

Contracts & Grants Q318 Award Report

Anticipating increased federal support

Extramural funding summary

Award reports for the current quarter total about \$1.14 billion, about 6% below Q3 of last year, after adjusting for inflation, which has been running at about 3 percent. For the year to date, the award total is around \$4.3 billion, about 3.4% below last year, also after inflation. Federal funding for the year is \$2.4 billion, which is essentially the same as last year at this point, after inflation.

Based on the federal budget bill passed in late March, there is good reason to expect that the final quarter of UC's fiscal year will bring an increase in federal funding. This should raise UC's year-end total to at least last year's level, and perhaps beyond that slightly, even after accounting for inflation. The 2018 federal budget calls for increased research appropriations to the agencies that represent UC's largest federal sources of sponsored project support. The National Institutes of Health, UC's largest funder, is expected to receive a boost of about \$3 billion (8.7 percent). The National Science Foundation, UC's second-largest source of external research funds, will see an increase of 3.9%. Other key federal sources for UC, notably the Departments of Energy and Defense and NASA, will also receive increased funding. Climate science at NOAA and the Environmental Protection Agency, while not increasing, will at least continue at last year's levels.

That these increases have not yet appeared in campus Q3 award reports is unsurprising. For essentially all of that quarter, the future of the budget bill was hanging in the balance, and while no one expected to see the draconian cuts proposed by the President the previous May, federal agencies are well aware that Congressional budget actions are not wholly predictable. Only after receiving definite assurances of research appropriations will agencies begin to obligate funds.

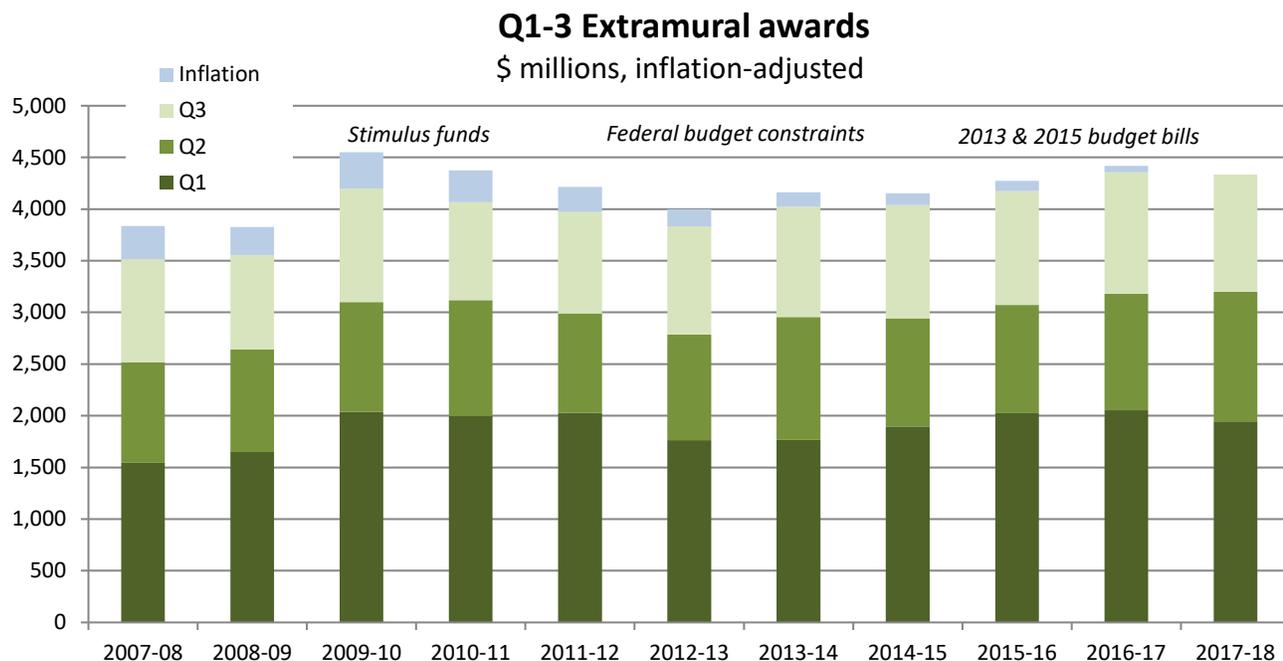
The final two quarters of the 2018 federal fiscal year — Q4 of UC's 2017-18 fiscal year and Q1 of 2018-19 — are likely to see significant increases in federal award reports, particularly for NIH-funded research projects.

