

Obtaining federal grant funds has become increasingly competitive. Compared to a decade ago, university researchers must submit more proposals, for larger amounts, simply to maintain the same level of research activity.

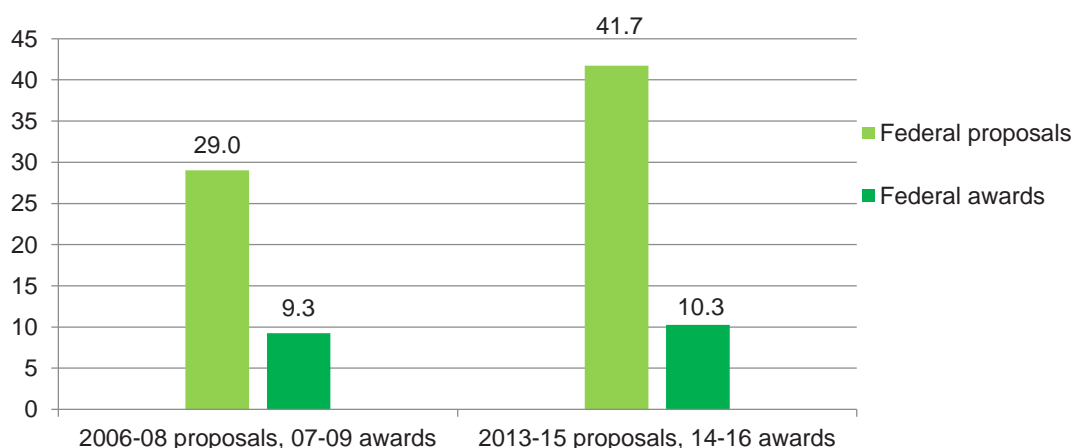
For at least the last decade, the U.S. research community has been expanding but federal appropriations for academic research and development have barely kept up with inflation. Obtaining federal grants has become more competitive every year, with only a fraction of the proposals submitted to federal agencies ultimately being funded. At the National Institutes of Health, for example, the proposal success rate for all institutions is now about 21%.

Despite this competition, UC has successfully maintained its position as the largest single academic recipient of federal R&D funds, and continues to perform nearly one-tenth of the nation's academic research. But it has only managed to do so by increasing its time and resource investment in generating larger numbers of federal proposals for ever-increasing amounts.

This analysis will assess UC's success with federal proposals over the past several years — a period of relative stability in federal funding — as compared to a baseline period just prior to the recession, the Recovery Act and the Sequester, all of which had major impacts on federal appropriations for academic research.

Over the last three federal fiscal years (2014 through 2016) UC received about \$10.3 billion in federal awards. Because there is a considerable time lag between when a proposal is submitted and when an award is approved and reported by a campus, some of these awards will be connected to proposals submitted prior to 2014. To capture these earlier proposals, and to avoid tabulating proposals that will receive awards after 2016, the 2014-16 award amounts will be compared to proposals submitted during 2013-15. During that period, UC submitted about \$41.7 billion in federal proposals, suggesting that the proposal yield rate is presently less than 25 per dollar proposed. For a baseline comparison, UC submitted about \$29 billion in federal proposals during 2006-08, and received \$9.3 billion in awards during 2007-09 for a proposal yield rate of 32 cents per dollar proposed.

Federal Proposals and Awards, \$ billions
Recent three-year totals compared to pre-recession baseline



Federal FY	2006	2007	2008	2009	Total		2013	2014	2015	2016	Total
Proposals, \$M	9,080	9,580	10,324		28,983		12,691	14,586	14,444		41,720
Awards, \$M		2,795	3,011	3,456	9,261			3,450	3,394	3,431	10,274
Proposal yield					0.320						0.246

The decline in yield, from \$0.32 per proposal dollar to under \$0.25, provides a clear demonstration of how competitive the federal grant process has become over the last decade. To counter this long-term, declining yield rate on federal proposals and maintain research activity levels, UC's research community has adjusted by producing larger numbers of proposals. In 2015, the number of proposals UC submitted to federal agencies was 30% higher than in 2006.

<i>Federal FY</i>	2006	2007	2008		2013	2014	2015
Proposals, \$M	9,080	9,580	10,324		12,691	14,586	14,444
# of Proposals	10,164	10,881	11,045		12,240	12,948	13,208
Proposal Avg. \$K	893	880	935		1,037	1,127	1,094
<i>Inflated Prop. Avg.</i>	1,102	1,046	1,076		1,082	1,158	1,105

In addition, the average projected cost per proposal has also risen, from under \$900K to about \$1.1 million, an increase of nearly 23% from 2006 to 2015. However, this increase is actually just barely keeping up with inflation.

Similarly, federal award totals to UC have also increased significantly over the last decade. But after taking inflation into account, federal funding is at essentially the same level as before the recession, and substantially below the peak years of 2009 through 2011, when Recovery Act funds added over \$1 billion to UC's federal award total.

<i>Federal FY</i>	2007	2008	2009		2014	2015	2016
Awards, \$M	2,795	3,011	3,456		3,450	3,394	3,431
<i>Inflated award \$M.</i>	3,322	3,466	3,836		3,547	3,432	3,431

This analysis of federal proposals and awards points to two critical factors at work: the race against inflation and the heightened intensity of competition for grants, as reflected in the lower yield rate. The net effect of this combination of factors is that despite a larger number and dollar volume of proposals, the inflation-adjusted federal award total in 2016 is about where it was a decade ago.

These comparisons point to a process for obtaining federal contracts and grants that has become increasingly demanding and labor-intensive. Simply maintaining the same level of federal research activity from year to year has required a substantial increase in the number of proposals submitted. This, in turn, has necessitated an ever-increasing level of effort in drafting, reviewing, processing, submitting and tracking an ever-larger number of proposals. The growing administrative effort required to secure federal grants is one of the less-visible indirect costs of conducting research — costs that are never fully recovered from UC's federal agency sponsors.