Situation: The Vice President for Research and Graduate Education provides an annual report to

the President on aggregated research activity of the UNC system.

Background: Data on research and sponsored programs from the most recent complete fiscal year

are collected, reviewed by the campuses, and condensed into a report. This report is

for FY 2015 (July 1, 2014 – June 30, 2015).

Assessment: In total, UNC institutions reported \$1,384,276,761 in new awards in FY15. When

adjusted to take into account the \$26.5 million in sub awards made between UNC institutions, the FY15 total was a record \$1,357,826,288. This represents a less than

1% increase over FY14 and a 34% increase over FY05.

The number of proposals submitted in FY15 is the largest to date, topping 12,000 for

the first time.

As has been the trend for several years, the U.S. Federal government provides

approximately two-thirds of the total sponsored program funding received by UNC

institutions in a given year.

Data on select commercial indicators and activities generated from UNC research

show a steady increase in invention disclosures and relatively stable numbers of start-

ups, US patents issued, and licenses or options executed.

Action: This item is for information only.



FY2015 University of North Carolina Research and Sponsored Programs Report to the President

December 2015

Executive Summary

This annual report provides a brief snapshot of the sponsored program activity across UNC for FY15.

In total, UNC institutions reported \$1,384,276,761 in new awards in FY15. When adjusted to take into account the nearly \$26.5 million in subawards made between UNC institutions, the FY15 total was a record \$1,357,826,288. This represents a less than 1% increase over FY14 and a 34% increase over FY05.

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FY15 Sponsored Program Funding for UNC

At \$1.36 billion, the adjusted total in new awards showed a <1% increase in adjusted total from the previous fiscal year. Adjusted award dollars exclude any subawards made between UNC institutions. Adjusted annual totals increased in FY15 for twelve institutions (ECU, NCA&T, UNC-CH, UNCC, ASU, FSU, UNCW, WCU, WSSU, UNCA, UNCSA and NCSSM).1

Table 1. FY15 Sponsored Program Activity

| Table 1. FY15 Sponso | | | Total Awards Dollars | | | Adi | usted Total Award | |
|-----------------------|------|------------------|----------------------|--------------------|-----------------------------------|---------------|-------------------|---------------------|
| | Т | otal Proposals | | includes inter- | Inter-institutional Award Dollars | | | llars (minus inter- |
| | | Dollars | | titutional awards) | | | l | stitutional awards) |
| Doctoral Granting | | | | | | | | |
| Institutions | | | | | | | | |
| ECU | \$ | 202,185,530.68 | \$ | 44,350,476.87 | \$ | 6,053,572.00 | | \$38,296,904.87 |
| NCA&T | \$ | 207,081,696.14 | \$ | 53,208,109.23 | \$ | 1,154,935.00 | | \$52,053,174.23 |
| NCSU | \$ 1 | 1,096,391,245.00 | \$ | 307,711,162.00 | \$ | 3,985,930.00 | | \$303,725,232.00 |
| UNCCH | \$ 3 | 3,446,334,447.14 | \$ | 796,171,468.68 | \$ | 4,521,456.62 | | \$791,650,012.06 |
| UNCC | \$ | 261,833,796.32 | \$ | 47,069,288.00 | \$ | 3,832,424.00 | | \$43,236,864.00 |
| UNCG | \$ | 145,502,267.28 | \$ | 30,255,992.85 | \$ | 761,921.14 | | \$29,494,071.71 |
| | | | | | | | | |
| Master's Institutions | | | | | | | | |
| ASU | \$ | 62,234,271.97 | \$ | 12,921,507.04 | \$ | 826,486.00 | | \$12,095,021.04 |
| FSU | \$ | 51,491,300.48 | \$ | 11,657,845.80 | \$ | 737,507.00 | | \$10,920,338.80 |
| NCCU | \$ | 106,411,604.61 | \$ | 20,152,205.00 | \$ | 625,465.00 | | \$19,526,740.00 |
| UNCP | \$ | 5,209,595.02 | \$ | 3,740,262.67 | \$ | 172,443.00 | | \$3,567,819.67 |
| UNCW | \$ | 70,851,150.84 | \$ | 12,910,473.66 | \$ | 601,548.00 | | \$12,308,925.66 |
| WCU | \$ | 17,523,180.16 | \$ | 5,712,555.36 | \$ | 522,698.00 | | \$5,189,857.36 |
| WSSU | \$ | 27,488,480.50 | \$ | 11,200,104.99 | \$ | 680,961.99 | | \$10,519,143.00 |
| Baccalaureate | | | | | | | | |
| Institutions | | | | | | | | |
| ECSU | \$ | 27,276,440.52 | \$ | 6,290,942.83 | \$ | 193,585.00 | | \$6,097,357.83 |
| UNCA | \$ | 7,454,024.74 | \$ | 4,342,407.55 | \$ | 1,554,958.00 | | \$2,787,449.55 |
| Special Focus | | | | | | | | |
| Institutions | | | | | | | | |
| UNCSA | \$ | 9,864,228.00 | \$ | 133,500.00 | | | \$ | 133,500.00 |
| NCSSM | \$ | 668,281.98 | \$ | 1,358,370.98 | \$ | - | \$ | 1,358,370.98 |
| System Office | | | | | | | | |
| UNCGA | \$ | 35,080,848.74 | \$ | 15,090,087.46 | \$ | 224,582.00 | | \$14,865,505.46 |
| | | | | | | | | |
| Totals | \$ | 5,780,882,390.12 | \$ | 1,384,276,760.97 | \$ | 26,450,472.75 | | \$1,357,826,288.22 |

