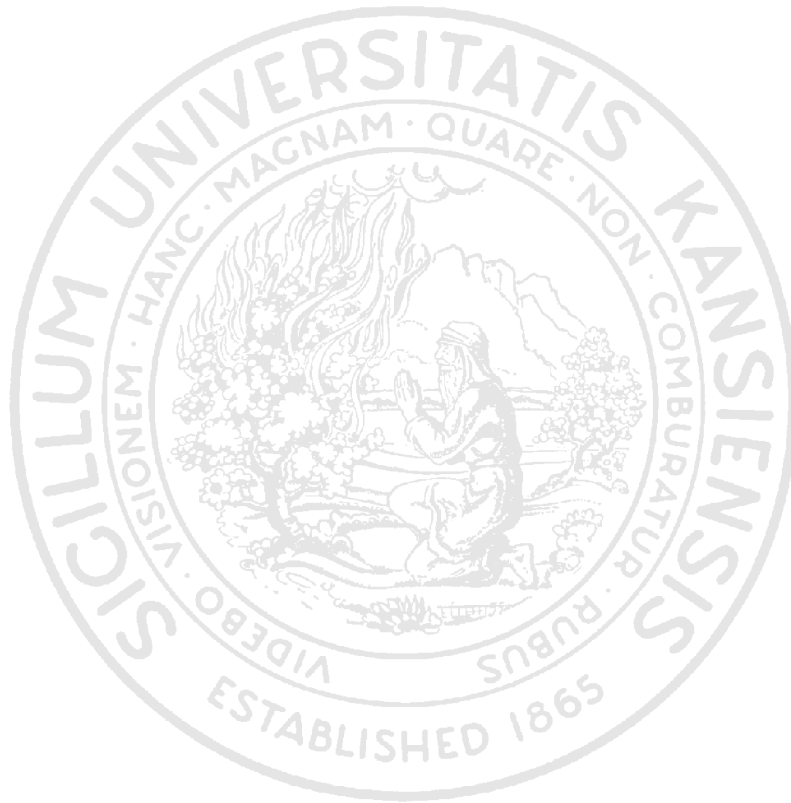


1999

A report on sponsored research at
The University of Kansas

Fiscal Year 1999 (July 1, 1998 - June 30, 1999)



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A Letter from Vice Chancellor Barnhill...



Robert E. Barnhill

*Vice Chancellor, Research & Public Service,
President, KU Center for Research*

Many positive and significant changes surrounding the research enterprise at the University of Kansas have occurred during the past year. We have reached several important milestones that warrant a collective “Congratulations!” to everyone involved in the research process.

- A few years ago, the Kansas Board of Regents set several research performance indicators for KU. Among them was reaching \$110 million in total research expenditures by FY2000, and \$120 million by the FY2002. In FY99, KU’s total research expenditure figure was \$168 million, surpassing the higher goal ***three years ahead of schedule.***
- We are developing more important research partnerships with private industry. Collaborations with industry groups such as Sprint, Merck Research Laboratories, AmeriSteel, Procter and Gamble, Adaptive Bandwidths, Ltd., and Nortel Networks provided \$13 million funding for FY99.
- For FY99, total federal expenditures rose by more than 13% from the preceding year.
- The Kansas City community has recognized KU’s research acumen and has initiated collaborative relationship agreements.

All of these points work together to improve our national rankings which are important for many reasons. Besides heightening the overall esteem of the university, being highly ranked helps to attract first class faculty and students. A high ranking is important to our students because they gain better educations which include a hands-on research component. This makes their degrees more prestigious and can translate into making them more marketable when seeking employment.

We are moving toward the admirable goal of becoming one of the top 50 public universities in terms of our level of federal funding. (Currently, we are ranked 60th.) In looking at the members of this august Top 50 group, we’ve found that there are 43 public universities that have not fallen out of the top 50 for the last eight years. Besides being very impressive, this information tells us how difficult it’s going to be to supplant

these “consistent members” of the top 50. That said, I can tell you without hesitation that we are definitely gaining ground in this pursuit.

Total KU research funding was up \$21 million in FY99, and funds from all sources totaled \$168 million. \$74 million came from federal funding, an 11.2% increase over the previous year. On the Lawrence campus, proposal submissions rose 40% between FY97 and FY99. Awards, which always trail proposals by a year or so, were up 12% this year over FY98. Over the past two fiscal years, expenditures rose by 25%.

Our strategy to increase research funding has two major components: internal improvements and the stimulation of larger projects. Assisting KU researchers in as many ways as possible is another method of helping the university improve its research rankings. At the KU Center for Research, we:

- have a strong customer orientation. Our customers (faculty and sponsors) are able to contact us with just about any type of problem or question, and our experienced staff is able to guide them through to a satisfactory resolution;
- promote a spirit of entrepreneurship, helping faculty researchers take the initiative in pursuing funding for a research interest. When this happens, we are supportive in a variety of ways across the life of the proposal or grant;
- have adopted a multiple credit allocation system whereby all investigators and their departments receive credit for research expenditures;
- encourage macro-level research/research administration collaborations;
- work with other administrative units on campus to fund both faculty start-up and retention packages.

The second prong of our strategy (stimulating larger projects) takes several forms, including:

- collaborations among various disciplines and across departments and/or institutions;
- broad areas of specialization (sometimes referred to as megathemes) which brings disparate groups of researchers together to work on projects in areas where KU currently has substantial strength;
- the six designated centers, which serve as umbrella administrative units for groups of researchers who are working in the areas of information technology, pharmacy, human development, the humanities, biodiversity, and learning disabilities;
- recruitment of “team-building” faculty members who have considerable breadth of experience and can coalesce groups of researchers in productive areas; and,
- entrepreneurial opportunities such as funding from the Research Development Fund and the General Research Fund may be pursued by KU researchers who produce excellent proposals.

Another avenue taken to improve our research rankings is to forge partnerships with other research entities. In line with Chancellor Hemenway's goal of KU being recognized as the premier research institution for the greater Kansas City area, we are developing a plan that will build KU's research infrastructure in a manner that will be beneficial to the city while enhancing our overall research goals. KU has initiated research relationships with Midwest Research Institute and the new Stowers Medical Research Institute (both in Kansas City), and with the *Research!America* firm. Ongoing efforts are continuing with the Senator Pat Roberts Committee on Science, Technology and the Future, and the Kansas Technology Enterprise Corporation (KTEC). KU has taken the state lead in information technology and in human biosciences research for both of these groups.

For the past four years, the Merrill Advanced Studies Center has held regional conferences focused on research policy development. Under the able direction of Dr. Mabel Rice, these conferences have led to the organization of a "Four Corners" group of research officers (from Kansas, Nebraska, Iowa and Missouri). These officials meet twice each year to discuss current research concerns and formulate policy recommendations for the future.

The KU Center for Research has been active in the many important facets of growing the research enterprise at KU. Research is important not only on the KU campuses, but also because of how it affects the economy of the entire state. Research institutions are now being viewed as engines of economic development. In a recent analysis of the economic impact made by KU graduates, we found that KU alumni who currently live in Kansas earn salaries in excess of \$3.5 billion. For every dollar the state invests in KU research, the expected yield in federally funded grants is \$4, although this return is not immediate. Another way to gauge the economic impact of research is to look at the jobs it produces. Using U.S. Department of Commerce indicators, the prestigious Association of American Universities (AAU) found that in Kansas, 40.6 jobs are created per \$1 million in research funding. Consequently, our most current compilation of statewide research statistics indicates that 9,600 jobs in Kansas can be directly attributed to research investment in the three Kansas research universities (KU, KSU, WSU).

In a 1999 *Atlantic Monthly* article titled "Building Wealth: The New Rules for Individuals, Companies, and Nations," Lester Thurow, a professor of management and economics at MIT, wrote that "A successful knowledge-based economy requires large public investments in education, infrastructure, and research and development." He quotes the following rates of return on R&D: private = 24%; public = 66%. By "public rates of return," he means the benefits that accrue to the whole society. Thurow continues, saying "Put simply, the payoff from social investment in basic research is as clear as anything is ever going to be in economics."

While we know that great progress has been made in a number of important areas, we also know that there is always room for improvement. We have placed a new emphasis on raising KU's level of prestige in the academic community. Nationally known

organizations such as the AAU, the National Research Council, *TheCenter* at the University of Florida, as well as influential research policy writers such as Hugh Davis Graham and Nancy Diamond, believe that the time has come to broaden the scope of the process we use to rank post-secondary institutions. Beyond the traditional financial metrics, we will begin looking at measures such as major faculty awards in the humanities (NEH, Guggenheims, and ACLS, for example), number of faculty Ph.D.'s, number of enrolled National Merit Scholars, graduation rates, and the number of National Academy members. By looking at these diverse criteria, we seek to recognize – and be recognized for – the excellence that exists across the disciplines at KU in areas with substantial research funding as well as in fields where research funding is traditionally very low, but where KU scholarship is outstanding.

Communication at all levels – on and off campus – is increasingly important. With the broad range of research interests at KU, it is imperative that we continue to provide a multiplicity of ways to keep the research community informed regarding topics of interest. A quarterly newsletter is distributed across the campus; information important to researchers is prominently displayed on our website. *Explore*: magazine has been reconfigured into a “webzine” with terrific graphics alongside its provocative content.

