



NOV - 5 2010

ASSOCIATION OF AMERICAN UNIVERSITIES

November 2, 2010

Chancellor Harvey Perlman
University of Nebraska
201 Canfield Administration Building
501 North 14th Street (14th & R Street)
Lincoln, NE 68588-0419

Dear Harvey:

As you know, the AAU Membership Committee has recommended and the AAU Executive Committee has agreed that the University of Nebraska should undergo a formal review concerning its continued membership in the Association of American Universities. I have been asked to chair the AAU Review Committee; a list of members is attached.

The Review Committee met jointly with the Membership Committee on October 17 to discuss the overall process. Based on that discussion and the Review Committee's examination of the Report of the AAU Membership Task Force — the 1999 document that describes the review process adopted by the AAU membership — the committee proposes that the review proceed in two steps:

- (1) your submission by February 15 of a portfolio of information describing Nebraska's mission and trajectory and their relationship to the mission of AAU (the enclosed AAU Membership Principles may be helpful in this respect);
- (2) the Review Committee's development of a recommendation to the Executive Committee prior to the AAU Membership Meeting, April 10-12, 2011.

This schedule is intended to provide sufficient time to accomplish the necessary actions based on the assumption that a timely completion of the process is in the interests of both Nebraska and AAU; but if you find that an extended timetable would be helpful, we can certainly try to accommodate your interests.

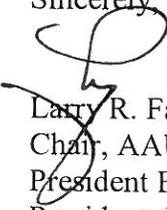
The portfolio that you prepare should be designed by you to present your case as you choose; however, the committee thought it might be helpful to indicate certain information that it believes would be useful for its deliberations. Some of the information suggested below might not be available but might direct you to similar information that is available; all of the following suggestions are intended as helpful guidance in describing the correspondence between the missions of Nebraska and the AAU:

- an update of the AAU Membership Indicators data for Nebraska,
- beyond that provided in the Indicators, any additional information concerning the breadth and quality of Nebraska's programs of research and graduate education
- any information you have that would bear on trends in the quality of graduate students,
- a description of Nebraska's professional and agricultural schools and particular strengths they may possess, with special reference to the scholarship of the faculty,
- information that would bear on the quality of Nebraska's humanities and social science programs, which are not robustly portrayed by the AAU Membership Indicators,
- any comments you may wish to make concerning specific Nebraska program standings in the recent NRC assessment of research doctorate programs,
- an assessment of the quality of undergraduate students on the basis of admissions data and any outcome measures you may have.

In addition to these suggested items, the Review Committee would welcome any planning documents that you might have bearing on the correspondence of the mission and trajectory of Nebraska with the mission of AAU.

Let me close with a general comment about the length of your response. This review process is not a surrogate for accreditation and need not be supported with massive documentation. The degree to which Nebraska's mission and trajectory correspond to the AAU Membership Principles should be self-evident in obviously relevant information, and should not require extensive presentation or subtle argument. We urge you to strive for a compact, pithy report.

I hope these suggestions are helpful to you. Please don't hesitate to contact me at my office in Houston if you have any questions. My telephone number is 713-238-8110, and my email address is lfaulkner@houstonendowment.org. Anything you desire to mail conventionally, including the requested portfolio, should be sent to the AAU Washington office in care of John Vaughn, who is staffing the Review Committee and is also willing to assist toward resolving questions.

Sincerely,


Larry R. Faulkner
 Chair, AAU Membership Review Committee
 President Emeritus, University of Texas at Austin
 President, Houston Endowment Inc.

cc: AAU Review Committee members
 AAU President Robert M. Berdahl

AAU Membership Review Committee

President Emeritus Larry R. Faulkner (*Chair*)
University of Texas at Austin

Chancellor Gene D. Block
University of California, Los Angeles

President Emerita Nannerl O. Keohane
Duke University

Chancellor Carolyn "Biddy" Martin
University of Wisconsin-Madison

President Emeritus George Rupp
Columbia University

President Robert H. Shelton
University of Arizona

President Shirley M. Tilghman
Princeton University

AAU Membership Policy

The Association of American Universities is an association of leading comprehensive¹ research universities distinguished by the breadth and quality of their programs of research and graduate education. Membership in the association is by invitation. The association maintains a standing Membership Committee, which periodically evaluates both non-member universities for possible membership and current members for continued membership, with the goal of ensuring that the association in fact comprises comparable leading research-intensive universities. Non-member universities whose research and education profile exceeds that of a number of current members may be invited to join the association; current members whose research and education profile falls significantly below that of other current members or below the criteria for admission of new members will be subject to further review and possible discontinuation of membership.

While the association does not have a specific limit on the number of its members, it values remaining a relatively small organization whose composition enables productive meetings and collegial relationships among the member presidents and chancellors. It endeavors to balance these characteristics of the association with the expectation that its membership will include the leading research-intensive universities.

Adopted January 12, 1999
Revised April 20, 2010

¹ The term “comprehensive” is intended to specify institutions with a broad range of degree-granting undergraduate programs as well as programs of research and graduate education.

AAU Membership Indicator Profiles

Institution Profile for
University of Nebraska-Lincoln

AAU Quartiles		Fed R&D Exp (avg. FY06-08 w/ USDA correction) \$ in 1000s	Norm Exp (avg./faculty)	Natl Acad Members 2007	Natl Acad Norm (members/faculty) x1000	Awards and Memberships 2007	Awards & Mmbrshps Norm (total/faculty) x1000	Citations (avg of 5 yr windows, 2000-04 to 2002-06)	Citations Norm (total/faculty) x1000	USDA, State and Industry (avg FY06-08) \$ in 1000s	USDA, State and Industry Norm (avg./faculty)	Doctorates (avg FY06-08)	Doctorates Norm (avg./faculty) x1000	Postdocs (avg FY05-07)	Postdocs Norm (avg./faculty) x1000
AAU 75%	\$ 357,911	\$ 319	51.0	207.8	179.8	145,309.8	131.0	\$ 72,340	47	605.9	406.0	657.7	570.0		
AAU 50%	\$ 248,263	\$ 188	31.0	140.5	115.0	95,209.2	79.0	\$ 31,025	32	406.8	352.0	366.5	309.0		
AAU 25%	\$ 139,134	\$ 133	19.5	87.0	76.5	64,137.5	53.8	\$ 16,124	17	297.8	293.5	211.4	207.0		

