Sponsored Projects Annual Report, Fiscal Year 2013

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University of California, Berkeley

Chancellor
Nicholas B. Dirks
Executive Vice Chancellor and Provost
George W. Breslauer
Vice Chancellor for Research
Graham R. Fleming
Assistant Vice Chancellor - Research Administration and Compliance
Patrick Schlesinger

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http://berkeley.edu
The University of California, Berkeley is one of the world’s leading universities in research, teaching, and public service, with an enrollment of nearly 26,000 undergraduates and more than 10,000 graduate students. The campus employs 1,505 full-time and 604 part-time faculty in more than 130 academic departments and more than 80 interdisciplinary research units. UC Berkeley is divided into 14 colleges and schools, most of which are subdivided into departments. The campus offers over 9,800 undergraduate and graduate courses in 375 degree programs, and typically produces more Ph.D.s than any other U.S. university.

The Sponsored Projects Office (SPO) at UC Berkeley is responsible for endorsing and authorizing proposals to and interpreting, negotiating, and accepting contracts and grants for projects funded by federal and state agencies, foundations, and other public and private sources. SPO prepares and negotiates all subawards for collaborative research. SPO is part of the Research Administration and Compliance Office, under the Vice Chancellor for Research.

Berkeley Coeus is the campus research contract and grant system of record and is managed by the Research Administration and Compliance Office. The Berkeley Coeus web site provides UC Berkeley departments and organized research units with reports on contract and grant proposals and awards administered within the unit. The site also provides reports on funding by sponsor category and funding by department that can be accessed by the public.

Research Proposals and Awards, Funding Overview

Ten-Year Comparison of Funding Requested and Funding Received, FY 2004-2013

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Requested</td>
<td>$1,413.6</td>
<td>$1,539.2</td>
<td>$1,271.0</td>
<td>$1,936.3</td>
<td>$2,110.0</td>
<td>$2,376.4</td>
<td>$2,290.4</td>
<td>$2,343.4</td>
<td>$1,937.3</td>
<td>$1,736.7</td>
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<tr>
<td>Received</td>
<td>$584.8</td>
<td>$491.2</td>
<td>$469.2</td>
<td>$504.3</td>
<td>$953.9</td>
<td>$643.0</td>
<td>$744.0</td>
<td>$717.3</td>
<td>$713.7</td>
<td>$709.8</td>
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</tbody>
</table>
Project period funding includes all funding anticipated for a project, reporting in the fiscal year of its begin date. Budget period funding reports each budget period for a project in the fiscal year of its begin date.

Ten-Year Comparison of Project and Budget Period Funding, FY 2004-2013
(dollars in millions)

Ten-Year Comparison of Number of New Awards Received, FY 2004-2013
Activity type “Other” primarily includes funding transferred from the Lawrence Berkeley National Laboratory for administrative purposes, along with projects that span multiple activities or do not cleanly fit into the five other categories.
UC Berkeley colleges, schools, and divisions include the Colleges of Chemistry, Engineering, Natural Resources, and Environmental Design, as well as Optometry, Law, Journalism, Public Policy, Public Health, Education, Business, Social Welfare, and others.

Organized Research Units (ORUs) report to the Vice Chancellor for Research and span many disciplines. These institutes, centers, and departments exist primarily to conduct research, and include the Space Sciences Laboratory, the Institute of Transportation Studies, the Berkeley Seismological Laboratory, and many others.

The College of Letters and Science, or L&S, includes Biological, Physical, Social Science, and Arts and Humanities Divisions.
Fiscal Year 2013 Number of Proposals Submitted by Control Unit
(3,012 total)

- Colleges, Schools, & Divisions: 1,600 (53%)
- Letters & Science: 746 (25%)
- Organized Research: 598 (20%)
- Student Affairs: 57 (2%)
- Others: 11 (0%)