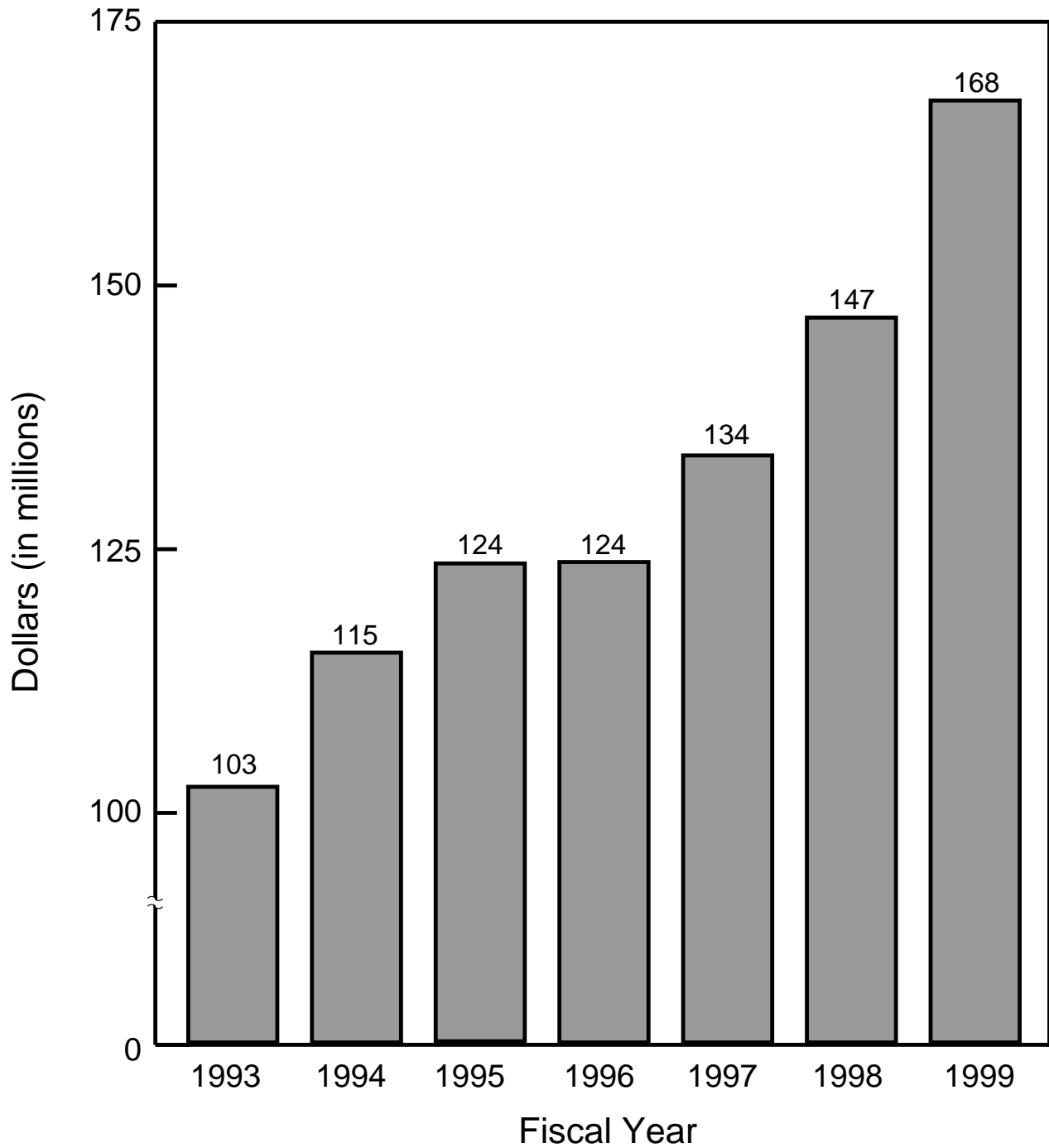
An important “identification issue” was finalized during the past year: a new acronym for the Center for Research. Many on the Lawrence campus still identify the term “CRINC” with the organization that primarily served the School of Engineering. Some felt it necessary to differentiate between the “old CRINC” and the “new CRINC.” Our staff were uncertain about how to explain where they work - RPS? CRINC? Sponsored Program Accounting? To avoid all the confusion, we’ve simplified things by calling ourselves what we really are, the KU Center for Research, or KUCR for short (said as individual letters like the KUEA).

By providing excellent service to scientists, educators, humanists, social scientists, engineers, and others, the KU Center for Research continues to encourage higher productivity in the research arena. To share our goals with others, a mission statement was drafted this year:

To develop and enhance the resources that promote the growth and excellence of research and creative activity at the University of Kansas.

As we look toward the future, the KU Center for Research has made a solid commitment to continue the positive momentum we’ve built up over the past few years. In concert with the measures outlined above, we are developing innovative ways to enhance the growing entrepreneurial spirit on campus. We’ll be working to maintain the proper ambience or atmosphere in which research can flourish.

Research, Development, and Training Expenditures: FY93-99

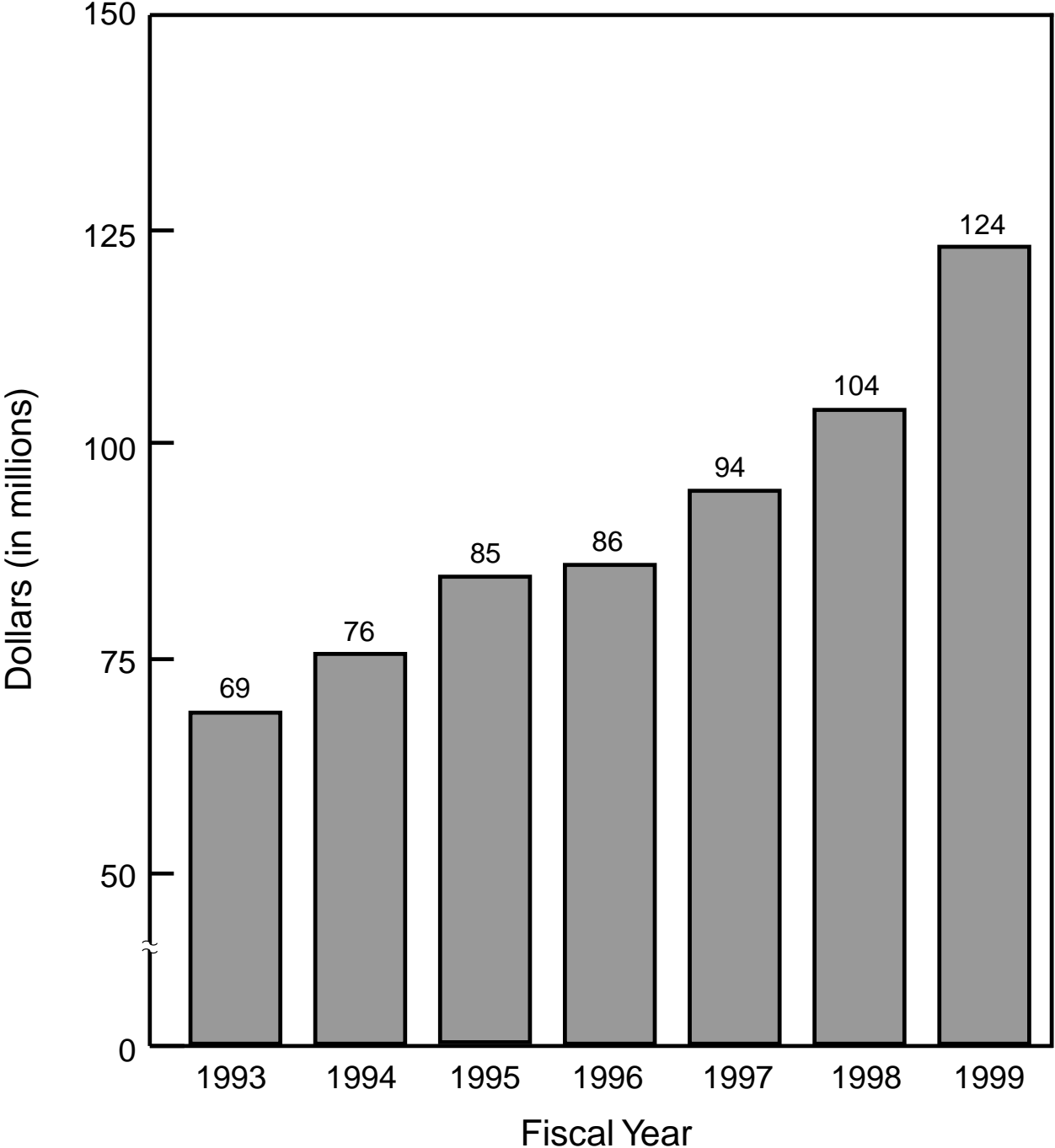


Research, Development, and Training Expenditures: FY99

Source of Funds	Science & Engineering Research	Training and Other Research	Totals
————— Thousands of dollars —————			
Grants & Contracts	96,287	27,170	123,457
Federal government	57,272	16,235	73,507
State and local governments	11,363	5,803	17,166
Industry, non-profit agencies and other	27,652	5,132	32,784
Institution Funds	36,465	7,653	44,118
Institutionally financed organized research	24,880	812	25,692
Cost sharing and unreimbursed facilities & administrative costs ¹	11,585	6,841	18,426
TOTAL	\$132,752	\$34,823	\$167,575
Research Expenditure Categories			
<p><i>Science and engineering research.</i> Research and development expenditures in science and engineering as reported on the annual NSF survey. Examples would include expenditures on projects sponsored by the NSF, American Heart Association, or Sprint in areas such as physics or mathematics, biology, chemistry, and engineering.</p> <p><i>Training and other research.</i> Expenditures on externally sponsored projects not reported on the NSF survey. Included are training grants, grants in non-science areas (e.g., art, history, law), service awards (e.g., a grant from the Corporation for Public Broadcasting to KANU radio), and awards for conferences.</p>			
Funding Sources			
Grants and Contracts			
<i>Federal government.</i> Grants from all agencies of the federal government (e.g., NIH, NSF, USDE).			
<i>State and local governments.</i> Grants from all non-federal governmental entities (e.g., Kansas Department of Health & Environment, county and municipal governments).			
<i>Industry, non-profit agencies, and other.</i> Grants from for-profit organizations (e.g., Sprint), nonprofit agencies (e.g., American Heart Association) and other sources not elsewhere classified.			
Institution funds			
<i>Institutionally financed organized research.</i> In the science and engineering category this would include state funded organized research units (e.g., funds allocated by the State of Kansas for the Kansas Geological Survey). An example in the non-science and engineering category would be funds allocated for the Hall Center for the Humanities.			
<i>Cost sharing and unreimbursed facilities and administrative costs (F&A).</i> Included are facilities and administration (F&A) costs that are not reimbursed by the funding agency (i.e., the difference between F&A costs based on the federally negotiated rate and the actual F&A costs recovered), and mandatory or voluntary cost sharing.			