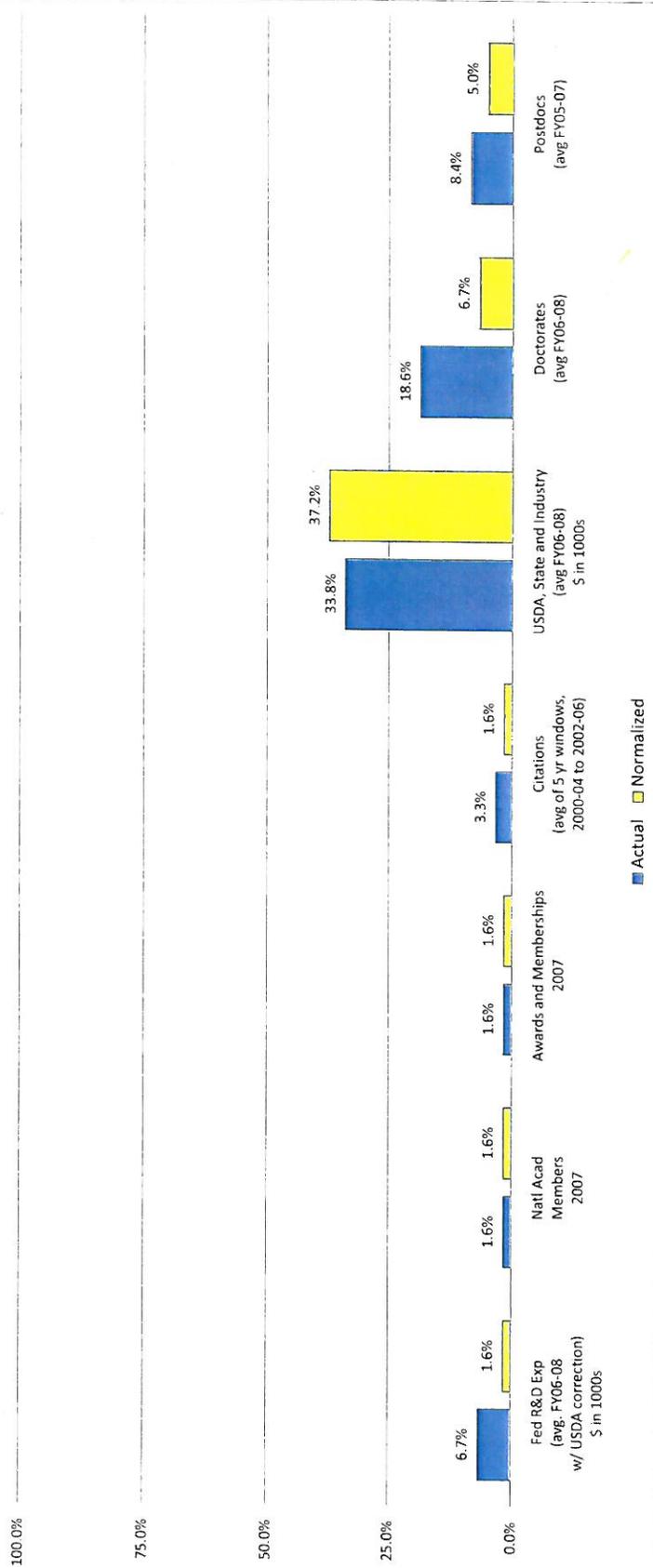
Institutional Data

Amount	\$ 64,688	\$ 64	2.0	33.0	33.0	21,053.0	21.0	\$ 21,742	22	258.0	117.33	116.00	
Percentiles:	6.7%	1.6%	1.6%	1.6%	1.6%	3.3%	1.6%	33.8%	37.2%	18.6%	6.7%	8.4%	5.0%

Faculty Data
Avg FY07-09
IPEDEEAP 1,011.0
AAMC 1,011.0 (value used to normalize)

Faculty, data normalized by dividing by the institution's 3-year average faculty numbers (2007-09), for institutions with medical schools, medical school 2007-09 average faculty numbers are included.

AAU Indicator Percentiles for: University of Nebraska-Lincoln



Data for your institution that were reported to NSF as system or otherwise related institutions were corrected to include only the AAU member campus data by using the WebCASPER spreadsheet files for expenditures located in the info tab of the R&D survey

Data Sources:

Federal Expenditures: National Science Foundation (NSF) Survey of Research and Development (R&D) Expenditures at Universities and Colleges conducted by the NSF Division of Science Resources Statistics (SRS), 2006-2008. The estimated proportion of university expenditures drawn from USDA are subtracted from the Phase I research expenditures as non-competitive funding; that amount is added into the Phase II State, Local and Industry funding. In those cases where expenditures are reported to NSF for university systems, the figure used is corrected to reflect expenditures for the respective campus only.

National Academies Members (National Academy of Sciences (NAS), National Academy of Engineering (NAE), and Institute of Medicine (IOM)): Compiled by The Center for Measuring University Performance at Arizona State University. (<http://mup.asu.edu>)

Awards and Fellowships: Awards and Fellowships tabulated by The Center for Measuring University Performance plus those additional awards from AAU's list not included in The Center. (List attached) http://mup.asu.edu/research_data.html

Citations: Institute for Scientific Information (ISI). University Science Indicators, 1981-2006. Standard Version [CD-ROM]. Average of the institution's citations for the three 5 year increments 2000-04, 2001-05, 2002-06.

State, Local and Industry & USDA Obligations: NSF Survey of R&D Expenditures at Universities and Colleges & NSF Survey of Federal Science and Engineering (S&E) Support to Universities, Colleges, and Nonprofit Institutions, conducted by the NSF Division of Science Resources Statistics (SRS), 2006-2008.

Doctorates: The Integrated Postsecondary Education Data System (IPEDS) completions survey data. (<http://nces.ed.gov/ipeds/datacenter/Default.aspx>)

PostDocs: NSF-NIH Survey of Graduate Students & Postdoctorates in S&E, conducted by the NSF Division of Science Resources Statistics (SRS), 2005-2007.

Faculty: IPEDS Survey, 2007 - 2009. For institutions with medical schools, medical school 2007-09 average faculty numbers is included; medical faculty is from the American Association of Medical Colleges (AAMC) Medical School Faculty reports. (<http://www.aamc.org/data/facultyroster/reports.htm>)

List of Awards, Fellowships and Memberships:

AAU Collection
American Academy in Rome (2000-2009)
American Academy of Arts and Sciences
American Antiquarian Society Fellowships (1973-2009)
American Association for the Advancement of Science Fellows (2004-2008)
American School of Classical Studies in Athens Fellowships (2003-2004)
Field Medal (1936-2008)
National Academy of Education (1998-2008)
Nobel Prize (1907-2008)
Residency at the Center for Advanced Studies in the Visual Arts (2004-2011)
Residency at the Institute for Advanced Study (2004)

List Compiled by The Center
American Council of Learned Societies
Fulbright (American)
Getty
Guggenheim
National Endowment for the Humanities
National Humanities Center
Newberry Library
Woodrow Wilson Center
Beckman Foundation Young Investigator Awards
Burrughs-Wellcome Career Awards in the Biomedical Sciences
Cottrell Scholars
Howard Hughes Medical Institute Investigators
Lasker Medical Research Awards

MacArthur Foundation Fellowships
Mellon Foundation Distinguished Achievement Awards
National Medal of Science
National Medal of Technology
NIH MERIT (R37) and Outstanding Investigator (R35) awards
NSF CAREER Awards
Pew Scholars in Biomedicine
Presidential Early Career Awards for Scientists and Engineers (PECASE)
Robert Wood Johnson Health Policy Fellowships
Searle Scholars
Sloan Fellowships
U.S. Secretary of Agriculture Honor Award



ASSOCIATION OF AMERICAN UNIVERSITIES

The enclosed material includes the following:

1) AAU membership policy

This document contains proposed changes to the AAU membership policy, shown with tracked changes and with changes accepted.

2) A ranking table of AAU and non-AAU universities showing institutional ranks on each AAU membership indicator.

- The table includes 126 universities — the 60 U.S. universities (shown in black) and 66 non-universities (shown in red) selected by including all non-AAU universities that fall between the U.S. university with the largest amount of federal research expenditures¹ and the AAU university with the smallest amount of federal research expenditures, measured as normalized, per-faculty expenditures. Your institution is shown in the enclosed table by name; all other AAU institutions are shown by number only. Expenditure values are the **three-year average expenditures for 2005-2007**.
- The table shows each institution's **rank on each of seven indicators**, showing first the **total value and then the normalized value for each indicator**. The institutions are arrayed in the table by the arithmetic average of their rankings **on each of the four Phase I normalized indicators (federal expenditures, National Academy memberships, faculty honors and awards, and citations)**; these values are shown in column eight. For example, the two AAU institutions tied for fourth in the ranking each have an average of six for Phase I normalized indicators ($((6+4+7+6)/4=5.75$ rounded to 6, and $(4+11+4+5)/4=6$, respectively).