¹UNC fiscal year runs July 1 through June 30.

² Not all current fiscal year submissions are funded in the same fiscal year. Additionally, FY Total Proposed Dollars includes some non-competing renewal proposals (primarily associated with NIH funding). ³ Some current fiscal year awards are prior fiscal year submissions.

Trends in Sponsored Program Awards, FY97-15

In the last 18 years, UNC sponsored program activity has more than doubled, even without the recent boost from the American Recovery and Reinvestment Act (ARRA or "stimulus," shown in tan). A significant factor in this sustained growth is the wise use of facilities and administrative (F&A) receipts to help institutions cover the costs of supporting the research enterprise. UNC institutions utilize F&A receipts to, among other things, maintain and upgrade research infrastructure; invest in new research through matching funds, seed grants and "start up" packages for new faculty; support library holdings; and ensure compliance with federal and other regulations.

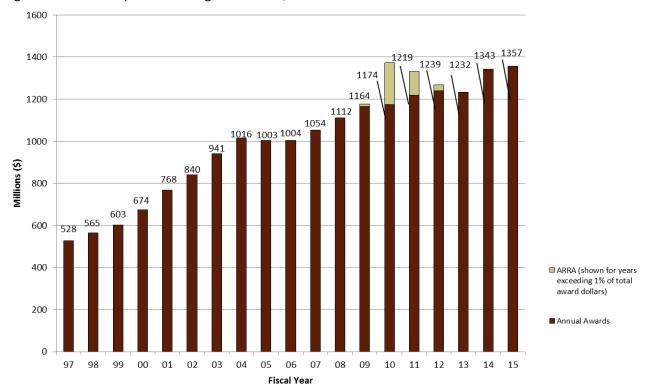


Figure 1. Trends in Sponsored Program Awards, FY97-FY15*

^{*}To avoid double-counting, inter-institutional subagreements are not included in Annual Awards.

Trends in Proposal Submissions

In FY15, the number of proposals submitted exceeded the previous year as well as the high water mark seen during the American Recovery and Reinvestment Act ("stimulus") period. The growth in proposal submissions over nearly a decade underscores the important contributions made by campus research faculty, administrators, and staff.

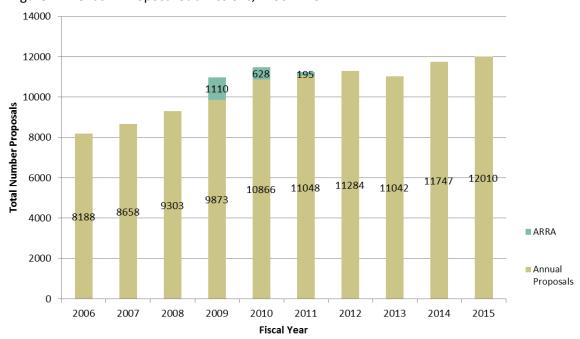


Figure 2. Trends in Proposal Submissions, FY06-FY15*

^{*}Inter-institutional subagreements require staff effort and are included in Annual Proposals.