For more information and analysis

Several interactive data visualizations and data tables are available online at the [UC Information Center](#). These include a visualization showing [UC's research award history](#) since 1999, a [geographic representation](#) of UC's project sponsors, and data tables summarizing [UC's annual award and proposal totals](#). Also available in the [Research section](#) of the UCOP Institutional Research and Academic Planning website is a series of Topic Briefs presenting a detailed analysis of recent trends in UC's federal, state, corporate and non-profit funding. (Link urls are listed on last page.)

I. Quarterly award trends

For the first three quarters of FY 2017-18, award funding from all sources came to \$4.3 billion, with \$1.14 billion of this total during Q3. Before taking inflation into account, this is about \$22 million below the same period last year. However, with an inflation rate of nearly 3% over the last year, what would have been a modest decrease of about 0.5% becomes a decline in spending power of about 3.4%.



Even though there has been significant growth in award funding since federal budget constraints were lifted in 2014, inflation-adjusted totals are still below where they were when stimulus funds were available. Because awards are typically spent 1-2 years or more after they are reported, high rates of inflation can reduce the purchasing power of the award just as the project is winding down.

Extramural awards by quarter

\$ millions, inflation-adjusted

| | 08-09 | 09-10 | 10-11 | 11-12 | 12-13 | 13-14 | 14-15 | 15-16 | 16-17 | 17-18 |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| Q1 | 1,922 | 2,387 | 2,305 | 2,273 | 1,930 | 1,905 | 2,012 | 2,124 | 2,115 | 1,947 |
| Q2 | 1,154 | 1,246 | 1,292 | 1,073 | 1,120 | 1,285 | 1,111 | 1,099 | 1,158 | 1,251 |
| Q3 | 1,065 | 1,288 | 1,095 | 1,100 | 1,144 | 1,152 | 1,162 | 1,156 | 1,213 | 1,137 |
| Q4 | 1,610 | 1,611 | 1,528 | 1,533 | 1,503 | 1,816 | 1,796 | 1,934 | 1,778 | |
| FY Total | 5,752 | 6,532 | 6,220 | 5,980 | 5,697 | 6,159 | 6,080 | 6,314 | 6,265 | |

Award totals over the course of a fiscal year vary with the federal funding cycle. Federal award reporting peaks during the last two quarters of the federal fiscal year; in UC's fiscal year, these quarters correspond to Q4 of one fiscal year and to Q1 of the next. With direct federal sponsorship providing 55-60% or more of all UC's awards, the federal funding cycle produces sharp quarterly spikes in overall funding.

II. Award trends by sponsor category

Federal agencies continue to provide the majority of UC's contracts and grants, and federal funding has been relatively constant for the last four years. Direct federal funding to UC for the year to date is close to last year's total, even after accounting for an inflation rate of 3%. This is the second quarter of the federal fiscal year, and with the passage of the Omnibus Budget, it is likely that federal agency funding will increase over the next several quarters.