3) Federal research expenditures charts

The left chart shows aggregate AAU federal research expenditures as a percentage of total federal research expenditures by all U.S. colleges and universities; the right chart shows the distribution of total AAU federal research expenditures across the quartiles of AAU member universities.

¹ The University of California-San Francisco and Rockefeller University rank 1 and 2 respectively in normalized federal research expenditures but are not eligible for AAU membership due lack of a comprehensive undergraduate program.

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AAU Membership Principles

In its evaluation of institutions, the Membership Committee is guided by a set of Membership Principles and Membership Indicators, presented below. The Membership Principles specify the primary purpose of the association and the corresponding characteristics of its member institutions. The Membership Indicators are a two-phase set of quantitative measures used to assess the breadth and quality of university programs of research and graduate education.

In assessing potential new member universities, the evaluation of university profiles based on the Membership Indicators is the first stage of a two-stage process used to identify institutions that may be invited into membership. The second stage involves a more qualitative set of judgments about an institution's mission, characteristics, and trajectory.

- 1) The primary purpose of AAU should be to provide a forum for the development and implementation of institutional and national policies promoting strong programs of academic research and scholarship and undergraduate, graduate, and professional education.
- 2) The members of AAU should be comprehensive universities distinguished by the breadth and quality of their programs of graduate education and research.
- 3) The members of AAU shall approve appropriate criteria for assessing the breadth and quality of these programs, and shall apply these criteria in making judgments about potential new members of the Association and in the assessment of current members.
- 4) All current members are subject to periodic review by the Membership Committee. In those instances in which there appears to be a significant and sustained disparity between the mission or accomplishments of a member institution and that of other members of the association, or that of non-members deemed deserving of membership, an in-depth review of that institution will be initiated by the Membership Committee. Discontinuation of membership will be one possible outcome of this in-depth review.

Ranking Table Showing US AAU and Non-AAU Institutions' Rank for Each AAU Indicator

Rank	Sorted by average of Phase 1 Normalized Indicators Ranks - 2005-2007										PHASE I - Indicators										PHASE II - Indicators									
	Rank (1-126)	Fed Exp Norm	Rank (1-115)	Natl Acad Norm	Rank (1-115)	Natl Acad Norm	Rank (1-83)	Awards	Rank (1-83)	Awards Norm	Rank (1-126)	Citations	Rank (1-126)	Citations Norm	Rank (1-126)	Av. Of Phase 1 Norm Indicators	Rank (1-126)	SL&I, USDA	Rank (1-126)	SL&I, USDA, Norm	Rank (1-126)	Doc Norm	Rank (1-126)	Doc Norm	Rank (1-124)	Post Docs Norm	Rank (1-124)	Post Docs Norm		
1	81	2	23	1	47	1	52	1	1	1	52	1	1	1	1	1	120	23	1	124	12	32	1	1	1	1	1			
2	9	1	10	2	23	2	9	2	2	2	9	2	2	2	2	2	22	1	99	4	4	4	2	2	2	2	2			
3	33	3	6	3	38	3	22	3	3	3	22	3	3	3	3	3	98	47	77	1	25	4	4	4	4	4	4			
4	4	6	2	4	7	4	3	4	4	4	3	4	4	4	4	4	35	34	8	2	3	6	6	6	6	6	6			
4	1	4	13	11	3	4	2	5	5	5	2	5	5	5	5	5	50	45	31	9	2	5	5	5	5	5	5			
6	6	7	3	5	9	9	11	8	7	7	11	8	7	7	7	7	14	10	14	3	8	8	8	8	8	8	8			
7	7	5	5	9	12	10	10	7	8	8	10	7	8	8	8	8	23	13	42	18	9	7	7	7	7	7	7			
8	14	8	23	17	18	11	19	9	11	11	19	9	11	11	11	11	51	44	48	27	26	22	22	22	22	22	22			
9	15	30	1	6	1	6	1	4	1	1	4	1	4	1	1	1	95	119	12	25	1	3	3	3	3	3	3			
10	18	20	7	10	4	8	13	12	13	13	13	12	13	13	13	13	67	84	45	47	7	9	9	9	9	9	9			
10	13	9	20	16	16	15	15	11	13	13	15	11	13	13	13	13	3	2	56	58	14	10	10	10	10	10	10			
12	8	12	12	13	15	19	7	10	14	14	7	10	14	14	14	14	34	40	22	20	10	13	13	13	13	13	13			
13	11	15	8	12	8	14	12	18	15	15	12	18	15	15	15	15	65	96	17	13	12	20	20	20	20	20	20			
14	30	40	4	7	4	13	6	13	18	18	6	13	18	18	18	18	19	27	1	5	11	18	18	18	18	18	18			
15	5	19	15	19	10	23	5	15	19	19	5	15	19	19	19	19	38	58	6	11	6	16	16	16	16	16	16			
15	32	26	21	15	21	16	23	19	19	19	23	19	19	19	19	19	94	102	38	24	43	34	34	34	34	34	34			
17	65	50	8	8	11	5	30	16	16	16	30	16	16	16	16	16	107	104	52	13	37	23	23	23	23	23	23			
18	2	17	11	20	12	34	4	21	23	23	4	21	23	23	23	23	20	42	15	46	5	21	21	21	21	21	21			
19	29	14	42	33	40	26	34	22	24	24	34	22	24	24	24	24	74	79	75	81	21	11	11	11	11	11	11			
19	3	23	14	24	2	22	8	28	24	24	8	28	24	24	24	24	37	68	3	23	16	33	33	33	33	33	33			
21	27	10	37	23	54	39	46	28	25	25	46	28	25	25	25	25	40	22	69	43	45	26	26	26	26	26	26			
22	10	27	16	22	7	18	17	35	18	18	17	35	18	18	18	18	17	37	7	19	23	36	36	36	36	36	36			
22	37	33	38	35	26	20	20	17	26	26	20	17	26	26	26	26	111	116	51	44	16	14	14	14	14	14	14			
24	34	34	25	28	14	17	24	27	17	17	24	27	17	17	17	17	72	94	26	28	41	44	44	44	44	44	44			
25	12	13	41	44	33	33	18	20	28	28	18	20	28	28	28	28	58	77	30	37	12	17	17	17	17	17	17			
25	22	16	48	45	31	25	29	25	28	28	29	25	28	28	28	28	110	113	65	63	24	19	19	19	19	19	19			
27	47	22	33	18	52	31	73	52	31	31	73	52	31	31	31	31	68	62	69	35	72	49	49	49	49	49	49			
27	50	43	30	25	33	24	42	33	31	31	42	33	31	31	31	31	55	56	61	52	42	32	32	32	32	32	32			
29	20	28	32	42	22	29	21	30	32	32	21	30	32	32	32	32	53	75	21	33	19	24	24	24	24	24	24			
30	17	37	17	27	20	35	14	32	33	33	14	32	33	33	33	33	9	17	20	48	15	29	29	29	29	29	29			
31	31	18	33	26	43	30	68	61	34	34	68	61	34	34	34	34	31	18	28	7	79	74	74	74	74	74	74			
31	52	21	58	40	68	52	51	23	34	34	51	23	34	34	34	34	122	122	101	83	31	12	12	12	12	12	12			
33	19	24	27	31	36	40	36	45	36	36	36	45	36	36	36	36	42	50	10	6	35	42	42	42	42	42	42			
34	115	54	59	21	60	12	106	55	12	12	106	55	12	12	12	12	126	126	108	34	90	27	27	27	27	27	27			
34	43	42	33	34	30	27	39	40	36	36	39	40	36	36	36	36	114	121	44	42	28	30	30	30	30	30	30			
36	69	66	21	14	45	32	47	37	37	37	47	37	37	37	37	37	71	73	47	21	64	55	55	55	55	55	55			
37	61	35	56	41	52	28	67	46	28	28	67	46	28	28	28	28	96	86	118	118	58	31	31	31	31	31	31			
37	36	32	54	51	42	37	35	31	38	38	35	31	38	38	38	38	104	111	24	10	68	70	70	70	70	70	70			
39	76	61	49	35	43	21	61	39	39	39	61	39	39	39	39	39	115	108	80	59	70	48	48	48	48	48	48			
40	38	51	30	38	32	44	26	34	44	44	26	34	44	44	44	44	12	14	25	41	20	25	25	25	25	25	25			
40	24	11	82	74	62	57	41	26	42	42	41	26	42	42	42	42	100	85	92	65	50	50	50	50	50	50	50			
42	26	25	50	51	55	56	44	43	44	44	44	43	44	44	44	44	53	68	86	86	63	62	62	62	62	62	62			
43	82	49	64	55	68	50	55	24	50	50	55	24	50	50	50	50	76	58	107	103	38	15	15	15	15	15	15			