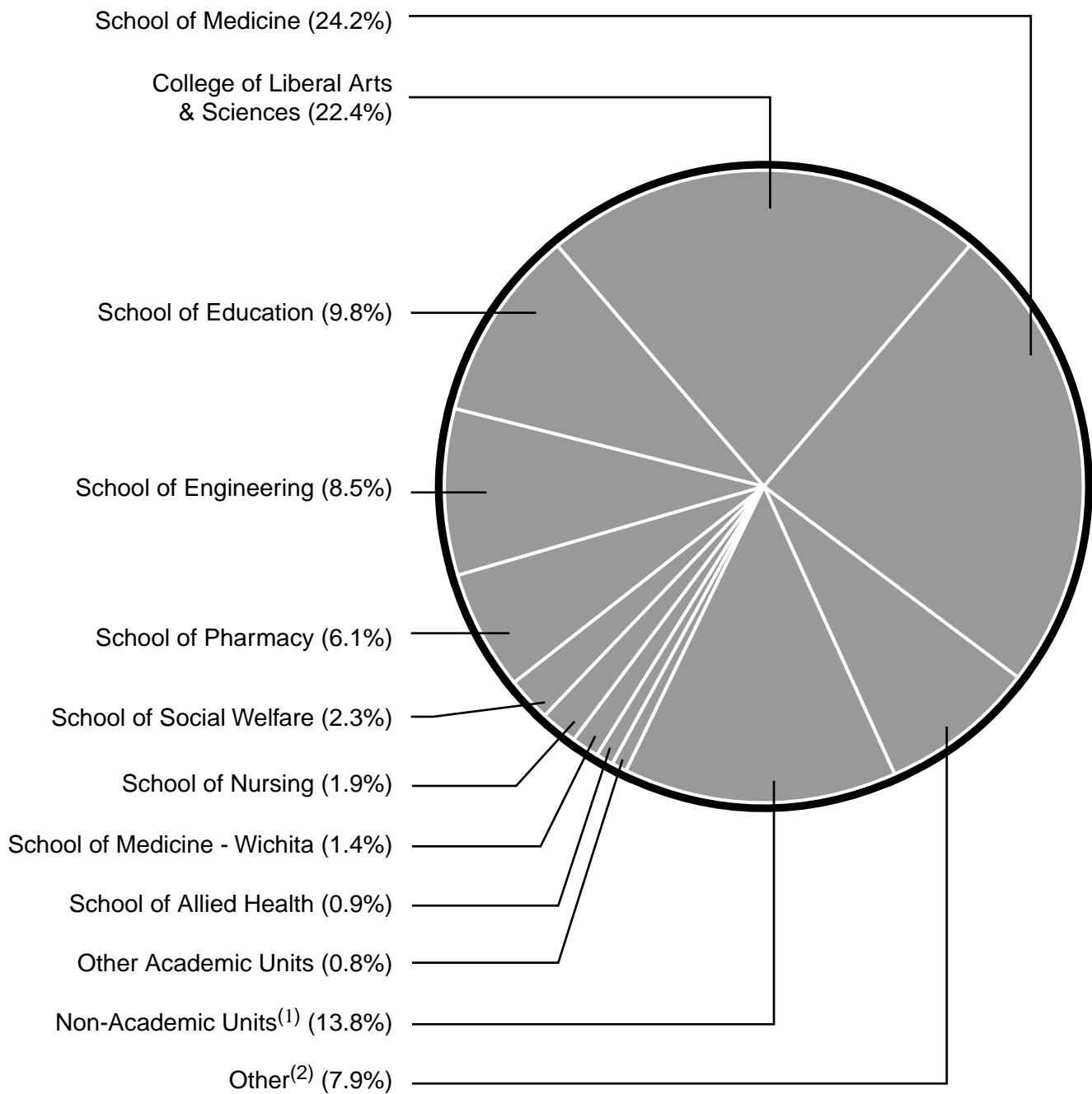
(1) Facilities and administrative costs (F&A) were formerly termed indirect costs (IDC).

Sponsored Project Expenditures: FY93-99⁽¹⁾



(1) Does not include KU Endowment Association, VA Medical Center, and clinical foundation expenditures.

Expenditures by Academic Unit: FY99



(1) Allocations to investigators with appointments in a research center or other non-academic unit.

(2) Includes KU Endowment Association.

Expenditures by Academic Unit: FY99

ACADEMIC UNIT	Number of Projects ⁽¹⁾	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
COLLEGE OF LIBERAL ARTS AND SCIENCES	639	22,800,735	4,796,994	27,597,729
College of Liberal Arts and Sciences Administration	19	195,440	3,917	199,357
NSF EPSCoR	1	2,025,779	0	2,025,779
Humanities	35	1,308,553	112,721	1,421,274
African & African-American Studies	5	217,088	4,207	221,295
English	2	15,798	6,898	22,696
French & Italian	0	21,391	0	21,391
Germanic Languages & Literatures	1	1,650	0	1,650
History	7	184,686	15,198	199,884
History of Art	3	229,242	11,522	240,764
Humanities & Western Civilization	5	104,634	50,182	154,816
Latin American Studies	0	168,023	8,494	176,517
Philosophy	1	400	0	400
Russian & East European Studies	8	132,099	8,108	140,207
Slavic Languages & Literatures	0	98,829	8,108	106,937
Spanish & Portuguese	0	6,755	4	6,759
Theatre and Film	3	127,958	0	127,958
Natural Sciences And Mathematics	406	10,658,473	2,883,434	13,541,907
Biological Sciences	161	4,225,146	1,155,189	5,380,335
Chemistry	64	2,498,285	688,257	3,186,542
Geography	31	710,948	212,906	923,854
Geology	72	1,443,097	430,807	1,873,904
Interdisciplinary Environmental Studies	0	50,531	8,128	58,659
Mathematics	26	375,336	106,727	482,063
Physics & Astronomy	52	1,355,130	281,420	1,636,550
Social Sciences	178	8,612,490	1,796,922	10,409,412
Anthropology	23	469,856	49,706	519,562
Communication Studies	3	105,550	28,946	134,496
Economics	4	43,146	11,488	54,634
Government	23	266,276	9,528	275,804
Human Development & Family Life	78	5,884,337	1,285,054	7,169,391
Linguistics	0	33,962	0	33,962
Psychology	16	515,619	161,056	676,675
Sociology	11	300,914	100,601	401,515
Speech/Language/Hearing	20	992,830	150,543	1,143,373
GRADUATE SCHOOL	7	54,040	29	54,069
LIBRARIES	1	63,901	0	63,901
REGENTS CENTER	5	97,434	4,945	102,379
SCHOOL OF ALLIED HEALTH	43	909,633	181,193	1,090,826

Expenditures by Academic Unit: FY99

ACADEMIC UNIT	Number of Projects ⁽¹⁾	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
SCHOOL OF ARCHITECTURE AND URBAN DESIGN	8	47,705	15,376	63,081
SCHOOL OF BUSINESS	30	543,586	77,345	620,931
SCHOOL OF EDUCATION	162	11,129,830	1,023,781	12,153,611
Education Administration	12	1,652,570	197,302	1,849,872
Teaching & Leadership	37	1,800,548	163,151	1,963,699
Psychology & Research in Education	18	1,284,576	21,966	1,306,542
Health, Sport, & Exercise Sciences	10	164,454	21,575	186,029
Special Education	85	6,227,682	619,787	6,847,469
SCHOOL OF ENGINEERING	193	8,911,770	1,603,374	10,515,144
Aerospace Engineering	15	449,898	55,008	504,906
Architectural Engineering	8	22,862	4,809	27,671
Chemical & Petroleum Engineering	28	933,725	229,417	1,163,142
Civil & Environmental Engineering	43	737,719	175,666	913,385
Electrical Engineering & Computer Science	82	5,270,462	1,088,834	6,359,296
Engineering Administration	1	17,758	3,918	21,676
Engineering Management	4	692,539	2,325	694,864
Mechanical Engineering	10	233,550	40,407	273,957
NASA EPSCoR	2	553,257	2,990	556,247
SCHOOL OF FINE ARTS	1	509	0	509
SCHOOL OF JOURNALISM & MASS COMMUNICATIONS	0	0	0	0
SCHOOL OF LAW	2	43,283	0	43,283
SCHOOL OF MEDICINE	730	23,661,243	6,189,159	29,850,402
Administration	23	3,325,564	135,519	3,461,083
Anatomy & Cell Biology	57	1,333,595	358,197	1,691,792
Anesthesiology	9	115,684	6,079	121,763
Biochemistry & Molecular Biology	62	1,911,103	605,882	2,516,985
Family Medicine	7	324,640	3,880	328,520
Health Policy & Management	1	178,246	3,438	181,684
Internal Medicine	151	3,793,202	1,034,480	4,827,682
Microbiology, Molecular Genetics & Immunology	44	2,841,948	1,009,053	3,851,001
Molecular & Integrative Physiology	63	2,904,094	1,335,208	4,239,302
Neurology	75	1,242,241	231,021	1,473,262
Obstetrics & Gynecology	11	135,478	22,834	158,312
Ophthalmology	5	73,337	2,666	76,003
Otolaryngology	5	160,381	59,579	219,960
Pathology & Laboratory Medicine	30	1,005,602	372,263	1,377,865
Pediatrics	41	358,584	16,301	374,885
Pharmacology, Toxicology & Therapeutics	68	1,772,380	407,145	2,179,525
Preventive Medicine	40	1,021,783	203,431	1,225,214
Psychiatry & Behavioral Sciences	12	358,281	26,894	385,175
Radiation Oncology	4	1,004	-592	412