Q1-3 Awards by sponsor category, FY 2008-09 to 2017-18

\$ millions, inflation-adjusted

| SPONSOR | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Federal | 2,436 | 3,246 | 3,016 | 2,631 | 2,218 | 2,468 | 2,438 | 2,371 | 2,429 | 2,399 |
| State | 361 | 350 | 364 | 383 | 462 | 330 | 309 | 297 | 398 | 304 |
| Other gov't* | 123 | 95 | 89 | 124 | 125 | 126 | 92 | 81 | 108 | 106 |
| Corporate | 328 | 308 | 316 | 413 | 376 | 526 | 425 | 633 | 570 | 577 |
| Non-profit | 517 | 499 | 480 | 443 | 578 | 482 | 590 | 596 | 559 | 483 |
| Academia** | 376 | 423 | 427 | 453 | 436 | 411 | 430 | 401 | 423 | 466 |
| TOTAL \$ | 4,141 | 4,921 | 4,693 | 4,447 | 4,194 | 4,342 | 4,284 | 4,380 | 4,486 | 4,335 |

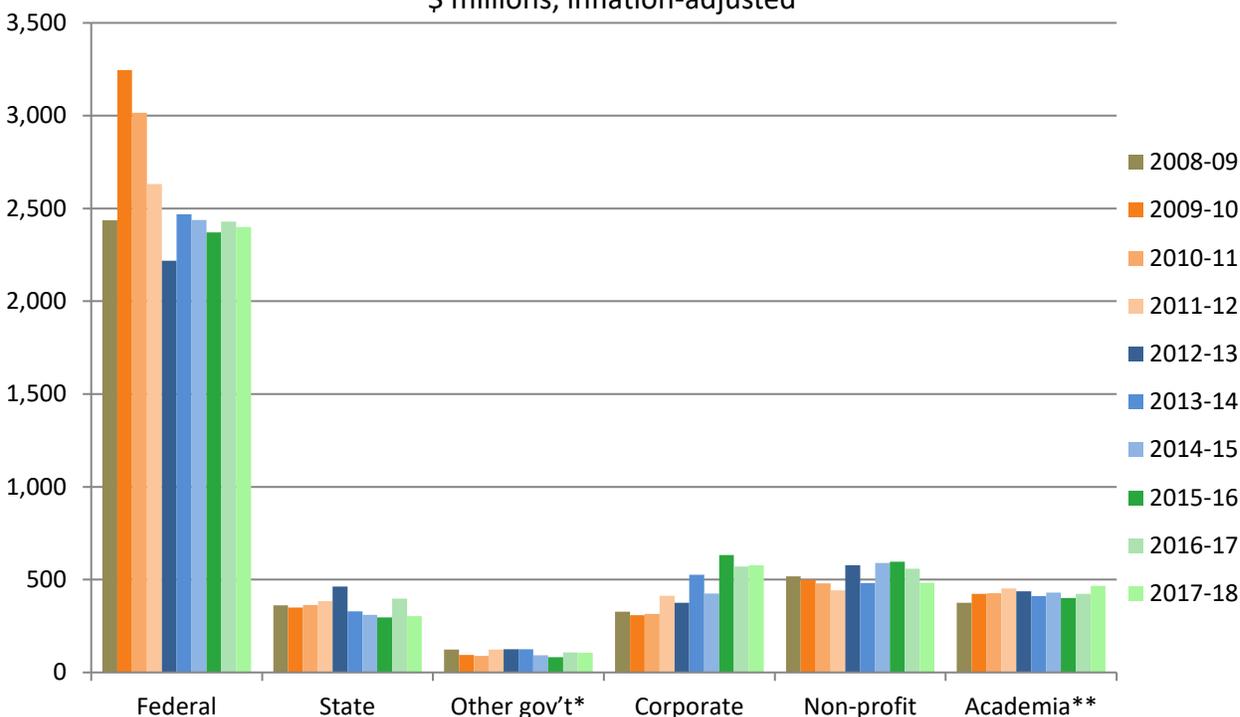
* Other government includes agricultural market order boards.

**Academia includes other research universities and institutions, DOE labs, campuses and UCOP.

The large federal award totals for 2009-10 through 2011-12 reflect the additional Recovery Act (ARRA) funds received from federal agencies.

Q1-3 Funding by sponsor category, 2008-09 to 2017-18

\$ millions, inflation-adjusted



In addition to \$2.4 billion in direct federal funding for the first three quarters of 2017-18, UC also received about \$497 million in federal funds indirectly, as flow-through funds (also referred to as sub-awards) from non-federal sponsors. The main sources of flow-through funds for this period are other research universities, non-profit organizations and state agencies with federal awards. Overall, about one-quarter of UC's non-federal funding originated with federal agencies.