Black - AAU
 Red - Non-AAU
 (M) Indicates Medical School
 * Not Eligible

Ranking Table Showing US AAU and Non-AAU Institutions' Rank for Each AAU Indicator

Sorted by average of Phase 1 Normalized Indicators Ranks - 2005-2007		PHASE I - Indicators										PHASE II - Indicators													
Rank	Institution	Rank (1-126)	Fed Exp Norm	Rank (1-115)	Natl Acad Norm	Rank (1-119)	Awards	Rank (1-83)	Awards Norm	Rank (1-126)	Citations	Rank (1-126)	Citations Norm	Rank (1-126)	Av. Of Phase 1 Norm Indicators	Rank (1-126)	SL&I, USDA Norm	Rank (1-126)	SL&I, USDA Norm	Rank (1-126)	Doc Norm	Rank (1-124)	Post Docs Norm	Rank (1-124)	Post Docs Norm
43	University of Maryland-Baltimore County	110	77	64	43					57	14				45	119	99	115	89			115	102		102
43	AAU Institution (M)	41	38	44	50	50	49	40	42	45	45	39	39	38		52	65	39	39			39	38		38
43	AAU Institution (M)	25	39	33	46	37	48	33	47	45	47	45	36	51		36	48	27	53			36	51		51
47	AAU Institution	16	36	38	54	24	46	25	48	33	48	46	27	60		2	7	13	29			34	60		60
48	AAU Institution	103	81	54	29	62	36	88	53	50	50	76	37	67		121	119	94	50			76	37		37
49	University of Utah (M)	48	56	50	56	41	43	43	49	51	49	51	40	41		90	106	54	70			40	41		41
49	AAU Institution (M)	21	58	28	49	28	55	16	43	51	10	30	4	32		10	30	4	32			18	35		35
51	AAU Institution	35	68	19	32	17	38	37	68	52	52	31	28	58		21	43	9	31			28	58		58
52	University of California-Santa Cruz	96	69	64	53					69	36			43		113	98	100	74			80	43		43
52	AAU Institution (M)	45	78	25	39	24	42	32	54	53	54	44	66		93	116	29	71			44	66		66	
54	AAU Institution	54	63	18	30	19	41	45	83	54	83	54	26	96		26	52	2	17			60	96		96
55	AAU Institution	44	65	38	48	29	45	48	69	43	64	15	16	79		43	64	15	16			52	79		79
55	Rensselaer Polytechnic Institute	112	72	61	37					103	62			61		62	41	93	15			102	61		61
57	Wake Forest University (M)	57	31	95	93	76	70	66	41	59	54	33	123	87		54	33	123	125			87	65		65
58	AAU Institution (M)	79	52	91	77	67	51	91	60	91	60	91	76	88		91	76	98	82			100	88		88
59	AAU Institution	49	71	60	71	45	53	38	50	61	50	61	82	107		82	107	33	51			73	92		92
59	University of Miami (M)	54	44	75	72	77	78	58	51	57	58	88	53	40		57	58	79	88			53	40		40
61	University of Illinois, Chicago (M)	42	46	75	83	51	54	59	66	62	62	62	62	59		69	89	49	61			55	59		59
62	University of Cincinnati-Main Campus (M)	40	41	82	89	57	63	50	59	63	60	77	62	87		60	77	62	87			50	54		54
63	AAU Institution (M)	23	74	44	65	27	58	27	63	65	63	65	1	54		1	5	11	54			27	68		68
64	Colorado State University	51	47	75	76	65	66	77	78	67	78	41	35	74		41	35	74	91			59	53		53
64	AAU Institution	63	105	29	47	39	59	28	57	67	57	29	54	34		29	54	34	90			77	104		104
66	AAU Institution (M)	67	53	115	115	73	69	53	38	69	63	69	42	8		63	54	42	8			85	78		78
67	Oregon State University	78	64	85	81	71	62	87	71	70	71	70	28	11		28	11	82	78			95	87		87
68	George Washington University (M)	85	80	75	69					80	64					116	110	60	30			122	123		123
69	AAU Institution (M)	39	87	44	65	35	61	31	73	72	6	20	5	40		6	20	5	40			22	47		47
69	University of New Mexico-Main Campus (M)	62	57	85	87	72	72	76	72	72	72	72	106	109		106	109	77	84			91	91		91
71	AAU Institution	109	99	75	63	61	47	98	84	73	124	124	87	64		124	124	87	64			99	89		89
72	Wayne State University (M)	66	73	85	90					60	58					56	63	76	94			66	64		64
72	University of California-Riverside	104	91	85	75					81	56					83	71	83	55			56	28		28
74	AAU Institution	56	94	44	59	48	64	56	86	76	8	16	18	38		8	16	18	38			47	72		72
74	AAU Institution	59	93	43	60	55	71	49	81	76	4	6	19	36		4	6	19	36			49	69		69
76	AAU Institution (M)	55	59	75	80	80	80	85	88	77	49	57	35	26		49	57	35	26			45	39		39
76	University of Alaska Fairbanks	84	29	105	100	79	77	118	103	77	70	30	124	124		70	30	124	124						
78	Virginia Commonwealth University (M)	75	79	85	87					74	74	78	81	73		78	81	73	76			61	46		46
79	University of Vermont and State Agricultural Coll (M)	91	67	95	95					96	75	79	120	92		66	49	119	120			92	80		80
79	University of Hawaii at Manoa (M)	46	48	64	73	66	73	116	123	79	44	46	90	114		44	46	90	114			84	94		94
81	University of Connecticut	64	76	91	98					62	65	80	61	70		61	70	50	45			94	99		99
81	AAU Institution	93	112	61	69	59	65	64	75	80	64	75	80	57		80	15	58	80			57	63		63
83	AAU Institution (M)	68	85	72	79	64	68	82	93	81	103	112	53	68		81	103	112	53			62	67		67
83	Georgetown University (M)	74	82	82	83					79	79	81	112	115		112	115	111	122			97	100		100
83	University of Delaware	92	92	64	65					92	87	81	84	92		84	92	71	75			86	85		85
86	SUNY at Albany	72	45	105	106	78	76	105	100	82	100	82	13	89		13	3	89	57			92	77		77