Expenditures by Academic Unit: FY99

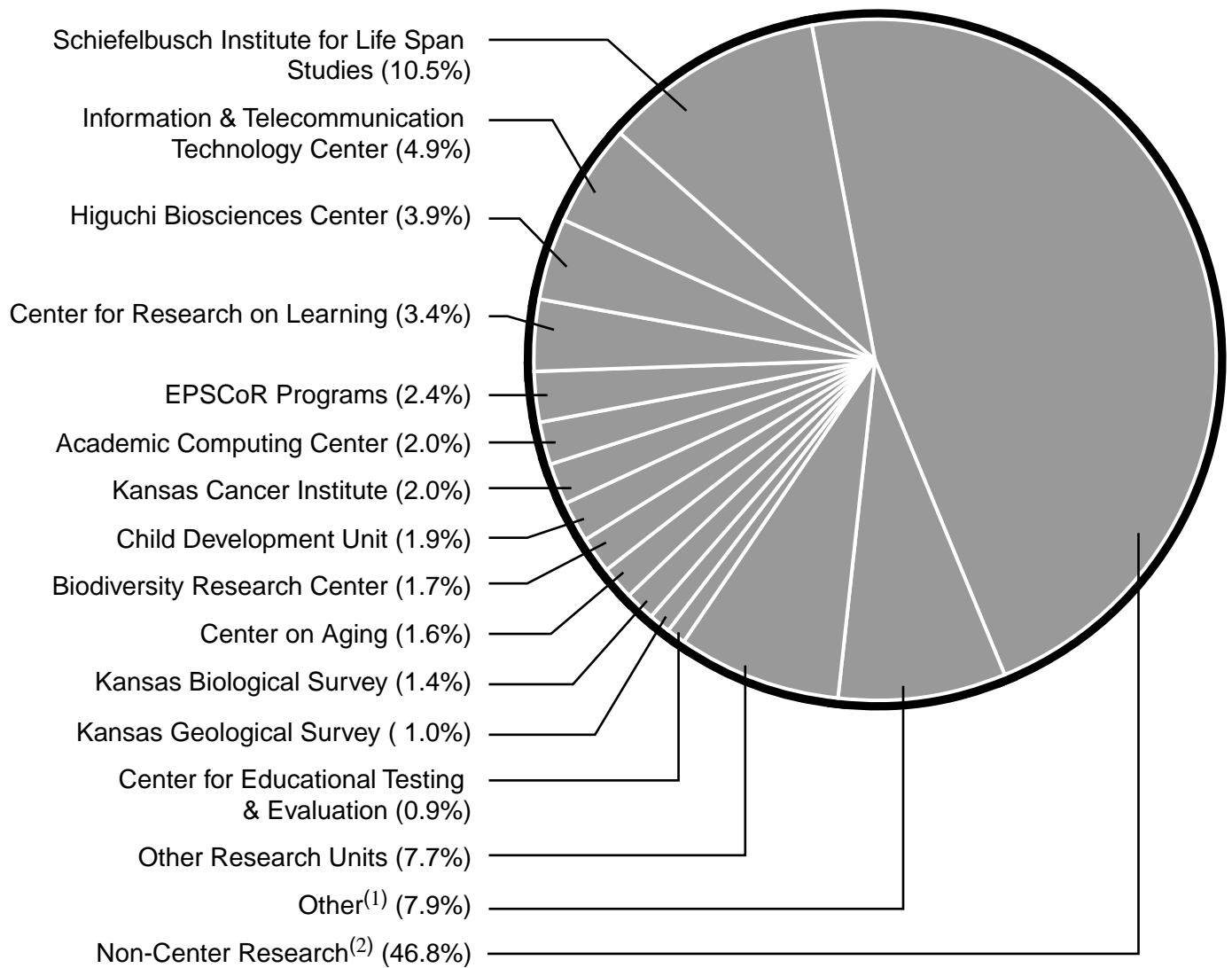
ACADEMIC UNIT	Number of Projects ⁽¹⁾	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
SCHOOL OF MEDICINE (continued)				
Radiology	6	404,206	164,507	568,713
Surgery	14	399,890	191,374	591,264
SCHOOL OF MEDICINE - WICHITA	23	1,646,602	75,602	1,722,204
SCHOOL OF NURSING	41	1,932,115	398,205	2,330,320
SCHOOL OF PHARMACY	155	5,817,852	1,708,225	7,577,175
Medicinal Chemistry	31	1,355,727	487,922	1,843,649
Pharmaceutical Chemistry	85	3,052,186	772,660	3,824,846
Pharmacology & Toxicology	34	1,288,940	369,907	1,658,847
Pharmacy Administration	2	109,966	43,198	153,164
Pharmacy Practice	3	11,033	34,538	96,669
SCHOOL OF SOCIAL WELFARE	51	2,605,819	187,933	2,793,752
TOTAL ACADEMIC UNITS	2,091	80,266,057	16,262,161	96,579,316
TOTAL NON-ACADEMIC UNITS⁽²⁾	263	14,823,613	2,254,923	17,078,536
OTHER⁽³⁾	—	9,799,157	0	9,799,157
TOTAL	2,354	104,939,925	18,517,084	123,457,009

(1) Projects are counted in the unit of the principal investigator's primary appointment.

(2) Allocations to investigators with appointments in a research center or other non-academic unit.

(3) Includes KU Endowment Association.

Expenditures by Research Center/Unit: FY99



(1) Includes KU Endowment Association.

(2) Projects not assigned to a research center/unit.

Expenditures by Research Center/Unit: FY99

RESEARCH CENTER/UNIT	Number of Projects	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
KUCR DESIGNATED RESEARCH CENTERS	404	25,257,204	4,812,158	30,069,362
Biodiversity Research Center	27	1,840,573	286,258	2,126,831
Center for Research on Learning	26	3,797,540	421,017	4,218,557
Higuchi Biosciences Center	105	3,816,650	970,253	4,786,903
Information & Telecommunication Technology Center	73	4,964,404	1,025,197	5,989,601
Joyce & Elizabeth Hall Center for the Humanities	4	17,457	9,226	26,683
Schiefelbush Institute for Life Span Studies	169	10,820,580	2,100,207	12,920,787
SURVEYS	135	2,482,401	563,950	3,046,351
Kansas Biological Survey ⁽¹⁾	69	1,418,282	346,466	1,764,748
Kansas Geological Survey	66	1,064,119	217,484	1,281,603
KUCRAFFILIATED CENTERS	189	4,449,064	1,040,542	5,489,606
Anthropology Museum	30	400,275	17,541	417,816
Biomedical Engineering Laboratory	2	16,162	7,763	23,925
Design Technologies Laboratory	4	256,164	59,009	315,173
Energy Research Center	17	352,819	64,950	417,769
Environmental Engineering & Science Research Lab.	5	108,446	37,761	146,207
Flight Research Laboratory	13	422,058	39,215	461,273
Infrastructure Research Institute	35	383,982	57,059	441,041
Institute for Public Policy & Business Research	36	604,601	139,436	744,037
Intelligent Systems & Automation Laboratory	2	25,581	11,800	37,381
Isotope Geochemistry Laboratory	12	360,920	128,847	489,767
Kansas Center for Advanced Scientific Computing	18	513,932	130,565	644,497
Nuclear Magnetic Resonance Laboratory	1	203,385	90,780	294,165
Paleontological Institute	1	34,108	20,417	54,525
Radiation Physics Laboratory	1	16,194	7,450	23,644
Tertiary Oil Recovery Project	1	433,044	122,126	555,170
Transportation Center	11	317,393	105,823	423,216
MEDICAL CENTER RESEARCH UNITS	124	6,835,480	1,473,629	8,309,109
Area Health Education Center	0	0	0	0
Center for Environmental & Occupational Health	8	332,216	24,506	356,722
Center on Aging	42	1,456,587	499,768	1,956,355
Child Development Unit	35	2,177,328	201,197	2,378,525
Kansas Cancer Institute	25	1,899,403	515,948	2,415,351
Mental Retardation & Human Development	4	358,049	217,246	575,295
Social Welfare Department	1	13,526	0	13,526
Miscellaneous Non-academic Units	9	598,371	14,964	613,335
OTHER RESEARCH UNITS - LAWRENCE CAMPUS	93	5,876,205	201,530	6,077,735
Academic Computing Center	4	2,396,227	100,959	2,497,186
Applied English Center	5	5,572	-505	5,067
Center for Computer Aided Systems Engineering	1	2,360	1,086	3,446
Center for East Asian Studies	4	215,507	11,732	227,239
Center for Educational Testing & Evaluation	13	1,095,705	7,119	1,102,824
Center for Environmental Education & Training	2	126,391	3,296	129,687
Center of Latin American Studies	5	377,950	16,988	394,938

