$1,710,004.	\$2,834,065.
Orthopaedic Surgery	\$301,762.	\$13,569.	\$315,331.
Radiation Medicine	\$8,541.	\$352,221.	\$360,762.
Physical Medicine and Rehabilitation	\$135,502.	\$295,872.	\$431,374.
<u>Medicine Totals:</u>	\$46,107,197.	\$52,582,888.	\$98,690,085.
<u>Pharmacy</u>			
Pharmaceutical Tech	\$2,174,113.	\$2,056,687.	\$4,230,800.
Pharmacy Practice & Science	\$2,725,677.	\$25,202.	\$2,750,879.
<u>Pharmacy Totals:</u>	\$4,899,790.	\$2,081,889.	\$6,981,679.
<u>Health Sciences</u>			
Rehabilitation Sciences	\$414,546.	\$1,007,519.	\$1,422,065.
Administrative Services	\$218,312.	\$320,760.	\$539,072.
Clinical Sciences	\$0.	\$-1,223,898.	\$-1,223,898.
<u>Health Sciences Totals:</u>	\$632,858.	\$104,381.	\$737,239.
<u>Public Health</u>			
Public Health Leadership Institute	\$168,400.	\$21,884.	\$190,284.
Preventive Med & Environmental Health	\$706,783.	\$-332,518.	\$374,265.
Health Behavior	\$870,059.	\$0.	\$870,059.
Health Services Management	\$13,041.	\$0.	\$13,041.
Epidemiology	\$753,834.	\$26,051.	\$779,885.
Gerontology	\$151,646.	\$0.	\$151,646.
KY Injury Prevention & Research Center	\$1,648,382.	\$72,457.	\$1,720,839.
Southeast Cntr for Ag Health & Injury Pr	\$627,611.	\$498,851.	\$1,126,462.
Center for Public Health Syst & Svcs Res	\$2,557,907.	\$0.	\$2,557,907.
Kentucky Rural Cancer Prevention Center	\$1,272,000.	\$0.	\$1,272,000.
Dean	\$463,716.	\$224,303.	\$688,019.
<u>Public Health Totals:</u>	\$9,233,379.	\$511,028.	\$9,744,407.

	New Accounts	Adjustments to Existing Accounts	Total
Provost Units			
<u>Agriculture</u>			
International Programs	\$0.	\$29,700.	\$29,700.
Assoc Dean Research/Director AES	\$210,204.	\$808,270.	\$1,018,474.
Agr Economics	\$725,120.	\$85,572.	\$810,692.
Biosystems & Ag Eng	\$1,984,608.	\$211,151.	\$2,195,759.
Plant & Soil Sciences	\$1,772,169.	\$1,534,451.	\$3,306,620.
Animal and Food Sciences	\$2,749,272.	\$442,607.	\$3,191,879.
Entomology	\$1,231,511.	\$-1,002,816.	\$228,695.
Forestry	\$596,567.	\$51,343.	\$647,910.
Horticulture	\$626,459.	\$473,318.	\$1,099,777.
Plant Pathology	\$912,188.	\$527,920.	\$1,440,108.
Community & Leadership Devel	\$22,760.	\$181,740.	\$204,500.
Veterinary Science	\$667,827.	\$40,000.	\$707,827.
Landscape Architecture	\$30,446.	\$0.	\$30,446.
Facilities Management Administration	\$147,000.	\$0.	\$147,000.
Regulatory Services	\$185,264.	\$0.	\$185,264.
Veterinary Diagnostic Laboratory	\$121,720.	\$32,006.	\$153,726.
Family & Consumer Sciences	\$2,253,449.	\$583,046.	\$2,836,495.
e-Extension	\$394,247.	\$261,693.	\$655,940.
Agr Programs	\$118,312.	\$213,500.	\$331,812.
Nutrition and Food Science	\$5,000.	\$179,007.	\$184,007.
Merchandising, Apparel & Textiles	\$65,574.	\$27,779.	\$93,353.
Ky Tobacco Research & Dev Center	\$169,055.	\$-148,629.	\$20,426.
<u>Agriculture Totals:</u>	\$14,988,752.	\$4,531,658.	\$19,520,410.
<u>Minority Affairs</u>			
Minority Affairs	\$63,813.	\$0.	\$63,813.
Student Support Services	\$0.	\$283,658.	\$283,658.
<u>Minority Affairs Totals:</u>	\$63,813.	\$283,658.	\$347,471.
<u>Library Administration</u>			
Library Administration	\$208,375.	\$384,087.	\$592,462.
Libraries	\$106,450.	\$50,000.	\$156,450.
Medical Center Library	\$28,820.	\$0.	\$28,820.
<u>Library Administration Totals:</u>	\$343,645.	\$434,087.	\$777,732.
<u>Office of the Provost</u>			
Center for Clinical & Translational Scie	\$1,896,261.	\$70,250.	\$1,966,511.
Art Museum	\$2,390.	\$0.	\$2,390.
Partnership Inst. for Math and Science	\$1,148,500.	\$0.	\$1,148,500.
International Affairs	\$917,181.	\$89,812.	\$1,006,993.
<u>Office of the Provost Totals:</u>	\$3,964,332.	\$160,062.	\$4,124,394.
<u>Arts & Sciences</u>			
Appalachian Center	\$70,000.	\$0.	\$70,000.
Anthropology	\$720,277.	\$324,473.	\$1,044,750.
Ky Archaeological Survey	\$45,000.	\$2,000.	\$47,000.
Chemistry	\$1,137,812.	\$785,495.	\$1,923,307.
Geography	\$35,980.	\$101,382.	\$137,362.
Geology	\$489,733.	\$110,097.	\$599,830.