Black - AAU
 Red - Non-AAU
 (M) Indicates Medical School
 * Not Eligible

Ranking Table Showing US AAU and Non-AAU Institutions' Rank for Each AAU Indicator

Rank	Sorted by average of Phase 1 Normalized Indicators Ranks - 2005-2007										PHASE I - Indicators										PHASE II - Indicators									
	Phase 1 Normalized Indicators					PHASE I - Indicators					PHASE II - Indicators					PHASE II - Indicators					PHASE II - Indicators									
	Rank (1-126)	Fed Exp Norm	Natl Acad Norm	Rank (1-115)	Awards	Rank (1-83)	Citations	Rank (1-126)	Awards, Norm	Rank (1-83)	Citations	Rank (1-126)	Av. Of Phase 1 Norm Indicators	Rank (1-126)	SL&I, USDA Norm	Rank (1-126)	Doc	Rank (1-126)	Doc, Norm	Rank (1-124)	Post Docs, Norm	Rank (1-124)								
87	AAU Institution (M)	88	102	75	82	57	60	83	91	84	39	38	55	67	75	86														
87	Arizona State University-Main Campus	70	100	50	57	83	83	72	97	84	47	67	39	65	88	107														
87	University of South Florida (M)	53	62	95	105	68	75	86	95	84	27	27	72	99	74	83														
90	University of Massachusetts-Amherst	97	111	61	65			75	82	86	73	85	59	56	68	76														
91	Virginia Polytechnic Institute and State Univ	73	95	56	61			94	104	87	7	8	41	60	77	95														
91	North Carolina State University	77	108	50	58			71	96	87	5	4	36	62	33	45														
91	University of Oklahoma Norman Campus	83	83	95	102			84	77	87	59	61	84	96	107	112														
94	AAU Institution (M)	58	101	72	92	49	67	54	91	88	15	36	23	73	30	57														
94	Florida State University (M)	94	88	72	77			90	99	88	75	94	46	49	51	52														
96	University of Louisville (M)	94	89	91	91			95	90	90	86	88	97	107	82	71														
96	University of Kentucky (M)	60	84	95	110	82	82	65	85	90	24	29	56	93	48	56														
98	New Mexico State University-Main Campus	80	55	115	115			108	102	91	62	39	113	112																
99	University of Notre Dame	105	107	95	101			78	70	93	89	92	91	100	81	75														
100	University of Mississippi Main Campus	121	97	115	115			99	74	95	102	80	111	98	109	98														
101	University of Dayton	101	60	115	115	81	81	126	126	96	99	68	126	126	124	124														
102	University of New Hampshire-Main Campus	89	70	115	115			111	107	97	85	74	119	121	117	117														
103	University of South Carolina at Columbia (M)	86	98	91	99			93	98	98	109	118	65	79	96	101														
104	University of Houston-University Park	116	123	64	64			104	109	99	87	97	67	65	109	114														
105	AAU Institution	123	126	85	85	73	74	109	113	100	117	113	95	106	106	111														
105	Ulah State University	90	75	105	107			115	118	100	45	26	116	117	121	120														
105	University of Nevada-Reno (M)	102	86	105	109			110	105	100	108	101	113	113	97	84														
105	Howard University (M)	119	119	64	61			119	121	100	123	123	103	108	119	121														
109	University of Nebraska-Lincoln	100	115	95	104	75	79	97	106	101	64	72	63	72	83	90														
110	Saint Louis University-Main Campus (M)	111	104	105	107			100	94	102	125	125	88	76	108	109														
110	University of Georgia	87	120	64	85			70	101	102	18	32	32	69	53	81														
112	Louisiana State Univ & Ag & Mech & Hebert Laws Ctr	95	118	105	114			63	80	104	11	12	64	95	66	82														
112	Florida International University	108	96	95	96			120	120	104	97	90	110	115	118	119														
112	Washington State University	99	109	115	115			89	89	104	33	25	81	102	70	73														
115	University of Rhode Island	114	103	95	96			122	119	106	77	65	117	116	114	110														
116	Mississippi State University	98	90	105	110			123	124	108	25	9	105	110	104	103														
117	University of Wyoming	126	124	95	93			114	111	109	100	87	121	119	103	97														
118	University of Maine	124	114	105	103			121	117	111	79	50	122	123	123	122														
119	University of Idaho	118	106	115	115			117	115	112	46	19	106	100	111	108														
120	West Virginia University (M)	107	110	105	112			112	116	113	80	83	85	97	112	115														
121	Temple University (M)	106	117	115	115			102	110	114	92	103	37	22	101	106														
121	Northeastern University	120	116	115	115			113	112	114	88	81	103	104	105	105														
123	Kansas State University	117	125	115	115			101	108	116	32	24	92	109	88	93														
123	Clemson University	113	122	105	113			107	114	116	30	21	96	111	112	118														
125	University of Southern Mississippi	122	113	115	115			125	125	118	118	105	102	85	119	116														
126	Old Dominion University	125	121	115	115			124	122	119	105	91	108	105	116	113														

Black - AAU
 Red - Non-AAU
 (M) Indicates Medical School
 * Not Eligible



November 8, 2010

President Larry R. Faulkner
Chair, AAU Membership Review Committee
Association of American Universities
1200 New York Ave., NW, Suite 550
Washington, DC 20005

Dear Larry:

I received your letter regarding the membership review of the University of Nebraska-Lincoln with very mixed feelings. As one of the first twenty members admitted to the Association, this University has contributed to and benefited from its AAU membership since 1909 and we cannot take lightly any action that might jeopardize that membership. As I know you must realize, being dropped from membership would have a far greater impact on an institution than not being invited to membership in the first place. We believe that this possibility places at risk much of the progress the University has experienced during the last decade.

At the same time, I understand why we were selected given the manner in which AAU ranks its membership. I believe that methodology improperly characterizes our position within the realm of research universities. Thus, I welcome the opportunity to demonstrate to the Review Committee the accomplishments of the University of Nebraska-Lincoln and to describe its trajectory which is clearly aligned with the mission of AAU. We are as proud of those accomplishments as we are excited about our future opportunities.

As you requested, we will develop a portfolio of information on the University's accomplishments and trajectory and will have it in your hands by February 15th. We understand the potential burden on the Review Committee and will strive for a concise submission, consistent with the critical importance this matter has for the future of the University of Nebraska-Lincoln. We agree it is in our respective interests to have this matter resolved by the AAU Membership meeting in April.

Sincerely,

A handwritten signature in black ink that reads "Harvey Perlman". The signature is written in a cursive, flowing style.

Harvey Perlman
Chancellor



February 9, 2011

Members of the AAU Review Committee,

Enclosed is the report you requested for the purpose of reviewing our membership in AAU. While I would have preferred to compile this report in a different context, it was a useful exercise for us in collecting the achievements of the University over the last decade. I apologize if the length of the report exceeds your expectation. We have tried to make our case by describing illustrative achievements rather than providing you a complete catalog of our success. Nonetheless, the potential loss of membership in AAU places in considerable jeopardy our upward trajectory as well as the reputation of the University. In this context, I hope you will understand if it seems too long or detailed.

The AAU Membership Principles require the Review Committee to make a "qualitative set of judgments about an institution's mission, characteristics, and trajectory." In our report we have focused on demonstrating that the University is committed to the AAU mission and has acted on that mission; that it has programs and faculty that have competed successfully against and have collaborated with, those of the leading national research universities; and that the research trajectory of UNL is among the steepest among AAU members. More significantly, we demonstrate that UNL is positioned, in unique ways, to contribute to some of the most pressing issues on the nation's research agenda.