Expenditures by Research Center/Unit: FY99

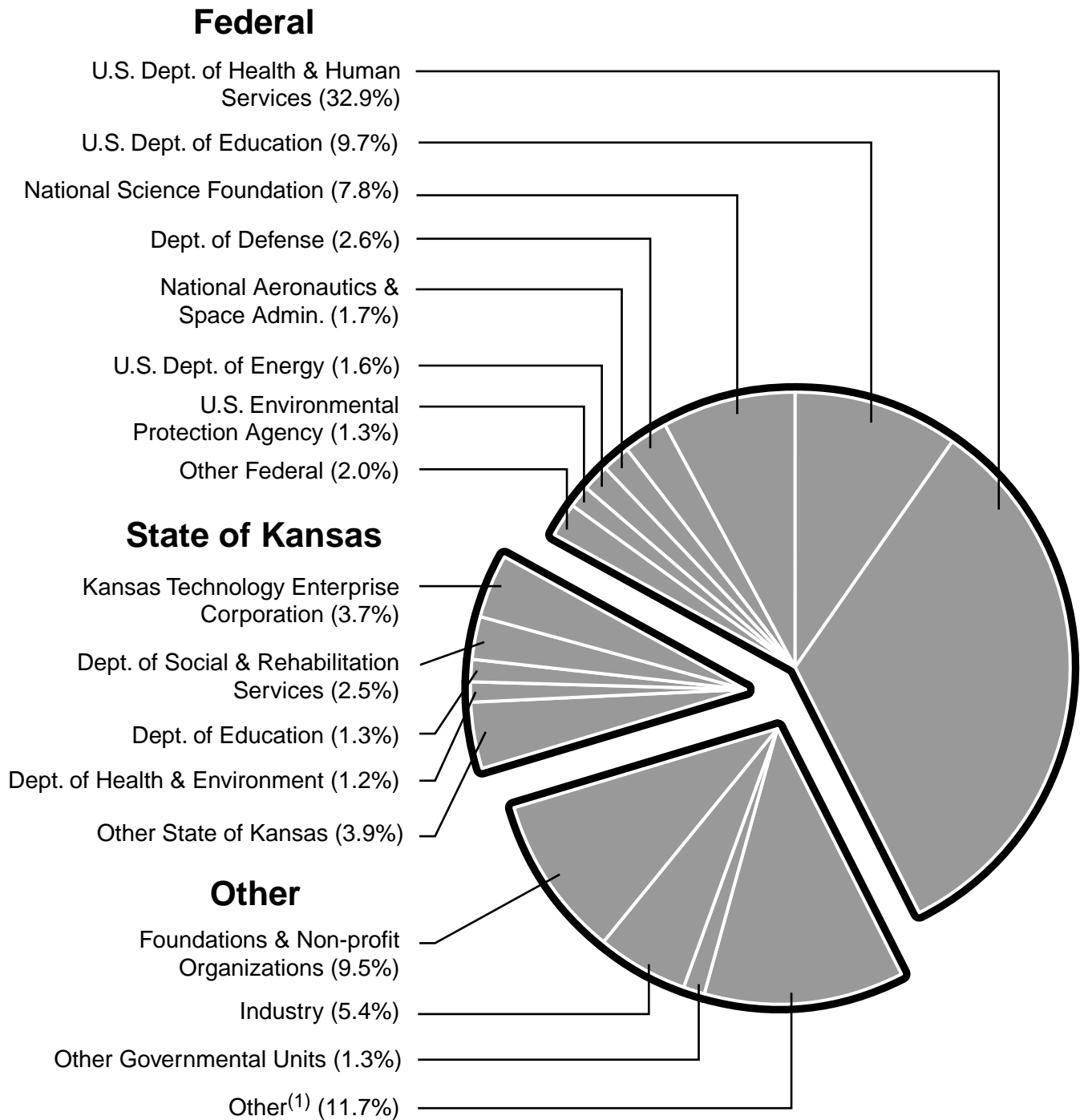
RESEARCH CENTER/UNIT	Number of Projects	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
OTHER RESEARCH UNITS - LAWRENCE CAMPUS (continued)				
Center for Russian & East European Studies	7	246,833	16,215	263,048
Division of Continuing Education	8	244,911	10,853	255,764
Dole Institute for Public Service/Policy	1	17,307	834	18,141
International Student Services	1	20,000	0	20,000
Kansas Audio Reader Network	0	0	0	0
Kansas Law Enforcement Training Center	0	0	0	0
KANU Radio	5	336,838	0	336,838
Lied Center	10	82,707	0	82,707
Minority Affairs	2	40,233	0	40,233
Office of International Programs	10	63,991	8,426	72,417
Organizations & Leadership	2	34,724	0	34,724
Public Safety Office	2	10,215	0	10,215
Research & Public Service	1	175,657	489	176,146
Spencer Museum of Art	2	27,848	5,196	33,044
Student Affairs	1	8,379	1,257	9,636
Student Financial Aid	1	11,672	0	11,672
Student Health Services	2	55,109	3,084	58,193
Supportive Educational Services	1	166,998	14,242	181,240
University Theatre	1	93,234	0	93,234
Writing Center	1	1,875	0	1,875
Miscellaneous Non-academic Units	1	17,962	259	18,221
PROGRAMS	5	2,817,855	139,138	2,956,993
NASA EPSCoR	3	609,441	9,232	618,673
NSF EPSCoR	2	2,208,414	129,906	2,338,320
TOTAL RESEARCH CENTERS	950	47,718,209	8,230,947	55,949,156
TOTAL NON-CENTER RESEARCH⁽²⁾	1,404	47,422,559	10,286,137	57,708,696
OTHER⁽³⁾	—	9,799,157	0	9,799,157
TOTAL	2,354	104,939,925	18,517,084	123,457,009

(1) Includes amounts generated by the Kansas Applied Remote Sensing Program.

(2) Projects not assigned to a research center/unit.

(3) Includes KU Endowment Association.

Expenditures by Sponsoring Agency: FY99



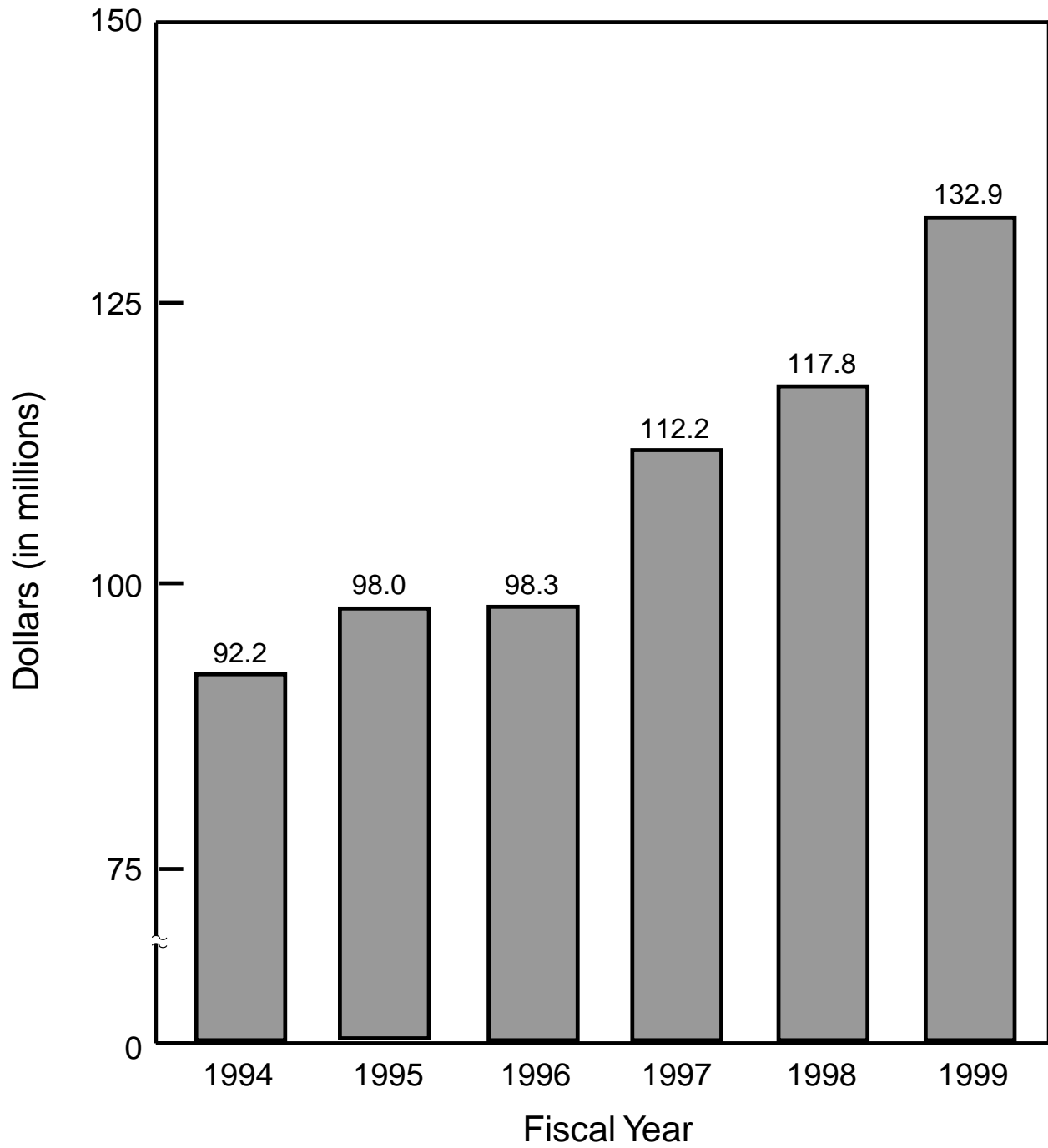
(1) Includes KU Endowment Association.