FY15 Sponsors

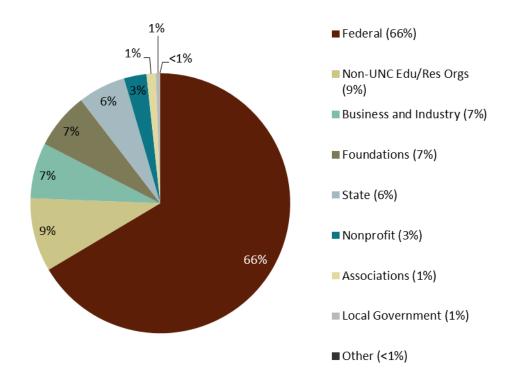
The relative contribution of Federal dollars has remained steady over several years, at two-thirds of the total sponsored awards each year. In actual dollars, sponsored awards from several different sectors grew in FY15 over the previous fiscal year. Dollars from non-UNC educational and research institutions grew by 33%. Dollars from foundations grew by 48%, and dollars from associations grew 125%.

Table 2. FY15 Sponsors by category

| Table 2.1113 Sponsors by category | |
|--|------------------|
| Unites States Federal Government | |
| 5771 - National Aeronautics and Space Administration (NASA) | \$4,238,484.38 |
| 5764 - National Foundation for the Arts and Humanitites (NFAH) | \$952,705.00 |
| 5738 - National Science Foundation (NSF) | \$115,449,435.00 |
| 5845 - US Small Business Administration (SBA) | \$1,717,922.00 |
| 5670 - Department of Agriculture (USDA) | \$46,823,094.65 |
| 5634 - Department of Commerce (DOC) | \$8,892,639.77 |
| 5522 - Department of Defense (DOD) | \$48,847,051.42 |
| 5500 - US Department of Education (DOED) | \$77,360,405.30 |
| 5453 - Department of Energy (DOE) | \$25,035,048.00 |
| 5285 - Department of Health and Human Services (DHHS) | \$54,968,655.82 |
| 5332 - National Institutes of Health (NIH) | \$434,265,028.43 |
| 5446 - Department of Homeland Security (DHS) | \$4,051,272.08 |
| 5442 - Department of Housing and Urban Development (HUD) | \$188,639.00 |
| 5393 - US Department of the Interior (DOI) | \$6,109,890.59 |
| 5430 - US Department of Justice (DOJ) | \$1,480,835.64 |
| 5424 - Department of Labor (DOL) | \$50,000.00 |
| 5409 - US Department of State (DOS) | \$4,737,948.75 |
| 5375 - US Department of Transportation (DOT) | \$2,788,615.46 |
| 5368 - Department of Veterans Affairs (VA) | \$747,765.13 |
| 5269 - United States Environmental Protection Agency (EPA) | \$7,239,744.51 |
| 5262 - Agency for International Development (USAID) | \$53,295,011.00 |
| 5803 - Corporation for National and Community Service (CNCS) | \$1,172,498.00 |
| 5807 - All Other Federal Agencies | \$1,155,033.00 |
| 5809 - Executive Office of the President (EOP) | \$0.00 |
| 18425 - U.S. Commission on Civil Rights | \$0.00 |
| 22001 - National Academy of Education | \$0.00 |
| 25130 - President of the United States | \$0.00 |
| 25131 - Administrative Office of the United States Courts | \$0.00 |
| Confidential | \$16,205,168.00 |
| Total Awards from Federal Government | \$917,772,890.93 |
| Nonprofit Organization | |
| State of North Carolina | \$13,828,950.38 |
| All other states | \$24,891,045.91 |
| Total Awards from Nonprofit Organization | \$38,719,996.29 |
| Association | |
| State of North Carolina | \$2,091,829.70 |
| All other states | \$14,031,845.01 |
| Total Awards from Association | \$16,123,674.71 |
| | |