We are confident that, if you apply these membership principles, UNL will easily be confirmed to be within the mainstream of the AAU membership. We acknowledge that ranking of institutions in accordance with the AAU Membership Indicators makes UNL appear to be an outlier. We continue to have serious reservations about the utility or the appropriateness of the ranking methodology based on these indicators, but we reserve that analysis for the Appendix to the report. We prefer to rest our case on the success we have achieved.

I am, of course, available if your committee has questions or is in need of clarification or elaboration. Always skeptical that the written word can adequately describe the vibrancy and momentum of a University, we would welcome the opportunity to host the committee on site.

Thank you for your careful attention.

Sincerely,

A handwritten signature in black ink that reads "Harvey Perlman".

Harvey Perlman
Chancellor

c: Robert Berhdahl, President, AAU
John Vaughn, Executive Vice President, AAU



Report of the University of Nebraska–Lincoln to the Membership Review Committee of the Association of American Universities





Report of the University of Nebraska–Lincoln to the Membership Review Committee of the Association of American Universities

FEBRUARY 15, 2011

The University of Nebraska–Lincoln submits this report in compliance with the review of its membership in the Association of American Universities. The AAU membership policy emphasizes that its members should be “leading comprehensive research universities distinguished by the breadth and quality of their programs of research and graduate education.” The AAU Membership Principles require both an evaluation of the institution’s position in the AAU membership indicators, as well as a judgment about an “an institution’s mission, characteristics, and trajectory.” That judgment is critical because 14 current members of AAU fall below the “top” 63 institutions when the membership indicators are considered alone. The ultimate objective of this document is to demonstrate that UNL’s mission, characteristics, and trajectory, and the breadth and quality of its programs, place it comfortably within the membership of AAU, and to confirm, as recognized by the AAU itself, that the AAU membership indicators are only an imprecise and oftentimes misleading method of comparing the quality of the diverse institutions that comprise higher education in the United States.

In 2000 a Task Force of faculty, administrators, and alumni published its report titled *A 2020 Vision: The Future of Research and Graduate Education at UNL* (2000). It used benchmark data from 1999 to provide a candid self-assessment of the university and the gap between its accomplishments and its aspirations. The recommendations of that report advanced the vision for our sesquicentennial year, 2019, to “become one of the leading public research universities in the nation and ranked among the strongest state universities in academic quality.” This report was transformational and represented a turning point in the work and direction of the university.

This submission documents the rapid strides the university has experienced over the last decade. The upward trajectory is clearly evident. The commitment of the State of Nebraska, the University of Nebraska Board of Regents, the administration and the faculty to position UNL as a major research university is clear. With the success we already have achieved, the investments made in research faculty, facilities, and infrastructure along with the emerging opportunities of membership in the Big Ten (and the Committee on Institutional Cooperation) and the development of an Innovation Campus adjacent to the university, we are poised to see even greater increases and successes in the near future.

The body of this report has four parts: Part 1 is focused largely on research and documents our trajectory and our commitment to the research mission. Part 2 provides a number of examples of our specific accomplishments across the breadth of the university. It is not intended to be comprehensive, but rather to give texture to our assertion that over the last decade UNL has become a significant player in the national research agenda, that its trajectory on most of the major metrics that characterize AAU institutions has been strong, and that it is positioned moving forward to make increasing contributions to some of the most critical national and global challenges likely to demand the attention of the nation’s research agenda in the coming decades. Part 3 describes briefly the reasons why we are optimistic about our continued future success and Part 4 is a short conclusion highlighting the issues associated with this membership review. There is an appendix that addresses the concerns we have with the current AAU membership indicators, concerns we believe other members should have if the indicators are assumed to be precise enough to identify the relative quality of individual members.

PART ONE

*Research Trajectory
and Mission*





University of Nebraska–Lincoln
AAU Membership Review 2011

1

Part One:

Research Trajectory and Mission

Research Trajectory

Research productivity is the central metric for AAU membership. Whether limited to research considered within the AAU Membership Indicators, or more broadly to include contributions to science and technology, UNL's growth in research is among the highest in the AAU. The two graphs on the next page document that UNL has experienced significant and steady growth in federal research awards and total sponsored awards over the last decade. These increases will continue to contribute to increased research expenditures in the years ahead.

