



# THE UNIVERSITY OF NORTH CAROLINA SYSTEM

UNIVERSITY OF NORTH CAROLINA  
RESEARCH AND SPONSORED PROGRAMS

REPORT TO THE PRESIDENT  
Fiscal Year 2022

April 2023

University of North Carolina System  
Raleigh, North Carolina

## **Executive Summary**

**The annual Report to the President provides a snapshot of sponsored program activity across the University of North Carolina System. For fiscal year 2022 (FY2022), the total award dollars increased slightly despite the anticipated ebb in funding for COVID 19 research. Growth in inter-institutional awards indicates strong collaboration between UNC System institutions. North Carolina State Government sponsored awards accounted for most non-federal funding. Commercialization activity expanded, with a significant increase in patents issued.**

## **Introduction**

The University of North Carolina System is a public, multi-campus university dedicated to the service of North Carolina and its people. It encompasses 17 diverse constituent institutions and other educational, research, and public service organizations. Each share in the University's mission to discover, create, transmit, and apply knowledge to address the needs of individuals and society. This mission is accomplished through instruction, which imparts the skills necessary for individuals to lead responsible, productive, and personally satisfying lives; through research, scholarship, and creative activities, which advance knowledge and enhance the educational process; and through public service, which contributes to the solution of societal problems and enriches quality of life in the state. In the fulfillment of this mission, the University shall seek an efficient use of available resources to ensure high quality service to the citizens of the state.

While instruction is the primary responsibility of the constituent institutions, research and economic development are also essential to the UNC System's work on behalf of North Carolina. In addition to developing new discoveries and innovations, UNC System engagement in research and its related activities supports student success by providing a platform for training graduate students. It also attracts external funding, contributes to North Carolina's business climate and reputation, and enhances recruitment and retention of talented faculty and students.

## **Fiscal Year 2022 Sponsored Program Funding for UNC**

UNC System institutions generated a total of \$2.2B in sponsored programs funding in FY2022 from all sources. Of that amount, federal COVID institutional support awards and inter-institutional awards distributed among UNC System institutions totaled \$294,146,577. After subtracting those subcategories, the adjusted total for FY2022 was \$1.9B. This total includes competitively awarded COVID research funding. Federal agency funding accounts for 67% of the award portfolio. Table 1 contains more detailed sponsored program funding data for each UNC System institution in FY2022.

Table 1. FY2022 Sponsored Program Activity<sup>1-2-3</sup>

	Total Proposals Dollars	Total Awards Dollars (includes COVID and Inter-institutional awards)	Inter-institutional Award Dollars (-)	COVID Relief Dollars (-)	Awards Dollars that are both Inter-institutional and COVID (+)	Adjusted Award Dollars (minus inter-institutional and COVID Awards)
<b>Doctoral Institutions</b>						
ECU	\$289,282,018	\$82,113,040	\$4,698,934	\$999,999	\$999,999	\$77,414,107
NCA&T	\$482,473,508	\$97,260,152	\$3,012,061	\$2,152,079	\$58,628	\$92,154,640
NCSU	\$1,544,783,274	\$408,942,390	\$9,504,166	\$0	\$0	\$399,438,224
UNCCH	\$4,242,086,135	\$1,203,086,663	\$5,779,777	\$137,112,270	\$93,027	\$1,060,287,643
UNCC	\$345,957,618	\$57,299,125	\$4,170,150	\$0	\$0	\$53,128,975
UNCG	\$178,290,081	\$52,846,542	\$2,166,009	\$1,011,097	\$75,000	\$49,744,437
UNCW	\$92,315,782	\$15,309,495	\$580,441	\$97,210	\$22,000	\$14,653,844
<b>Master's Institutions</b>						
ASU	\$73,408,898	\$19,507,147	\$2,098,599	\$2,052,137	\$913,768	\$16,270,179
ECSU	\$36,404,977	\$20,273,528	\$1,449,088	\$9,576,354	\$113,820	\$9,361,906
FSU	\$39,517,660	\$41,712,640	\$803,239	\$26,033,208	\$121,882	\$14,998,075
NCCU	\$126,941,357	\$27,347,627	\$378,491	\$1,121,179	\$0	\$25,847,957
UNCP	\$28,096,666	\$11,119,775	\$798,950	\$2,381,591	\$218,174	\$8,157,408
WCU	\$19,132,017	\$7,628,289	\$448,099	\$662,153	\$64,456	\$6,582,493
WSSU	\$70,536,803	\$41,899,665	\$960,767	\$23,917,314	\$0	\$17,021,584
<b>Baccalaureate Institutions</b>						
UNCA	\$10,805,932	\$5,678,232	\$509,589	\$0	\$0	\$5,168,643
<b>Special Focus Institutions</b>						
UNCSA	\$482,700	\$457,700	\$0	\$0	\$0	\$457,700
NCSSM	\$1,284,000	\$766,000	\$115,000	\$0	\$0	\$651,100
<b>System Office</b>						
UNCSO	\$62,454,232	\$63,695,538	\$0	\$49,556,627	\$0	\$14,138,911
<b>Totals</b>	<b>\$7,644,253,658</b>	<b>\$2,156,943,548</b>	<b>\$37,473,359</b>	<b>\$256,673,218</b>	<b>\$2,680,754</b>	<b>\$1,865,477,725</b>

<sup>1</sup>UNC fiscal year runs July 1 through June 30.