Expenditures by Sponsoring Agency: FY99

SPONSORING AGENCY	Number of Projects	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
FEDERAL	919	57,862,240	15,644,754	73,506,994
Department of Health & Human Services	392	30,003,375	10,575,414	40,578,789
Department of Education	117	10,871,955	1,077,977	11,949,932
National Science Foundation	202	7,995,067	1,683,233	9,678,300
Department of Defense	50	2,547,914	689,304	3,237,218
National Aeronautics & Space Administration	41	1,695,894	346,916	2,042,810
Department of Energy	19	1,476,362	498,145	1,974,507
Environmental Protection Agency	20	1,212,960	377,399	1,590,359
US Geological Survey	11	321,121	64,544	385,665
Department of Agriculture	8	259,115	52,985	312,100
Department of Veterans Affairs	4	242,886	10,083	252,969
Department of Housing & Urban Development	7	91,166	10,534	101,700
Other Federal	48	1,144,425	258,220	1,402,645
STATE OF KANSAS	343	14,993,622	622,603	15,616,225
Kansas Technology Enterprise Corporation (KTEC)	60	4,612,684	3,878	4,616,562
Department of Social & Rehabilitation Services	32	2,854,592	249,387	3,103,979
Department of Education	39	1,578,668	39,401	1,618,069
Department of Health & Environment	47	1,444,901	17,970	1,462,871
Department of Transportation	30	544,656	74,924	619,580
Other State of Kansas	135	3,958,121	237,043	4,195,164
OTHER GOVERNMENTAL UNITS	58	1,381,011	168,941	1,549,952
INDUSTRY	411	5,715,038	891,656	6,606,694
FOUNDATIONS & NON-PROFIT ORGANIZATIONS	399	11,244,824	449,256	11,694,080
OTHER ⁽¹⁾	224	13,743,190	739,874	14,483,064
TOTAL	2,354	104,939,925	18,517,084	123,457,009

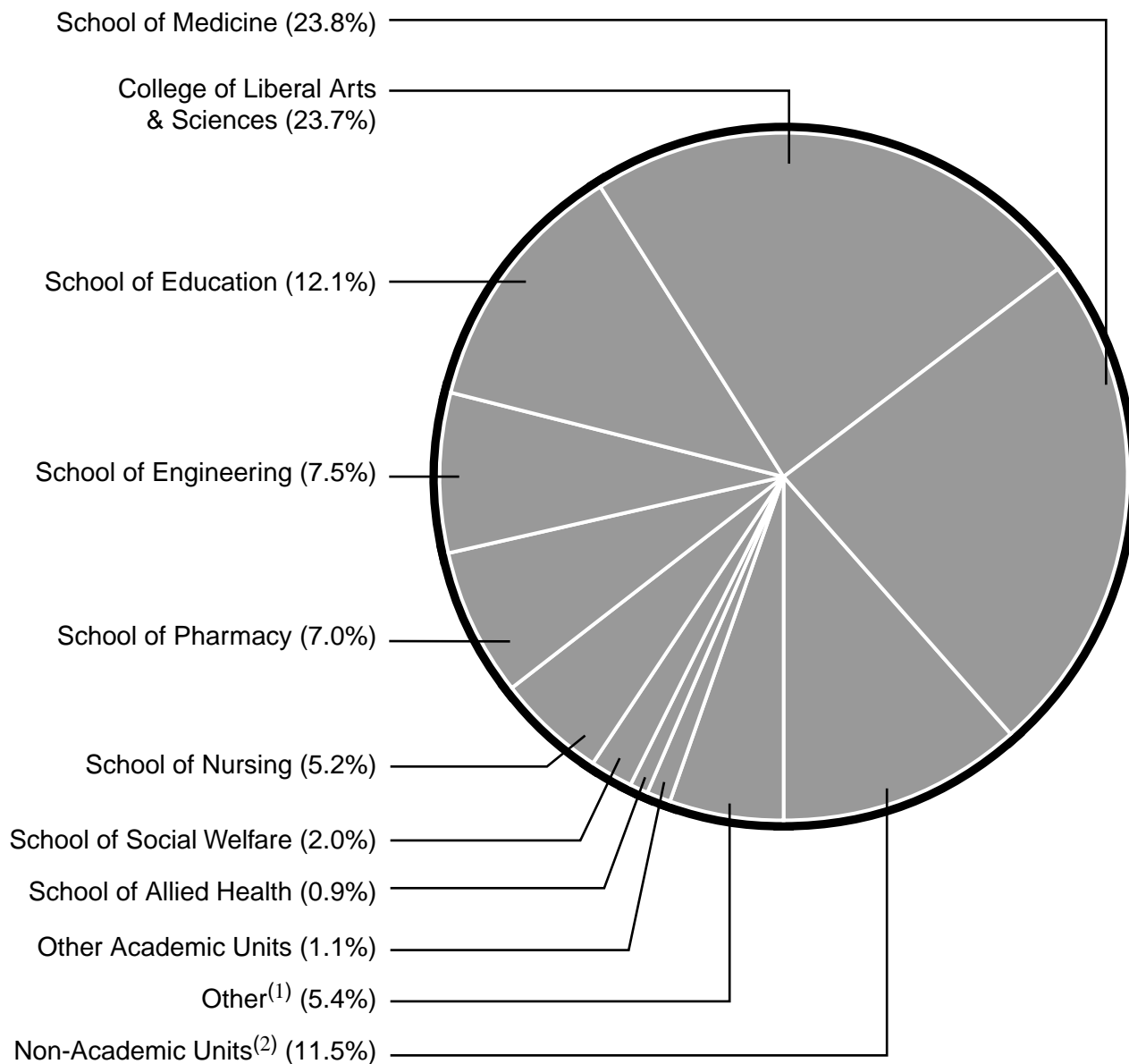
(1) Includes KU Endowment Association.

Sponsored Project Awards: FY94-99⁽¹⁾



(1) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

Awards by Academic Unit: FY99



(1) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

(2) Allocations to investigators with appointments in a research center or other non-academic unit.

Awards by Academic Unit: FY99

ACADEMIC UNIT	Number of Projects ⁽¹⁾	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
COLLEGE OF LIBERAL ARTS AND SCIENCES	332	25,943,125	5,513,900	31,457,025
College of Liberal Arts and Sciences Administration	17	210,884	3,871	214,755
Humanities	19	1,143,125	83,955	1,227,080
African & African-American Studies	2	186,868	3,636	190,504
English	1	5,250	0	5,250
French & Italian	0	6,900	0	6,900
Germanic Languages & Literatures	0	0	0	0
History	4	98,976	16,118	115,094
History of Art	2	248,209	13,929	262,138
Humanities & Western Civilization	2	107,986	49,674	157,660
Latin American Studies	0	74,803	502	75,305
Philosophy	0	0	0	0
Russian & East European Studies	5	161,958	48	162,006
Slavic Languages & Literatures	0	112,171	48	112,219
Spanish & Portuguese	1	26,770	0	26,770
Theatre and Film	2	113,234	0	113,234
Natural Sciences And Mathematics	181	13,109,878	3,227,799	16,337,677
Biological Sciences	76	4,257,722	1,210,659	5,468,381
Chemistry ⁽²⁾	34	4,736,028	993,039	5,729,067
Geography	15	1,047,361	317,896	1,365,257
Geology	33	1,047,658	305,395	1,353,053
Interdisciplinary Environmental Studies	0	66,914	5,296	72,210
Mathematics	7	319,846	78,223	398,069
Physics & Astronomy	16	1,634,349	317,291	1,951,640
Social Sciences	115	11,479,238	2,198,275	13,677,513
Anthropology	17	482,431	42,581	525,012
Communication Studies	3	256,006	78,661	334,667
Economics	4	81,477	15,426	96,903
Government	16	619,669	41,267	660,936
Human Development & Family Life	44	6,217,938	1,283,200	7,501,138
Linguistics	0	6,000	0	6,000
Psychology	14	1,317,599	274,644	1,592,243
Sociology	4	383,179	154,416	537,595
Speech/Language/Hearing	13	2,114,939	308,080	2,423,019
GRADUATE SCHOOL	5	116,156	0	116,156
LIBRARIES	1	55,180	0	55,180
REGENTS CENTER	3	114,794	4,721	119,515
SCHOOL OF ALLIED HEALTH	14	957,406	186,337	1,143,743

Awards by Academic Unit: FY99

ACADEMIC UNIT	Number of Projects ⁽¹⁾	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
SCHOOL OF ARCHITECTURE AND URBAN DESIGN	4	57,235	11,670	68,905
SCHOOL OF BUSINESS	13	476,654	29,604	506,258
SCHOOL OF EDUCATION	105	14,809,305	1,213,534	16,022,839
Education Administration	3	1,557,827	100,089	1,657,916
Teaching & Leadership	29	2,125,624	172,114	2,297,738
Psychology & Research in Education	8	1,528,105	17,927	1,546,032
Health, Sport, & Exercise Sciences	13	1,002,721	203,936	1,206,657
Special Education	52	8,595,028	719,468	9,314,496
SCHOOL OF ENGINEERING	99	8,122,466	1,866,878	9,989,344
Aerospace Engineering	4	25,994	4,499	30,493
Architectural Engineering	2	38,235	11,670	49,905
Chemical & Petroleum Engineering	16	1,256,771	324,909	1,581,680
Civil & Environmental Engineering	29	1,180,931	263,298	1,444,229
Electrical Engineering & Computer Science	41	4,768,962	1,205,788	5,974,750
Engineering Administration	1	73,540	13,102	86,642
Engineering Management	2	658,409	0	658,409
Mechanical Engineering	4	119,624	43,612	163,236
NASA EPSCoR	0	0	0	0
SCHOOL OF FINE ARTS	0	12,250	0	12,250
SCHOOL OF JOURNALISM & MASS COMMUNICATIONS	0	0	0	0
SCHOOL OF LAW	1	37,400	0	37,400
SCHOOL OF MEDICINE	402	24,758,036	6,881,881	31,639,917
Administration	9	1,127,944	76,588	1,204,532
Anatomy & Cell Biology	30	2,005,157	735,596	2,740,753
Anesthesiology	6	28,008	6,080	34,088
Biochemistry & Molecular Biology	32	2,929,928	1,060,608	3,990,536
Family Medicine	1	270,000	21,600	291,600
Health Policy & Management	0	87,901	5,859	93,760
Internal Medicine	96	4,804,713	1,014,408	5,819,121
Microbiology, Molecular Genetics & Immunology	23	2,810,956	1,080,473	3,891,429
Molecular & Integrative Physiology	28	2,780,759	1,125,408	3,906,167
Neurology	63	1,648,407	320,760	1,969,167
Obstetrics & Gynecology	11	183,049	22,534	205,583
Ophthalmology	0	0	0	0
Otolaryngology	2	143,524	8,850	152,374
Pathology & Laboratory Medicine	14	998,134	313,845	1,311,979
Pediatrics	17	483,055	58,355	541,410
Pharmacology, Toxicology & Therapeutics	30	1,953,966	499,178	2,453,144
Preventive Medicine	18	1,504,406	186,855	1,691,261
Psychiatry & Behavioral Sciences	10	273,439	33,051	306,490
Radiation Oncology	0	0	0	0