Ten-Year Comparison of Number of Proposals Submitted by Control Unit, FY 2004-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Colleges &amp; Schools</th>
<th>Letters &amp; Science</th>
<th>Organized Research</th>
<th>Student Affairs</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1,439</td>
<td>555</td>
<td>599</td>
<td>63</td>
<td>15</td>
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<tr>
<td>2005</td>
<td>1,574</td>
<td>609</td>
<td>671</td>
<td>51</td>
<td>19</td>
</tr>
<tr>
<td>2006</td>
<td>1,480</td>
<td>672</td>
<td>707</td>
<td>55</td>
<td>9</td>
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<tr>
<td>2007</td>
<td>1,608</td>
<td>657</td>
<td>733</td>
<td>39</td>
<td>4</td>
</tr>
<tr>
<td>2008</td>
<td>1,636</td>
<td>666</td>
<td>853</td>
<td>34</td>
<td>12</td>
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<tr>
<td>2009</td>
<td>1,893</td>
<td>779</td>
<td>1,003</td>
<td>44</td>
<td>11</td>
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<tr>
<td>2010</td>
<td>1,887</td>
<td>813</td>
<td>903</td>
<td>52</td>
<td>32</td>
</tr>
<tr>
<td>2011</td>
<td>1,708</td>
<td>753</td>
<td>874</td>
<td>68</td>
<td>9</td>
</tr>
<tr>
<td>2012</td>
<td>1,824</td>
<td>806</td>
<td>799</td>
<td>66</td>
<td>7</td>
</tr>
<tr>
<td>2013</td>
<td>1,600</td>
<td>746</td>
<td>598</td>
<td>57</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>16,649</td>
<td>7,056</td>
<td>7,740</td>
<td>529</td>
<td>129</td>
</tr>
</tbody>
</table>
Fiscal Year 2013 Funding Summary by Control Unit
($709.9 million total - dollars in millions)

- Colleges, Schools, & Divisions: $390.7 million (55%)
- Organized Research: $214.4 million (30%)
- Letters & Science: $92.6 million (14%)
- Student Affairs: $11.8 million (2%)
- Others: $0.4 million (0%)

Ten-Year Funding Summary by Control Unit, FY 2004-2013
(dollars in millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Colleges &amp; Schools</th>
<th>Organized Research</th>
<th>Letters &amp; Science</th>
<th>Student Affairs</th>
<th>Others</th>
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</thead>
<tbody>
<tr>
<td>2004</td>
<td>$290.6</td>
<td>$209.3</td>
<td>$71.4</td>
<td>$13.4</td>
<td>$13.4</td>
</tr>
<tr>
<td>2005</td>
<td>$254.1</td>
<td>$130.5</td>
<td>$98.2</td>
<td>$8.4</td>
<td>$8.4</td>
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<td>2006</td>
<td>$259.0</td>
<td>$138.8</td>
<td>$60.3</td>
<td>$11.0</td>
<td>$11.0</td>
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<tr>
<td>2007</td>
<td>$289.0</td>
<td>$132.4</td>
<td>$70.6</td>
<td>$12.3</td>
<td>$12.3</td>
</tr>
<tr>
<td>2008</td>
<td>$321.8</td>
<td>$524.3</td>
<td>$92.1</td>
<td>$15.8</td>
<td>$15.8</td>
</tr>
<tr>
<td>2009</td>
<td>$321.4</td>
<td>$188.6</td>
<td>$118.4</td>
<td>$14.6</td>
<td>$14.6</td>
</tr>
<tr>
<td>2010</td>
<td>$400.3</td>
<td>$221.1</td>
<td>$101.3</td>
<td>$21.3</td>
<td>$21.3</td>
</tr>
<tr>
<td>2011</td>
<td>$392.3</td>
<td>$190.6</td>
<td>$119.9</td>
<td>$14.5</td>
<td>$14.5</td>
</tr>
<tr>
<td>2012</td>
<td>$456.6</td>
<td>$149.4</td>
<td>$94.9</td>
<td>$12.9</td>
<td>$12.9</td>
</tr>
<tr>
<td>2013</td>
<td>$390.7</td>
<td>$214.4</td>
<td>$92.6</td>
<td>$12.2</td>
<td>$12.2</td>
</tr>
</tbody>
</table>
In the current fiscal year, federal funding again made up the largest portion of total funding received, although the federal share declined from 56% in fiscal year 2012 to 47% in fiscal year 2013. This is partly due to the impacts of federal funding sequestration and partly to the large amount of funding received from nonprofit organizations. Nonprofit organizations, including foundations, charities, research institutes, and institutions of higher education, increased by nearly 210% over last year’s $74.8 million, at $226.7 million in fiscal year 2013.