<sup>2</sup> Not all current fiscal year proposal submissions are funded in the same fiscal year. This can result in an institution reporting proposal dollars which exceed award dollars. Additionally, FY Total Proposed Dollars data include some non-competing renewal proposals (primarily associated with NIH funding).

<sup>3</sup> When reporting research dollars, inter-institutional awards, or federal formula funding for institutional support (COVID relief) are excluded (funding for research and development on COVID is included). Due to sponsor coding discrepancies, federal and non-federal awards may not equal award totals.

## Trends in Sponsored Program Activity

From FY2020 to FY2022, UNC System sponsored programs activity remained strong. Despite decreasing pandemic-related research funding, Table 2 shows a 3.9% average year-to-year increase in sponsored program awards. Sustained growth in acquiring federal funding allows UNC System institutions to make targeted use of facilities and administrative (F&A) receipts to help cover the costs of supporting the research enterprise. UNC System institutions utilize F&A receipts to maintain and upgrade research infrastructure; to invest in new research through matching funds to provide seed grants and “start-up” packages for new faculty; to support library holdings; to provide cost share funding needed to attract new research projects and jobs to the state; and to ensure compliance with federal and other regulations.

Table 2. FY2020-2022 Sponsored Program Activity

	FY2020	FY2021	FY2022	FY2020-2022 \$ Change	FY2020-2022 % Change	Avg Yr to Yr Change
<b>Doctoral Institutions</b>						
<b>UNC-CH</b>	\$1,026,613,542	\$959,459,302	\$1,060,287,643	\$33,674,101	3%	2.0%
<b>NCSU</b>	\$389,376,400	\$375,652,139	\$399,438,224	\$10,061,824	3%	1.4%
<b>ECU</b>	\$56,573,622	\$70,774,441	\$77,414,107	\$20,840,485	37%	17.2%
<b>NC A&amp;T</b>	\$59,123,037	\$74,816,811	\$92,154,640	\$33,031,603	56%	24.9%
<b>UNCC</b>	\$48,673,755	\$54,965,020	\$53,128,975	\$4,455,220	9%	4.8%
<b>UNCG</b>	\$41,581,641	\$45,247,353	\$49,744,437	\$8,162,796	20%	9.4%
<b>UNCW</b>	\$8,046,681	\$12,064,147	\$14,653,844	\$6,607,163	82%	35.7%
<b>Master's Institutions</b>						
<b>ASU</b>	\$12,130,880	\$35,264,404	\$16,270,179	\$4,139,299	34%	68.4%
<b>FSU</b>	\$11,230,291	\$12,711,202	\$14,998,075	\$3,767,784	34%	15.6%
<b>NCCU</b>	\$34,269,524	\$24,005,788	\$25,847,957	-\$8,421,567	-25%	-11.1%
<b>UNCP</b>	\$3,898,424	\$7,337,333	\$8,157,408	\$4,258,984	109%	49.7%
<b>WCU</b>	\$5,690,728	\$6,075,384	\$6,582,493	\$891,765	16%	7.6%
<b>WSSU</b>	\$11,966,875	\$9,089,904	\$17,021,584	\$5,054,709	42%	31.6%
<b>ECSU</b>	\$10,025,273	\$8,433,098	\$9,361,906	-\$663,376	-7%	-2.4%
<b>Baccalaureate Institutions</b>						
<b>UNCA</b>	\$1,862,345	\$4,564,845	\$5,168,643	\$3,306,298	178%	79.2%
<b>Special Focus Institutions</b>						
<b>NCSSM</b>	\$640,559	\$2,180,000	\$651,000	\$10,441	2%	85.1%
<b>UNCSA</b>	\$60,180	\$117,000	\$457,700	\$397,520	661%	192.8%
<b>System Office</b>						
<b>UNC SO</b>	\$10,246,174	\$10,334,059	\$14,138,911	\$3,892,737	38%	18.8%
<b>UNC Total</b>	<b>\$1,732,009,932</b>	<b>\$1,713,083,231</b>	<b>\$1,865,477,725</b>	<b>\$133,467,795</b>	<b>8%</b>	<b>3.9%</b>

## Proposal Submissions and Quality

In FY2022, UNC System investigators requested \$7.6B in submitted proposals. The number of awarded proposals increased by 508, to 10,941, despite an 8% year-to-year decrease in the number of submitted proposals. Notably, national and international collaborations with other educational and research institutions generated 2,330 high quality funded proposals in FY2022.

## Fiscal Year 2022 Sponsors

As outlined in Table 3, the majority of the UNC System’s research portfolio is composed of federal government sponsored awards.