Awards by Academic Unit: FY99

ACADEMIC UNIT	Number of Projects ⁽¹⁾	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
SCHOOL OF MEDICINE (continued)				
Radiology	3	264,845	109,442	374,287
Surgery	9	459,845	202,391	662,236
SCHOOL OF MEDICINE - WICHITA	7	530,333	50,491	580,824
SCHOOL OF NURSING	29	6,200,827	649,680	6,850,507
SCHOOL OF PHARMACY				
Medicinal Chemistry	21	1,666,297	495,147	2,161,444
Pharmaceutical Chemistry	48	3,451,054	868,818	4,319,872
Pharmacology & Toxicology	18	1,488,249	367,955	1,856,204
Pharmacy Administration	3	636,723	260,573	897,296
Pharmacy Practice	2	15,568	4,757	20,325
SCHOOL OF SOCIAL WELFARE	18	2,506,830	168,012	2,674,842
TOTAL ACADEMIC UNITS	1,125	91,955,888	18,573,958	110,529,846
TOTAL NON-ACADEMIC UNITS⁽³⁾	112	12,747,497	2,528,242	15,275,739
OTHER⁽⁴⁾	—	7,130,616	—	7,130,616
TOTAL	1,237	111,834,001	21,102,200	132,936,201

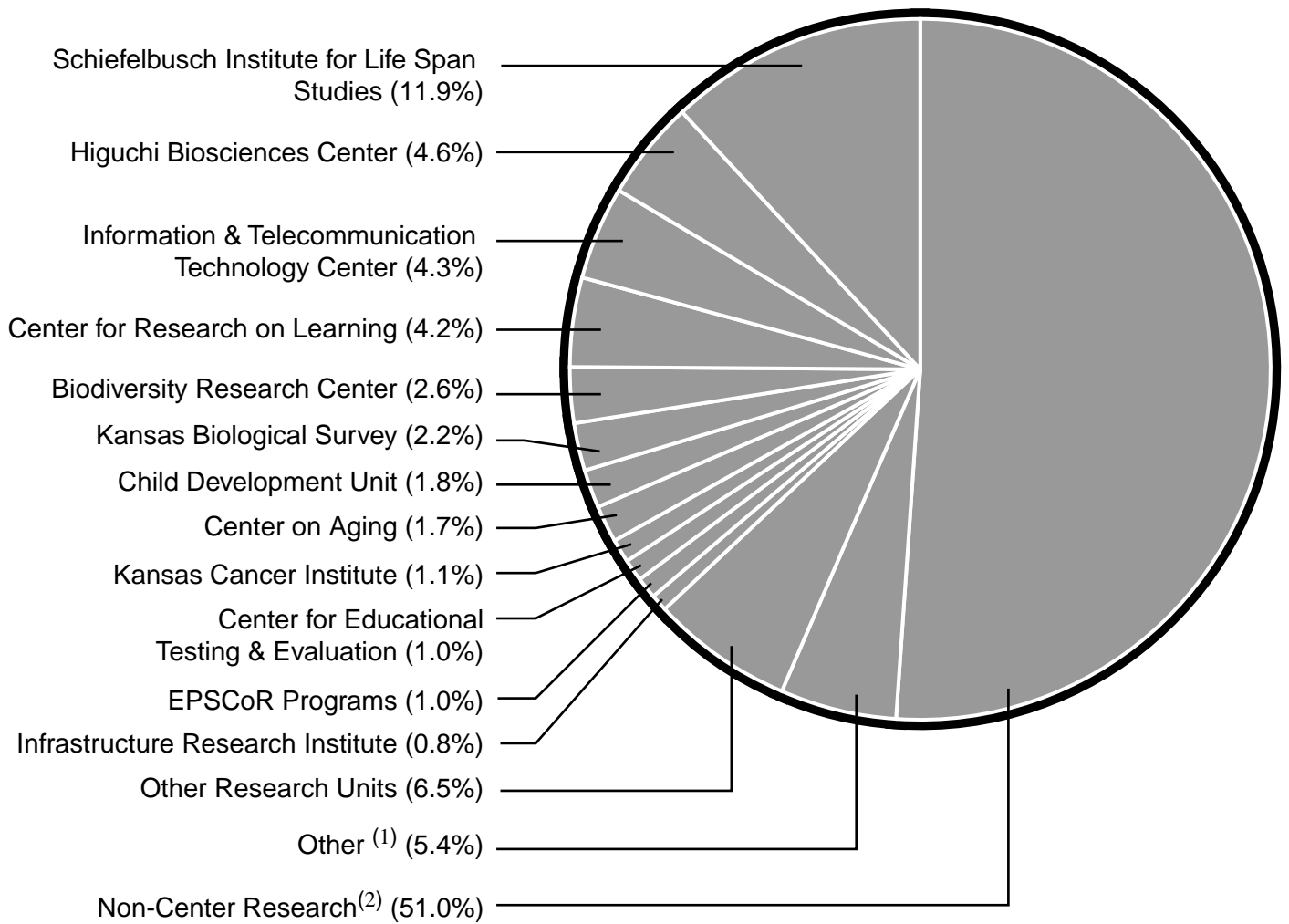
(1) Projects are counted in the unit of the principal investigator's primary appointment.

(2) Includes NSF EPSCoR awards (\$3,062,500).

(3) Allocations to investigators with appointments in a research center or other non-academic unit.

(4) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

Awards by Research Center/Unit: FY99



(1) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

(2) Projects not assigned to a research center/unit.

Awards by Research Center/Unit: FY99

RESEARCH CENTER/UNIT	Number of Projects	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
KUCR DESIGNATED RESEARCH CENTERS	240	30,742,528	5,983,808	36,726,336
Biodiversity Research Center	12	2,733,731	687,276	3,421,007
Center for Research on Learning	25	5,119,623	498,854	5,618,477
Higuchi Biosciences Center	64	4,856,690	1,239,995	6,096,685
Information & Telecommunication Technology Center	37	4,552,816	1,168,459	5,721,275
Joyce & Elizabeth Hall Center for the Humanities	3	73,825	9,005	82,830
Schiefelbush Institute for Life Span Studies	99	13,405,843	2,380,219	15,786,062
SURVEYS	69	2,868,650	738,159	3,606,809
Kansas Biological Survey ⁽¹⁾	34	2,307,666	615,430	2,923,096
Kansas Geological Survey	35	560,984	122,729	683,713
KUCRAFFILIATED CENTERS	101	4,067,284	829,719	4,897,003
Anthropology Museum	25	467,638	23,123	490,761
Biomedical Engineering Laboratory	1	249,000	0	249,000
Design Technologies Laboratory	3	120,000	20,000	140,000
Energy Research Center	6	489,436	84,287	573,723
Environmental Engineering & Science Research Lab.	4	120,372	26,711	147,083
Flight Research Laboratory	5	43,639	8,910	52,549
Infrastructure Research Institute	21	871,242	169,739	1,040,981
Institute for Public Policy & Business Research	18	519,497	78,312	597,809
Intelligent Systems & Automation Laboratory	1	51,685	23,315	75,000
Isotope Geochemistry Laboratory	3	332,326	105,193	437,519
Kansas Center for Advanced Scientific Computing	6	221,349	99,751	321,100
Nuclear Magnetic Resonance Laboratory	0	0	0	0
Paleontological Institute	0	0	0	0
Radiation Physics Laboratory	1	17,809	8,191	26,000
Tertiary Oil Recovery Project	1	244,592	80,608	325,200
Transportation Center	6	318,699	101,579	420,278
MEDICAL CENTER RESEARCH UNITS	25	5,115,650	1,398,066	6,513,716
Area Health Education Center	2	11,200	0	11,200
Center for Environmental & Occupational Health	0	0	0	0
Center on Aging	8	1,654,703	619,825	2,274,528
Child Development Unit	10	2,135,732	207,808	2,343,540
Kansas Cancer Institute	2	997,243	442,262	1,439,505
Mental Retardation & Human Development	1	278,633	128,171	406,804
Social Welfare Department	0	0	0	0
Miscellaneous Non-academic Units	2	38,139	0	38,139
OTHER RESEARCH UNITS - LAWRENCE CAMPUS	57	4,814,493	151,758	4,966,251
Academic Computing Center	3	375,000	0	375,000
Applied English Center	0	-5,066	0	-5,066
Center for Computer Aided Systems Engineering	0	0	0	0
Center for East Asian Studies	2	233,209	13,929	247,138
Center for Educational Testing & Evaluation	4	1,347,600	3,366	1,350,966
Center for Environmental Education & Training	0	0	0	0
Center of Latin American Studies	3	132,607	1,003	133,610