Funding from nonfederal governmental sources included $73.6 million from State of California agencies, down from $111.2 million last year.

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**Award Highlight**

**MasterCard Foundation Scholars Program: Supporting Sub-Saharan African Students at Berkeley**

The vision of the MasterCard Foundation Scholars Program is to educate and develop bright yet economically marginalized young people in Africa who have a demonstrated “give-back” ethos and who will contribute to the transformation of the continent. The MasterCard Foundation Scholars Program is a $500 million education initiative that will provide 15,000 talented, yet economically disadvantaged students from developing countries—particularly in Africa—with comprehensive support for secondary and university education.

At UC Berkeley, a $30 million award from this program will provide holistic support—financial, academic, social, and career counseling—to 113 students from Sub-Saharan Africa from 2012 to 2020. The scholars will pursue both undergraduate and professional master’s degrees.

Administered out of the Center for African Studies, the program at the University of California, Berkeley is supported by a broad cross-section of functional and disciplinary units on campus including the Division of Student Affairs, Undergraduate Admissions, the Graduate Division, the Berkeley International Office, and the International House.

[http://admissions.berkeley.edu/mastercardfoundation](http://admissions.berkeley.edu/mastercardfoundation)
Fiscal Year 2013 Funding Summary by Sponsor Category  
($709.9 million total - dollars in millions)

Ten-Year Funding Summary by Sponsor Category, FY 2004-2013  
($6.53 billion total - dollars in millions)
Fiscal Year 2013 Funding Summary by Federal Sponsor
($335 million total - dollars in millions)

- **DOE**: $42.0 million (13%)
- **DOD**: $35.3 million (11%)
- **NASA**: $23.1 million (7%)
- **DOED**: $7.6 million (2%)
- **USDA**: $4.8 million (1%)
- **DOT**: $3.4 million (1%)
- **USDI**: $1.0 million (0%)
- **Other**: $33.1 million (10%)

DHHS: $92.6 million (28%)

Funding from federal sources declined by 15% in fiscal year 2013. The Department of Health and Human Services and the National Science Foundation each awarded slightly more than $92 million, making up 28% and 27% of the federal total respectively, down from the 35% and 30% respectively in fiscal year 2012.

Ten-Year Funding Summary by Federal Sponsor, FY 2004-2013
($3.57 billion total - dollars in millions)

- **DOE**: $122.2 million (3%)
- **DOD**: $290.1 million (8%)
- **NASA**: $335.8 million (9%)
- **DOED**: $129.0 million (4%)
- **USDA**: $51.7 million (2%)
- **DOT**: $12.2 million (1%)
- **USDI**: $22.2 million (1%)
- **Other**: $129.0 million (4%)

DHHS: $1,226.3 million (34%)