Flow-through funds by sponsor category, Q1-3, FY 2017-18 (\$ millions)

| SPONSOR | FLOW-THROUGH \$ | AWARD TOTAL \$ | % OF TOTAL |
|------------------|-----------------|----------------|--------------|
| State | 61.3 | 303.6 | 20.2% |
| Other gov't. | 10.8 | 106.8 | 10.1% |
| Business | 40.3 | 577.2 | 7.0% |
| Non-profit | 93.8 | 483.7 | 19.4% |
| Higher education | 227.1 | 291.3 | 78.0% |
| DOE Labs | 22.9 | 34.8 | 65.9% |
| Campuses/OP | 40.4 | 140.2 | 28.8% |
| Total \$ | 496.6 | 1,937.6 | 25.6% |

When sub-awards are included, the federal contribution to UC's award funding for the year to date is about 67% of the total.

III. Award trends by project type

Research awards from all sources for the year to date amounted to about \$3.7 billion, including \$371 million in clinical trial sponsorship. Training, service and other awards came to about \$659 million. The dramatic increase in clinical trial funding over the last several years is due almost entirely to corporate sponsorship. Last year, during FY 2016-17, clinical trial awards totaled nearly \$510 million, \$456 million of this from corporate sponsors. This trend is likely to parallel the continued growth of the global pharmaceutical industry during 2017-18 and beyond.

Q1-3 Award amounts by project type \$ millions, inflation-adjusted

| PROJECT TYPE | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Research | 3,111 | 3,880 | 3,644 | 3,518 | 3,073 | 3,202 | 3,232 | 3,203 | 3,300 | 3,305 |
| Clinical trials | 152 | 161 | 137 | 174 | 261 | 351 | 244 | 406 | 355 | 371 |
| Training | 244 | 285 | 288 | 238 | 226 | 218 | 208 | 199 | 182 | 163 |
| Public service | 345 | 265 | 305 | 270 | 331 | 323 | 276 | 308 | 351 | 318 |
| Other projects | 290 | 330 | 319 | 247 | 303 | 249 | 324 | 263 | 298 | 178 |
| TOTAL \$ | 4,141 | 4,921 | 4,693 | 4,447 | 4,194 | 4,342 | 4,284 | 4,380 | 4,486 | 4,335 |

IV. Award trends by recipient location

Award totals for the year to date, after adjusting for an inflation rate of about 3%, are about 3.4% below last year overall, but with significant variation among locations.

Q1-3 Awards by location

\$ millions, inflation-adjusted

| UC LOCATION | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | Yearly change |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|
| San Francisco | 782 | 905 | 932 | 808 | 895 | 1,063 | 1,022 | 1,092 | 1,165 | 1,031 | -11.5% |
| Los Angeles | 795 | 902 | 906 | 774 | 612 | 644 | 705 | 699 | 694 | 725 | 4.4% |
| San Diego | 723 | 866 | 781 | 772 | 708 | 786 | 682 | 691 | 713 | 716 | 0.5% |
| Berkeley | 569 | 728 | 702 | 645 | 640 | 634 | 561 | 560 | 606 | 565 | -6.7% |
| Davis | 510 | 608 | 588 | 642 | 624 | 474 | 600 | 572 | 522 | 529 | 1.4% |
| Irvine | 252 | 285 | 280 | 238 | 229 | 246 | 210 | 280 | 275 | 228 | -17.1% |
| Santa Barbara | 145 | 215 | 155 | 190 | 143 | 151 | 134 | 136 | 134 | 151 | 12.7% |
| LBNL | 107 | 139 | 118 | 109 | 96 | 101 | 106 | 99 | 139 | 122 | -12.7% |
| Santa Cruz | 110 | 127 | 108 | 120 | 110 | 111 | 108 | 87 | 74 | 117 | 59.0% |
| Riverside | 71 | 96 | 79 | 93 | 76 | 80 | 93 | 106 | 104 | 109 | 5.0% |
| ANR | 18 | 9 | 11 | 10 | 16 | 14 | 21 | 21 | 17 | 20 | 16.7% |
| Merced | 16 | 20 | 14 | 14 | 16 | 25 | 25 | 18 | 28 | 17 | -39.8% |
| UCOP | 44 | 20 | 20 | 33 | 30 | 13 | 18 | 21 | 15 | 4 | -70.5% |
| TOTAL \$ | 4,141 | 4,921 | 4,693 | 4,447 | 4,194 | 4,342 | 4,284 | 4,380 | 4,486 | 4,335 | -3.4% |