Awards by Research Center/Unit: FY99

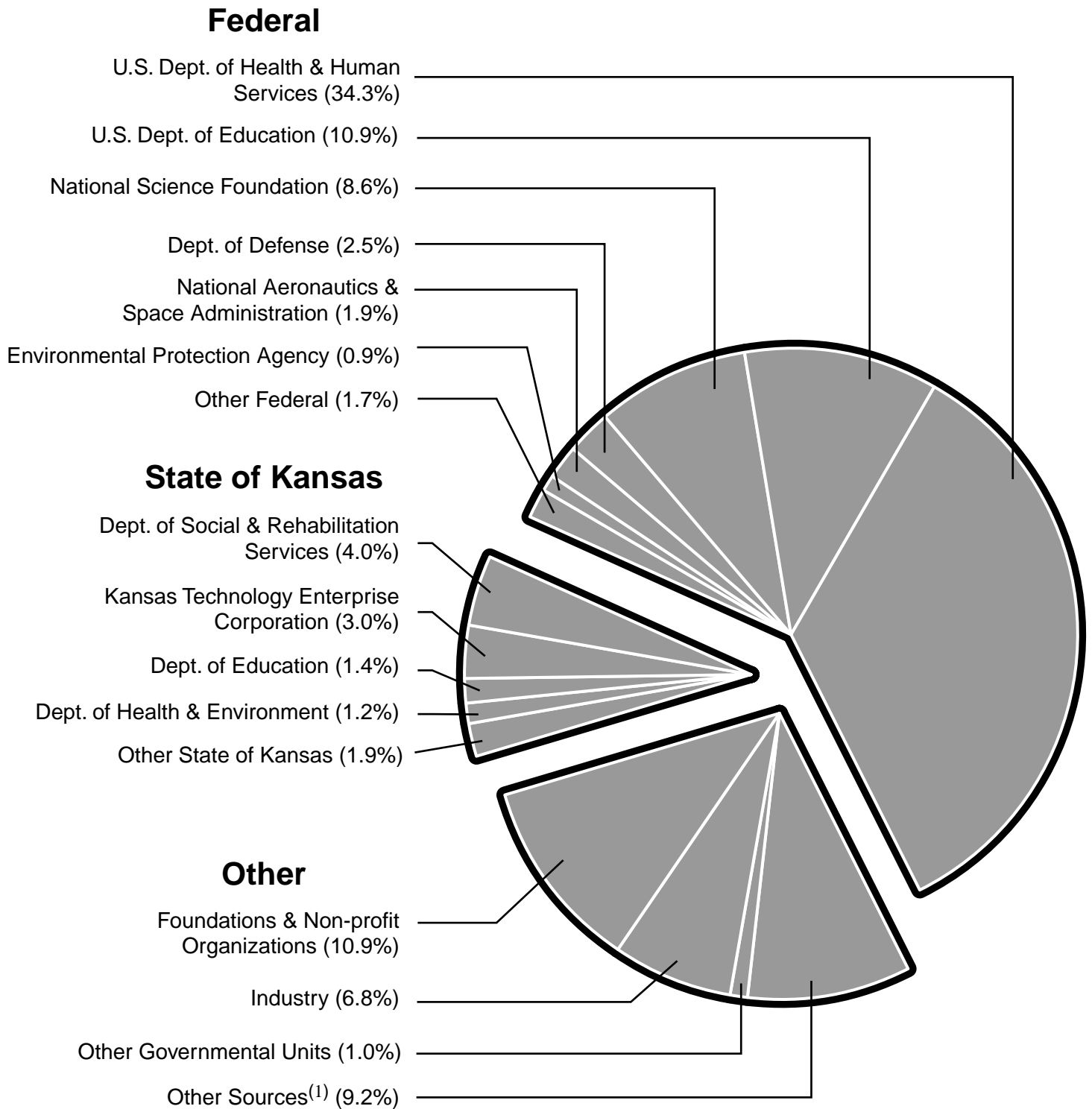
RESEARCH CENTER/UNIT	Number of Projects	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
OTHER RESEARCH UNITS - LAWRENCE CAMPUS (continued)				
Center for Russian & East European Studies	5	350,614	96	350,710
Division of Continuing Education	5	320,046	22,794	342,840
Dole Institute for Public Service/Policy	1	97,900	2,100	100,000
International Student Services	2	20,000	0	20,000
Kansas Audio Reader Network	1	1,500	0	1,500
Kansas Law Enforcement Training Center	1	12,000	0	12,000
KANU Radio	5	334,330	0	334,330
Lied Center	10	212,048	0	212,048
Minority Affairs	1	37,904	0	37,904
Office of International Programs	2	23,554	0	23,554
Organizations & Leadership	1	20,000	0	20,000
Public Safety Office	3	32,821	0	32,821
Research & Public Service	0	0	0	0
Spencer Museum of Art	2	91,888	34,914	126,802
Student Affairs	1	52,949	7,942	60,891
Student Financial Aid	1	11,672	0	11,672
Student Health Services	1	407,863	37,056	444,919
Supportive Educational Services	1	175,944	14,075	190,019
University Theatre	1	93,234	0	93,234
Writing Center	0	0	0	0
Miscellaneous Non-academic Units	1	434,876	14,483	449,359
PROGRAMS	2	1,233,360	79,140	1,312,500
NASA EPSCoR	0	0	0	0
NSF EPSCoR	2	1,233,360	79,140	1,312,500
TOTAL RESEARCH CENTERS	494	48,841,965	9,180,650	58,022,615
TOTAL NON-CENTER RESEARCH⁽²⁾	743	55,861,420	11,921,550	67,782,970
OTHER⁽³⁾	—	7,130,616	—	7,130,616
TOTAL	1,237	111,834,001	21,102,200	132,936,201

(1) Includes amounts generated by Kansas Applied Remote Sensing Program.

(2) Projects not assigned to a research center/unit.

(3) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

Awards by Sponsoring Agency: FY99



(1) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

Awards by Sponsoring Agency: FY99

SPONSORING AGENCY	Number of Projects	Expenditure Amount (dollars)		
		Direct	Facilities & Administrative	Total
FEDERAL	468	63,935,255	16,937,194	80,872,449
Department of Health & Human Services	219	34,046,563	11,486,399	45,532,962
Department of Education	70	13,295,452	1,238,599	14,534,051
National Science Foundation	83	9,204,574	2,267,743	11,472,317
Department of Defense	25	2,638,793	715,935	3,354,728
National Aeronautics & Space Administration	16	1,934,038	614,822	2,548,860
Environmental Protection Agency	11	904,328	307,701	1,212,029
US Geological Survey	6	291,921	62,179	354,100
Department of Veterans Affairs	4	283,263	13,009	296,272
Department of Agriculture	2	97,720	12,280	110,000
Department of Energy	6	12,183	73,939	86,122
Department of Housing & Urban Development	1	60,000	0	60,000
Other Federal	25	1,166,420	144,588	1,311,008
STATE OF KANSAS	149	14,436,105	666,665	15,102,770
Department of Social & Rehabilitation Services	19	4,763,068	529,459	5,292,527
Kansas Technology Enterprise Corporation (KTEC)	41	3,973,036	0	3,973,036
Department of Education	12	1,801,537	31,159	1,832,696
Department of Health & Environment	15	1,519,368	11,889	1,531,257
Department of Transportation	13	666,450	81,201	747,651
Other State of Kansas	49	1,712,646	12,957	1,725,603
OTHER GOVERNMENTAL UNITS	27	1,149,206	150,099	1,299,305
INDUSTRY	231	7,264,692	1,739,752	9,004,444
FOUNDATIONS & NON-PROFIT ORGANIZATIONS	221	13,686,253	747,900	14,434,153
OTHER⁽¹⁾	141	11,362,490	860,590	12,223,080
TOTAL	1,237	111,834,001	21,102,200	132,936,201

(1) Includes KU Endowment Association, VA Medical Center, and clinical foundation awards.

Technical Note: Credit to academic units & research centers

MULTIPLE CREDIT SYSTEM – LAWRENCE CAMPUS. Award and expenditure amounts for each project were assigned to both academic units and to research centers and other non-academic units. Amounts were credited to academic units based on the academic appointments of the principal investigator(s). Projects that were assigned to a research center were also credited to the specified unit. Because all projects were credited to both academic units and to research centers, the totals for academic and for non-academic research units are equal, and each represents the total amount from externally funded grants and contracts.

A. Credit to academic units. The assignment of credit for projects to academic units was a two-step process. First, the amount of the award or expenditure was allocated among investigators on multiple investigator projects. Second, the amount allocated to each investigator was assigned to academic units based on his or her academic appointments. This process is described below.

1. Allocation among investigators. Credit to academic units shown in last year's (FY98) report was based on the academic appointments of the principal investigator only. Beginning in FY99, credit for multiple investigator projects was allocated among the principal investigator (PI) and co-principal investigators based on their relative contributions to the project as specified by the researcher. If no allocation was specified, a default allocation was calculated as follows: 90% of the credit was divided equally among all investigators, including the PI. The remaining 10% was added to the credit allocated to the PI. For example, for a project with two investigators, the PI would receive 55% ($=10\% + 90\%/2$) of the credit, and the co-investigator would receive 45% ($=90\%/2$). For projects with three investigators, the PI would receive 40% and the co-investigators 30% each.

2. Allocation to academic units. The amount allocated to each investigator on a project was assigned to academic units according to the investigator's academic appointment(s). If the investigator had more than one academic appointment, then the total was allocated proportionately. If an investigator had a courtesy appointment from an academic unit but no other academic appointment, then the academic unit making the courtesy appointment received all of the investigator credit for the project. If the principal investigator had no academic appointments then the expenditures were not assigned to an academic unit, but were included in the "Non-academic" category.

B. Credit to research centers and other non-academic units. Investigators may assign their projects to a research center or other non-academic unit. When a project is assigned to a research center/unit, that unit will receive credit for the project on the awards and expenditure tables. Projects not assigned to a research center were included in the "Non-center Research" category. The assigned research unit is usually but not necessarily the same as the administrative unit, which is defined as the academic department or research center/unit that managed the project. Each project must have an administrative unit, but does not need to be assigned to a research center/unit.

MEDICAL CENTER. All award and expenditure amounts for each project were credited in their entirety to the administering academic unit, research center, or other non-academic unit. The multiple credit system used for Lawrence campus projects was not used for medical center projects.