NSF: $1,048.2 million (29%)
Federal Agencies

Ten-Year Funding Summary for Top Five Federal Sponsors, FY 2004-2013

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</thead>
<tbody>
<tr>
<td>DHHS</td>
<td>$113.4</td>
<td>$131.4</td>
<td>$108.7</td>
<td>$101.1</td>
<td>$111.4</td>
<td>$115.7</td>
<td>$175.6</td>
<td>$138.2</td>
<td>$138.3</td>
<td>$92.6</td>
</tr>
<tr>
<td>NSF</td>
<td>$102.9</td>
<td>$78.8</td>
<td>$76.6</td>
<td>$90.0</td>
<td>$102.3</td>
<td>$89.0</td>
<td>$154.3</td>
<td>$142.8</td>
<td>$119.5</td>
<td>$92.1</td>
</tr>
<tr>
<td>DOE</td>
<td>$24.6</td>
<td>$22.8</td>
<td>$20.5</td>
<td>$18.3</td>
<td>$24.7</td>
<td>$27.6</td>
<td>$31.1</td>
<td>$39.3</td>
<td>$56.9</td>
<td>$42.1</td>
</tr>
<tr>
<td>NASA</td>
<td>$115.0</td>
<td>$18.6</td>
<td>$23.9</td>
<td>$16.1</td>
<td>$29.3</td>
<td>$25.8</td>
<td>$21.8</td>
<td>$43.8</td>
<td>$18.4</td>
<td>$23.1</td>
</tr>
<tr>
<td>DOD</td>
<td>$16.6</td>
<td>$18.8</td>
<td>$18.8</td>
<td>$21.9</td>
<td>$30.9</td>
<td>$29.2</td>
<td>$54.1</td>
<td>$26.5</td>
<td>$38.1</td>
<td>$35.3</td>
</tr>
</tbody>
</table>

Award Highlight

Development Impact Lab: New Technological Solutions to Global Development Problems

The Development Impact Lab (DIL), based at UC Berkeley, will bring together world-class science, engineering, and economics to change the way new technologies for development are designed, evaluated, and scaled in the developing world. DIL’s legacy will include a new inter-disciplinary field of Development Engineering that formalizes the use of advanced science and technology to understand and address development problems. DIL is funded under a $20 million award that is part of the Higher Education Solutions Network, a USAID program designed to enhance the Agency’s ability to pioneer scientific, technological and innovative approaches to development challenges.

http://dil.berkeley.edu/
Funding from nonfederal sources increased by more than 15% in fiscal year 2013, at $374.7 million, helping to offset the drop in federal funding. $226.7 million was received from nonprofit agencies, more than in any prior year and more than double the amount received in fiscal year 2012.
Largest Awards, Fiscal Year 2013


Ashok J. Gadgil, Engineering Research Support Organization, “Development Innovations Lab (DIL),” U.S. Agency for International Development, $20,000,000


Jamie H. Cate, California Institute for Quantitative Biosciences, “Center for RNA Systems Biology,” National Institute of General Medical Sciences, $9,992,931


Fiona M. Doyle, Engineering Research Support Organization, “BEARS - Berkeley,” Berkeley Education Alliance for Research in Singapore, $6,021,420

Xiang Zhang, Engineering Research Support Organization, “An Optical Nanoscope for Imaging Beyond Diffraction Limit,” Gordon and Betty Moore Foundation, $6,000,000

Simons Institute: Collaborative Research in Theoretical Computing and “Big Data”

A groundbreaking $60 million award given to UC Berkeley from the Simons Foundation will establish the campus as the worldwide center for theoretical computer science. The grant—a significant investment in the University’s future—funds the creation of the Simons Institute for the Theory of Computing, where top computer theorists and researchers from around the globe converge to explore the mathematical foundations of computer science and extend them to tackle challenges in fields as diverse as mathematics, health care, climate modeling, astrophysics, genetics, economics and business. At the same time, Berkeley researchers secured two multi-million-dollar awards from the National Science Foundation to enhance research approaches that tackle “big data,” data sets so large and complex that they defy conventional analysis using existing software tools and mathematical approaches.

http://simons.berkeley.edu

TerraSwarm: Integrating the Physical World with the Cyber World to Improve Quality of Life

Researchers at UC Berkeley’s Electrical Engineering and Computer Science department are spearheading a multi-university team that is being awarded $27.5M for the new TerraSwarm Research Center. The Center, launched on January 15, 2013, is addressing the huge potential (and associated risks) of pervasive integration of smart, networked sensors and actuators into our connected world. The five-year grant is being awarded by the industry members of the Semiconductor Research Corporation and the Defense Advanced Research Projects Agency.

In the TerraSwarm view, “the swarm” is an extension of “the cloud” that goes well beyond information technology to improve our energy efficiency, safety, comfort, security, and human effectiveness by integrating the physical world with the cyber world. It leverages recent advances in the variety, cost, size, and power consumption of sensing and actuation devices and the associated communication networks.

http://www.terraswarm.org