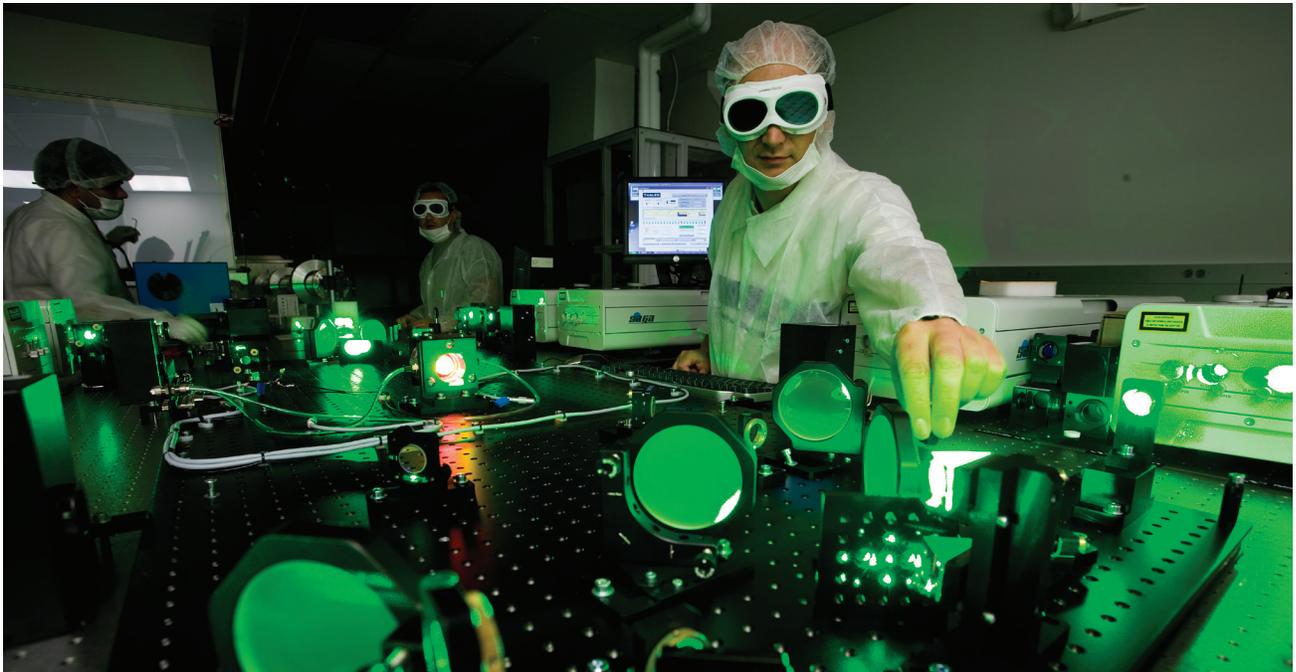




FIGURE 1.
Federal Research Awards (in millions)¹

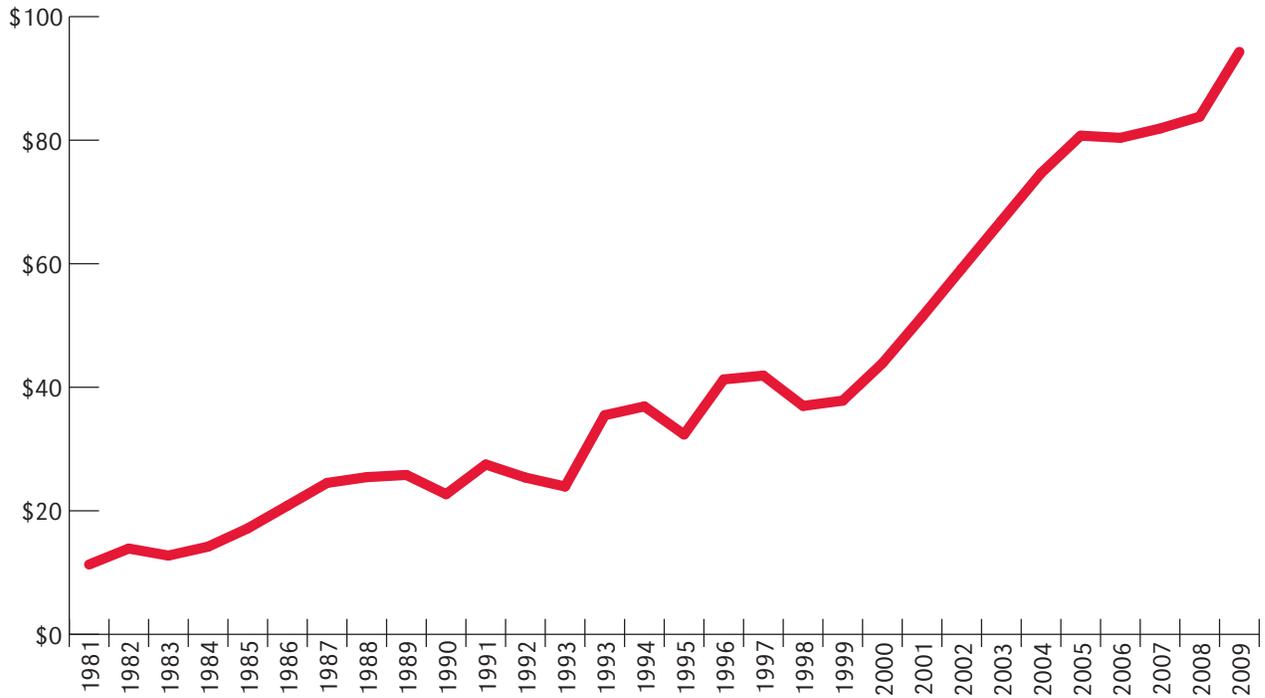
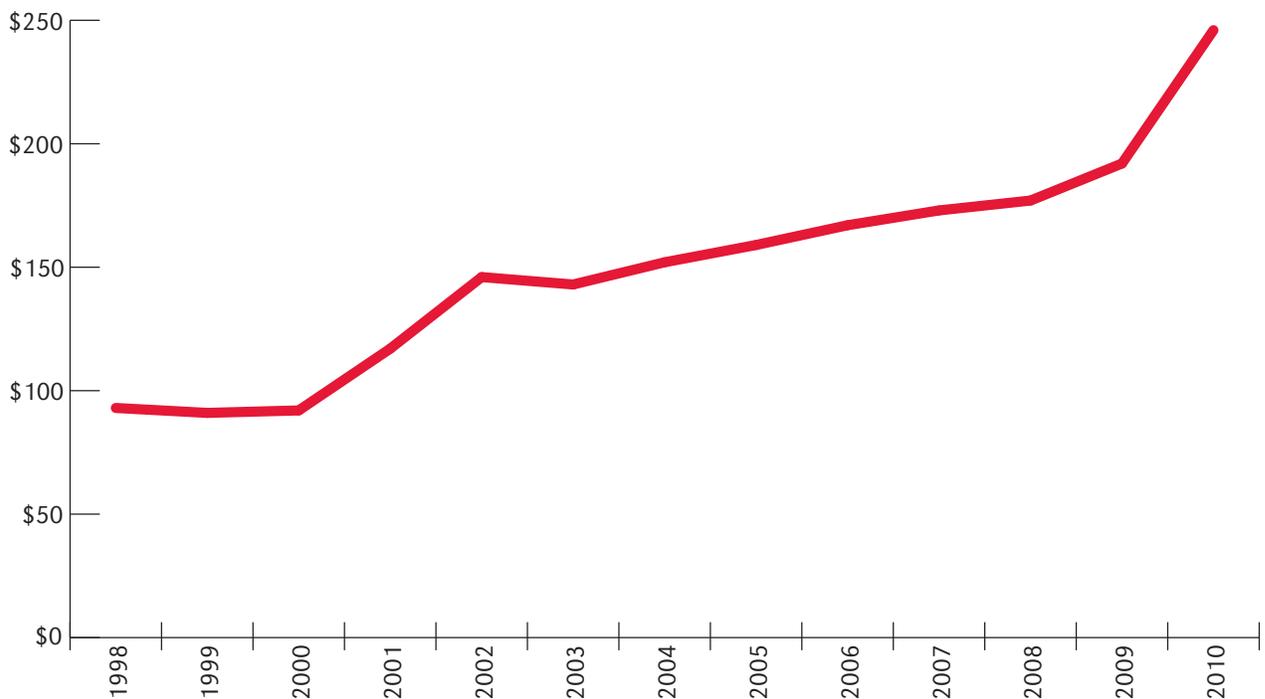


FIGURE 2.
Total Sponsored Awards (in millions)



¹ Data for 2009 and 2010 are not officially available from NSF and thus not included in Figure 1.



This growth rate places UNL as one of the fastest growing AAU institutions in terms of research. In the 10 year span of 1999 to 2008, UNL ranks 7th of all AAU institutions in the percentage growth in total NSF R&D federal research expenditures. Table 1 shows the percentage growth of all AAU institutions for that period in rank order. Note that the baseline year was 1999, the year before the release of the *2020 Vision Report*.

TABLE 1.
Percentage Growth in Federal Research Expenditures at AAU Institutions (1999-2008)²