Reports of state and non-profit funding for the year to date are somewhat behind last year's pace, and this accounts for some of the location-specific declines in funding. For example, Berkeley received an \$80 million federal/state Title IV-E social work training program award during Q1 of last year. This is an ongoing project and a renewal proposal has been submitted, but the award has not yet been reported.

V. Significant campus awards

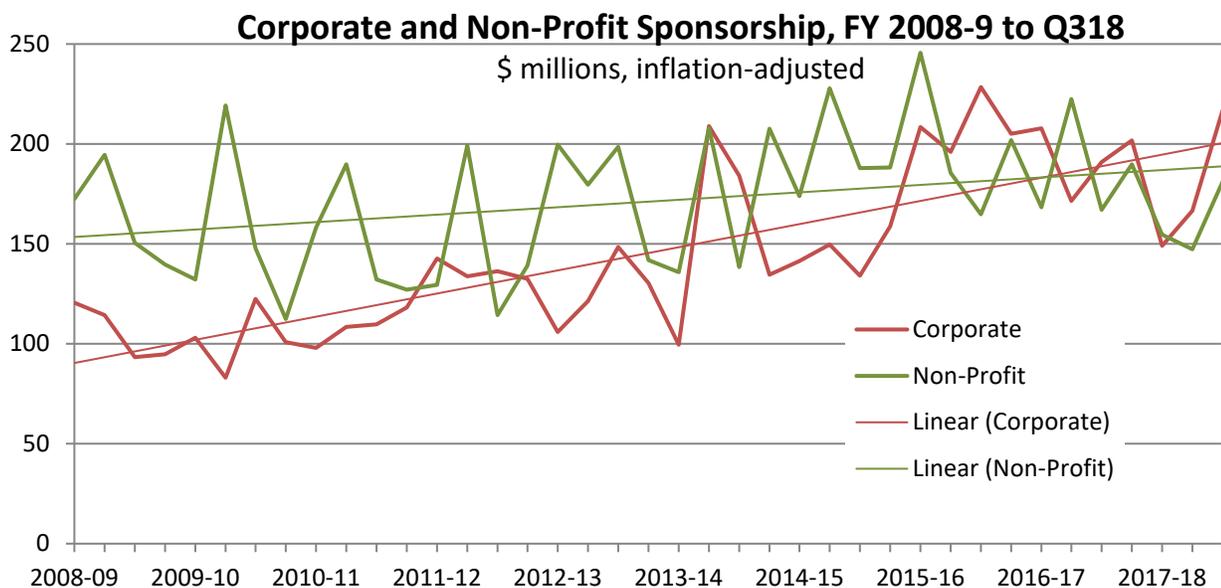
During Q318, UC received nearly 4,700 contracts and grants from about 1,500 sponsors, plus 1,400 Material Transfer Agreements. Listed below are significant awards that were reported this quarter by campuses, Agriculture & Natural Resources and Lawrence Berkeley Laboratory.