| Foundation | |
|---|--------------------|
| State of North Carolina | \$27,920,353.21 |
| All other states | \$69,078,441.31 |
| Total Awards from Foundation | \$96,998,794.52 |
| | . , , |
| Local Government | |
| State of North Carolina | \$6,939,438.35 |
| All other states | \$511,928.88 |
| Total Awards from Local Government | \$7,451,367.23 |
| | |
| Educational and Research Institutions | |
| State of North Carolina | \$36,974,082.09 |
| All other states | \$89,605,612.98 |
| Total Awards from Educational and Research Institutions | \$126,579,695.07 |
| | |
| State Government | |
| State of North Carolina | \$73,783,008.61 |
| All other states | \$8,090,476.00 |
| Total Awards from State Government (NC) | \$81,873,484.61 |
| | |
| Business and Industry | ¢21 042 2FF 07 |
| State of North Carolina | \$21,842,255.97 |
| All other states | \$73,669,640.68 |
| Total Awards from Business and Industry | \$95,511,896.65 |
| Other Sponsors | |
| State of North Carolina | \$864,786.00 |
| All other states | \$219,834.79 |
| Foreign Sponsors | \$2,160,340.17 |
| Total Awards from Other Sponsors | \$3,244,960.96 |
| | |
| Total Awards Amount | \$1,384,276,760.97 |
| UNC inter-institional awards | |
| Adjusted Total | \$1,357,826,288.22 |

Figure 3. FY15 Sponsors by category



FY15 Commercial Activity

UNC institutions possess a wide array of existing and emerging strengths in research and related commercial activities. Some institutions are developing inputs and activities (e.g. strategic faculty hires, sponsored awards, entrepreneurship programs) while others are focused on realizing greater outputs, outcomes or impacts from the assets already in place.

Invention disclosures are one output and a first step in a pathway towards the realization of commercial applications from university discoveries. Outcomes can include, but are not limited to, patents issued, licenses, and start-ups. Income from licensing university-generated technologies is another output that has shown strong growth over the past four years.

The Association of University Technology Managers (AUTM) Annual Licensing Survey is a leading source of information on university commercial activity and indicators of potential in this area. With occasional exception, UNC's doctoral granting institutions report their activities in the annual AUTM survey. Data from all other institutions are self-reported.

Table 3. Commercialization in FY15

| | Invention Disclosures | US Patents Issued | Licenses or Options Executed | Start-ups | License Income | | |
|---|--------------------------|----------------------|------------------------------------|-----------|----------------|--|--|
| Doctoral Granting Institutions | | | | | | | |
| ECU | 56 | 8 | 5 | 1 | \$144,997.00 | | |
| NCA&TSU | 19 | 0 | 2 | 1 | \$33,500.00 | | |
| NCSU | 291 | 20 | 139 | 12 | \$7,601,069.33 | | |
| UNCCH | 136 | 48 | 51 | 9 | \$2,975,335.43 | | |
| UNCC | 47 | 7 | 12 | 4 | \$37,297.81 | | |
| UNCG | 16 | 4 | 6 | 2 | \$62,391.00 | | |
| | | | | | | | |
| all other Institutions ASU/FSU/NCCU/UNCW) | | | | | | | |
| | 16 | 3 | 3 | 2 | \$ 31,663.93 | | |

Tab le 3. Trends in Commercialization, FY12-FY15

| | Invention Disclosures | US Patents Issued | Licenses or Options Executed | Start-ups | L | icense Income |
|-------------|--------------------------|----------------------|------------------------------------|-----------|----|---------------|
| FY15 Totals | 576 | 90 | 218 | 31 | \$ | 10,886,254.50 |
| FY14 Totals | 467 | 97 | 212 | 31 | \$ | 15,927,896.60 |
| FY13 Totals | 449 | 85 | 197 | 30 | \$ | 10,735,866.79 |
| FY12 Totals | 532 | 91 | 149 | 17 | \$ | 8,977,264.00 |