Sponsored Project Awards Received Through Fiscal Year 2012 as of 4/30/2012

	New Accounts	Adjustments to Existing Accounts	Total
<u>Provost Units</u>			
<u>Arts & Sciences</u>			
Mathematics	\$327,829.	\$201,917.	\$529,746.
Physics and Astronomy	\$952,771.	\$1,390,749.	\$2,343,520.
Psychology	\$3,417,773.	\$2,093,414.	\$5,511,187.
Statistics	\$95,886.	\$495,702.	\$591,588.
Sociology	\$45,749.	\$524,227.	\$569,976.
Biological Sciences	\$774,147.	\$510,462.	\$1,284,609.
History	\$70,400.	\$9,600.	\$80,000.
Philosophy	\$23,450.	\$0.	\$23,450.
<u>Arts & Sciences Totals:</u>	\$8,206,807.	\$6,549,518.	\$14,756,325.
<u>Business & Economics</u>			
Management	\$537,513.	\$137,466.	\$674,979.
Center for Business & Econ Res	\$60,000.	\$10,000.	\$70,000.
B&E Poverty Center	\$2.	\$2,832,349.	\$2,832,351.
Center for Entrepreneurship	\$0.	\$20,339.	\$20,339.
<u>Business & Economics Totals:</u>	\$597,515.	\$3,000,154.	\$3,597,669.
<u>Education</u>			
Education	\$11,395.	\$0.	\$11,395.
Curriculum & Instruction	\$329,217.	\$22,500.	\$351,717.
Educational & Counseling Psych	\$134,824.	\$0.	\$134,824.
Kinesiology and Health Promoti	\$5,000.	\$0.	\$5,000.
STEM Education	\$132,673.	\$0.	\$132,673.
Special Ed & Rehab Counseling	\$1,123,588.	\$475,812.	\$1,599,400.
Collaborative Center for Literacy Develo	\$0.	\$12,130.	\$12,130.
<u>Education Totals:</u>	\$1,736,697.	\$510,442.	\$2,247,139.
<u>Engineering</u>			
Center for Biomedical Engineering	\$202,080.	\$290,417.	\$492,497.
Visualization Center	\$2,315,647.	\$350,300.	\$2,665,947.
Computer Science	\$825,027.	\$570,778.	\$1,395,805.
Kentucky Transportation Center	\$6,350,391.	\$3,785,445.	\$10,135,836.
OISTL/Engineering Distance Learning	\$83,992.	\$5,995.	\$89,987.
Chemical and Materials Engin.	\$153,513.	\$1,838,410.	\$1,991,923.
Civil Engineering	\$76,088.	\$66,478.	\$142,566.
Mining Engineering	\$1,336,166.	\$100,000.	\$1,436,166.
Electrical and Computer Engineering	\$1,959,702.	\$38,228.	\$1,997,930.
UK Center for Manufacturing	\$0.	\$531,141.	\$531,141.
Mechanical Engineering	\$1,726,541.	\$964,964.	\$2,691,505.
<u>Engineering Totals:</u>	\$15,029,147.	\$8,542,156.	\$23,571,303.
<u>Law</u>			
Law	\$18,000.	\$0.	\$18,000.
<u>Law Totals:</u>	\$18,000.	\$0.	\$18,000.
<u>Communication & Information Studies</u>			
Communication & Information Studies	\$55,000.	\$0.	\$55,000.
School of Journalism	\$16,000.	\$36,500.	\$52,500.
Communication	\$447,882.	\$0.	\$447,882.
<u>Communication & Information Studies Totals:</u>	\$518,882.	\$36,500.	\$555,382.

Sponsored Project Awards Received Through Fiscal Year 2012 as of 4/30/2012

	New Accounts	Adjustments to Existing Accounts	Total
<u>Provost Units</u>			
<u>Design</u>			
Design	\$252,000.	\$0.	\$252,000.
<u>Design Totals:</u>	\$252,000.	\$0.	\$252,000.
<u>Social Work</u>			
Social Work	\$2,759,246.	\$209,952.	\$2,969,198.
Center on Trauma and Children (CTAC)	\$1,508,389.	\$0.	\$1,508,389.
<u>Social Work Totals:</u>	\$4,267,635.	\$209,952.	\$4,477,587.
<u>Graduate School</u>			
Martin School of Public Policy	\$399,180.	\$234,439.	\$633,619.
Graduate School Dean	\$0.	\$283,280.	\$283,280.
Center for Biomedical Engineering	\$43,000.	\$0.	\$43,000.
<u>Graduate School Totals:</u>	\$442,180.	\$517,719.	\$959,899.
<u>Provost Units Totals:</u>	\$138,783,765.	\$89,860,328.	\$228,644,093.
University Totals:	\$147,485,889.	\$89,959,014.	\$237,444,903.