| UC LOCATION | SPONSOR CATEGORY | SPONSOR | PROJECT TITLE | AMOUNT |
|-------------|------------------|--|---|--------------|
| Berkeley | Federal | NASA Goddard Space Flight Center | The Ionospheric CONnection Explorer (ICON) Phases B-F | \$10,333,000 |
| Davis | State | California Department of Water Resources | Prop 50, consolidated management of nitrate treatment: implementation, demonstration & affordability assessment | \$4,793,000 |
| Irvine | Federal | National Cancer Institute | Cancer Center Support Grant (CCSG) | \$2,086,000 |

| | | | | |
|-----------------------------------|------------|---|---|--------------|
| Los Angeles | Corporate | Eisai Companies | A placebo-controlled, double-blind, parallel-group, 24-month study to evaluate the efficacy and safety of a new treatment for subjects with early Alzheimer's Disease | \$8,689,000 |
| Merced | Federal | National Institute for Food and Agriculture | Sustaining California's food production through integrated water and energy management | \$1,105,000 |
| Riverside | UC Funds | UC Lab Fees Research Program | UC-Lab Center for Electricity Distribution Cybersecurity | \$3,524,000 |
| San Diego | Federal | National Institutes of Health, Office of the Director | California Precision Medicine Research Program Consortium | \$8,997,000 |
| San Francisco | Non-profit | Bill & Melinda Gates Foundation | Azithromycin for the prevention of neonatal, infant and child mortality in Burkina Faso, and safety assessment | \$13,541,000 |
| Santa Barbara | Corporate | Simpson and Simpson Business and Personnel Services, Inc. | San Onofre Nuclear Generating Station Mitigation Project Monitoring Program, 2018-2019 | \$5,749,000 |
| Santa Cruz | Federal | National Institutes of Health, Office of the Director | Upgrade of a pulsed electron paramagnetic resonance spectrometer | \$1,495,000 |
| Agriculture and Natural Resources | State | California Department Of Public Health | Obesity prevention, evaluation and research (three-year) | \$3,326,000 |
| Lawrence Berkeley Lab | State | California Energy Commission | Risk management and decision support system for ensuring the integrity of underground natural gas storage infrastructure in California | \$2,976,000 |

VI. Private Funding Sources

Private sources of funding have been steadily increasing in both dollar amount and relative importance.



Private project funding to UC declined during the recession, but has been steadily increasing since then. The growth in corporate funding that began in 2015-16 is principally due to an increase in clinical trial sponsorship, and reflects both the larger number and the increasing cost of conducting clinical trials. While there is considerable year-to-year and quarter-to-quarter variation in private sponsorship, the overall trend for both corporate and non-profit sponsorship shows a steady increase that is likely to continue as long as the economy remains strong, and the pharmaceutical industry continues to invest in developing new therapies and treatments.

VII. FY 2017-18 Funding Forecast

For the last two fiscal quarters — beginning October 2017 and running through the end of March 2018 — federal agencies were operating under a Continuing Resolution, which effectively kept their award funding at the previous year's appropriation levels. It wasn't until the very end of March that agencies were assured of their 2018 appropriations, and could begin to act less conservatively.

The result for UC, as well as other research universities, was that federal project funding for the past several quarters closely tracked the amounts received last year, before taking inflation into account. But with the passage of the Omnibus Budget in late March, Congress chose to substantially increase discretionary appropriations for agency-funded research and related projects, including an additional 8.7% for the National Institutes of Health, UC's largest single source of sponsored project funding. The Q218 Award Report (also available [online](#)) provides an agency-level analysis of how these increases could affect UC's federal funding, which could amount to a boost of \$200 million or more over the course of the federal 2018 fiscal year.

This increase would most likely be spread out over the final two quarters of the federal fiscal year, which translate to Q4 of UC's 2017-18 fiscal year and Q1 of 2018-19.

Link urls:

UC Information Center: <https://www.universityofcalifornia.edu/infocenter>

UC's research award history: <https://www.universityofcalifornia.edu/infocenter/uc-research-award-history>

Geographic representation of UC's project sponsors:

<https://www.universityofcalifornia.edu/infocenter/sponsored-projects>

Data tables summarizing UC's annual award and proposal totals: <https://www.universityofcalifornia.edu/infocenter/awards-and-proposals>

Research section of the UCOP Institutional Research and Academic Planning IRAP website:

<http://www.ucop.edu/institutional-research-academic-planning/content-analysis/research/index.html>