Table 3. FY2022 Federal Government Sponsored Awards<sup>4</sup>

United States Federal Government Agency Awards	Award Amount	Percent of Total Federal Awards
National Institutes of Health (NIH)	\$656,364,243	45%
US Department of Education (ED)	\$193,174,301	13%
National Science Foundation (NSF)	\$185,437,356	13%
Department of Health and Human Services (DHHS)	\$113,461,990	8%
US Department of Agriculture (USDA)	\$78,866,056	5%
Department of Defense (DOD)	\$59,467,631	4%
Department of Energy (DOE)	\$46,366,162	3%
Agency for International Development (USAID)	\$31,685,448	2%
Department of Commerce (DOC)	\$22,523,756	2%
United States Environmental Protection Agency (EPA)	\$11,457,737	<1%
US Small Business Administration (SBA)	\$9,686,714	<1%
US Department of Transportation (DOT)	\$8,019,438	<1%
US Department of the Interior (DOI)	\$6,705,138	<1%
Department of Homeland Security (DHS)	\$5,780,174	<1%
National Aeronautics and Space Administration (NASA)	\$5,431,417	<1%
All Other Federal Agencies	\$3,220,939	<1%
Department of Veterans Affairs (VA)	\$2,031,804	<1%
US Department of Justice (DOJ)	\$1,802,025	<1%
National Foundation for the Arts and Humanities (NFAH)	\$1,645,250	<1%
Corporation for National and Community Service (CNCS)	\$732,002	<1%
US Department of State (DOS)	\$649,668	<1%
US Department of Labor (DOL)	\$599,999	<1%
<b>Total Awards from Federal Government</b>	<b>\$1,445,109,247</b>	<b>100.00%</b>

<sup>4</sup>Unadjusted for institutional awards to capture full scope of inter-institutional collaboration.

The distribution of non-federal sponsored programs funding is outlined in Table 4. North Carolina State Government, educational and research institutions, and business and industry provided the largest amount of non-federal dollars to UNC System researchers, with North Carolina State Government sponsored awards increasing for the fifth straight year. Overall, the percentage of non-federal government awards increased to 33%, up from 27% in FY2021, showing institutions are competing successfully for a broader range of funding sources.

Table 4. FY2022 Non-Federal Government Sponsored Award<sup>5</sup>

<b>Non-Federal Government Awards by Sponsor Type</b>	<b>Dollar Award Amount</b>	<b>Percent of Total Awards</b>
State Government (NC)	\$202,942,535	29%
Educational and Research Institutions	\$190,826,879	27%
Business and Industry	\$106,021,154	15%
Foundation	\$103,061,239	14%
Nonprofit Organization	\$82,123,311	12%
Association	\$14,204,697	2%
Local Government	\$7,468,490	1%
State Government (non-NC)	\$4,592,034	<1%
Federal (non-US)	\$298,192	<1%
Other Sponsors	\$295,770	<1%
<b>Total Awards</b>	<b>\$711,834,301</b>	<b>100%</b>

<sup>5</sup>Unadjusted for institutional awards to capture full scope of inter-institutional collaboration.

### **Fiscal Year 2022 Commercial Activity**

UNC System institutions possess a wide array of existing and emerging strengths in research and related commercial activities. Institutional investments supporting these activities include strategic faculty hiring, sponsored awards, and entrepreneurship programs. In addition, institutions seek to maximize research and commercial activity with existing resources.

The commercial activity in this report uses the six metrics tracked by the Association of University Technology Managers (AUTM), through its Annual Licensing Survey. While only a subset of UNC System institutions participate in the annual AUTM survey, all doctoral institutions reported on the six metrics.

Table 5 summarizes FY2022 UNC System commercial activity (invention disclosures, U.S. patents issued, licenses or options executed, new start-up companies, and license income). In FY2022, there were a total of 459 invention disclosures, 214 patents issued, 291 licenses or options executed, 37 start-ups created, and \$18.4M in license income generated.

Data from FY2022 showed overall consistent commercialization activity and an above average number of patents issued. In FY2022, 214 patents were issued compared to the five-year annual average of 140 from FY2017-FY2021, marking 52% growth year-over-year. Notably, in FY2022, license income at UNC Charlotte increased 300% year-over-year, primarily from two IP exclusive license fee agreements with QM Power.

The UNC System strategic plan *Higher Expectations* (2022-2027) includes a research productivity goal measured by increases in licensing income and sponsored research. Five UNC doctoral institutions selected the research productivity metric as a component of their performance funding for the duration of the strategic plan. All five institutions saw improvement in this metric in the first year.

Table 5. Commercialization in FY2022

	Invention Disclosures	US Patents Issued	Licenses or Options Executed	Start-ups	License Income
<b>Doctoral Institutions</b>					
ECU	51	6	8	3	\$74,024
NCA&T	10	8	0	0	\$5,000
NCSU	205	54	193	18	\$6,092,044
UNCCH	140	58	70	5	\$11,800,000
UNCC	27	6	9	4	\$340,892
UNCG	5	0	6	6	\$40,769
UNCW	11	1	5	1	\$67,127
<b>Master's Institutions</b>					
ASU	3	0	0	0	0
FSU	0	1	0	0	0
NCCU	7	0	0	0	0