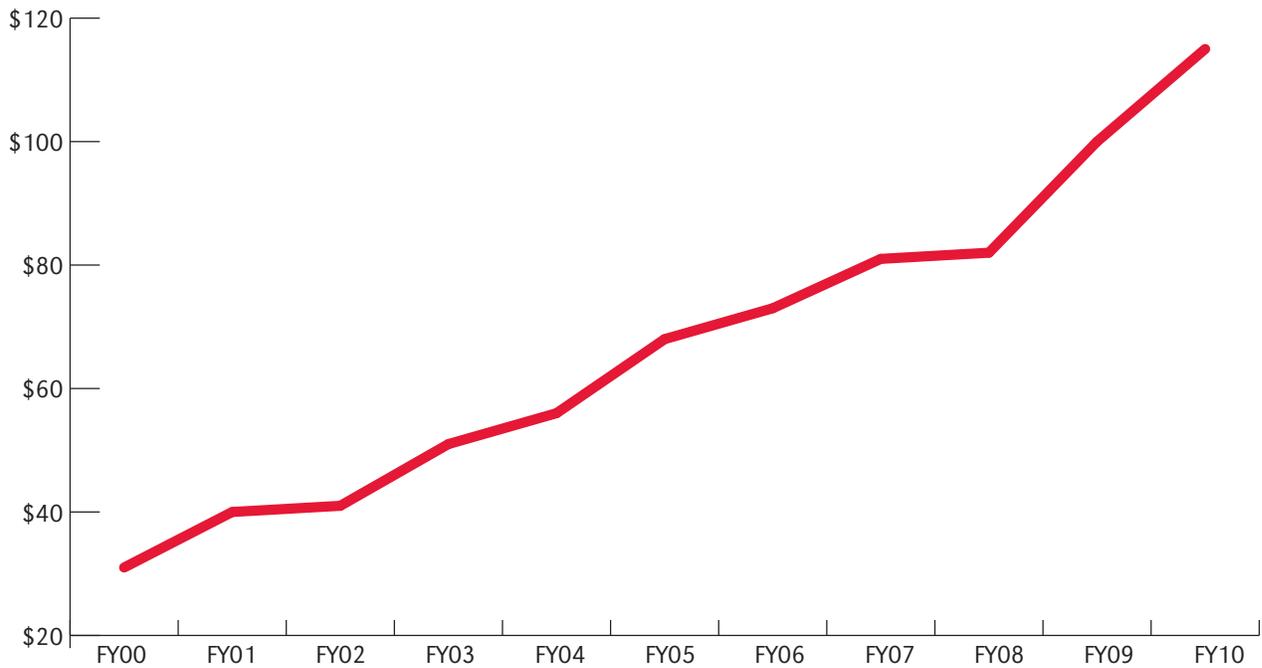
INSTITUTION	PERCENT INCREASE	INSTITUTION	PERCENT INCREASE
Vanderbilt University	183.4%	Purdue University	84.5%
Georgia Institute of Technology	149.1%	University at Buffalo	84.3%
The Ohio State University	147.8%	Indiana University-Bloomington	82.6%
Duke University	141.7%	Johns Hopkins University	80.9%
University of California, Irvine	136.1%	Washington University in St. Louis	80.2%
University of Pittsburgh	134.4%	New York University	79.4%
University of Nebraska-Lincoln	121.4%	The University of Michigan-Ann Arbor	77.4%
Emory University	119.2%	Yale University	75.5%
Case Western Reserve University	117.9%	University of Minnesota-Twin Cities	75.3%
University of California, Davis	116.1%	University of Southern California	74.7%
Tulane University	115.0%	University of Pennsylvania	72.9%
University of Kansas	113.7%	Princeton University	71.4%
Brown University	110.1%	Michigan State University	70.2%
The University of Chicago	109.7%	University of California, San Diego	68.1%
University of Rochester	108.0%	University of Washington	66.8%
Pennsylvania State University -University Park	104.2%	Texas A&M University	64.7%
University of North Carolina-Chapel Hill	104.0%	University of Maryland	63.0%
University of Virginia	103.4%	Massachusetts Institute of Technology	60.2%
University of Oregon	101.9%	Rice University	57.0%
University of Missouri-Columbia	100.7%	University of Arizona	56.0%
Northwestern University	99.8%	Cornell University - Endowed College	52.9%
University of Texas at Austin	96.6%	University of California, Santa Barbara	50.8%
Columbia University	92.0%	Harvard University	44.1%
University of Wisconsin-Madison	90.4%	Stanford University	43.9%
Iowa State University	89.7%	University of Illinois at Urbana-Champaign	43.7%
Carnegie Mellon University	89.1%	University of California-Berkeley	30.4%
University of Florida	88.9%	Brandeis University	29.8%
University of Iowa	87.5%	California Institute of Technology	24.7%
University of California, Los Angeles	87.3%	Stony Brook University	13.3%
Rutgers, The State University of New Jersey	85.6%	Syracuse University	-19.4%
	<i>median</i> [^]		

²Source: NSF R&D Expenditures, which is the same source as used for the AAU membership indicators, but these values do not include an adjustment for USDA expenditures.



Similar success has been achieved by the University of Nebraska Medical Center (UNMC) pursuant to the commitment across the University of Nebraska to advance the research agenda for the university and the State of Nebraska. Unlike the previous tables that display the growth exclusively for the UNL campus, Figure 3 below displays the growth in total research awards at UNMC over the past decade.

FIGURE 3.
Total Research Awards for UNMC (in millions)





If the growth rates of campuses in the NU system, of which 98 percent of research expenditures are from UNL and the University of Nebraska Medical Center, are combined, the University of Nebraska ranks 7th among all AAU institutions in percentage growth of NSF R&D federal expenditures over the past five years as displayed in Table 2. It is important to note that all but 12 AAU institutions include medical schools.

TABLE 2.
NSF R&D Federal Expenditures at Colleges and Universities (in thousands)
sorted by Percentage Growth, 2003-2008³

INSTITUTION	2003	2008	PERCENT INCREASE
The Ohio State University (all campuses)	198,488	335,121	68.8%
University of Oregon	36,127	55,190	52.8%
Vanderbilt University	221,979	331,296	49.2%
Case Western Reserve University	205,452	305,483	48.7%
Duke University	306,864	451,317	47.1%
The University of Chicago	201,129	284,616	41.5%
University of Nebraska (all campuses)	96,627	136,317	41.1%
University of Texas at Austin	231,996	324,287	39.8%
Massachusetts Institute of Technology	356,206	495,008	39.0%
Texas A&M University	177,119	245,607	38.7%
Georgia Institute of Technology (all campuses)	203,582	281,184	38.1%
Purdue University (all campuses)	129,199	176,592	36.7%
Pennsylvania State University (all campuses)	301,094	406,528	35.0%
University of California, Irvine	133,873	178,299	33.2%
University of North Carolina-Chapel Hill	280,678	373,098	32.9%
Tulane University	82,118	109,152	32.9%
University of Rochester	208,148	276,268	32.7%
Northwestern University	200,316	264,984	32.3%
University of Pittsburgh (all campuses)	345,625	456,172	32.0%
University of Kansas (all campuses)	92,888	122,401	31.8%
University of California, Davis	208,327	268,957	29.1%
University of Maryland	183,206	236,417	29.0%
Johns Hopkins University	1,106,971	1,425,100	28.7%
University of Missouri-Columbia	84,211	108,131	28.4%
Rutgers (all campuses)	110,041	140,399	27.6%
Emory University	228,255	291,126	27.5%
University of Virginia (all campuses)	173,442	219,429	26.5%
Yale University	296,713	374,551	26.2%
University of California, Santa Barbara	88,422	111,601	26.2%
Rice University	43,706	54,959	25.7%
Iowa State University	82,297	102,771	24.9%
University of Minnesota (all campuses)	293,266	364,137	24.2%
University of California, San Diego	400,100	490,963	22.7%
Indiana University (all campuses)	153,625	186,711	21.5%
University at Buffalo (all campuses)	129,794	157,578	21.4%
Princeton University	104,011	125,102	20.3%
New York University	166,033	199,363	20.1%
University of Wisconsin-Madison	396,231	474,440	19.7%
Columbia University	385,529	461,029	19.6%
University of Florida	194,958	230,999	18.5%
Brown University	81,445	95,145	16.8%
University of Iowa	197,260	229,903	16.5%
University of Southern California	300,195	348,713	16.2%
University of Pennsylvania	415,631	482,321	16.0%
University of Colorado (all campuses)	377,941	437,393	15.7%
University of Michigan (all campuses)	516,818	592,768	14.7%
Michigan State University	133,820	152,907	14.3%
Brandeis University	33,722	38,204	13.3%
University of California, Los Angeles	421,174	471,932	12.1%
Cornell University (all campuses)	320,868	358,944	11.9%
California Institute of Technology	219,097	243,624	11.2%
Washington University in St. Louis	357,364	393,918	10.2%
Harvard University	348,620	383,330	10.0%
University of Washington	565,602	614,069	8.6%
Carnegie Mellon University	157,583	170,978	8.5%
University of Arizona	259,074	277,897	7.3%
Stanford University	483,540	509,477	5.4%
University of California, Berkeley	238,206	249,163	4.6%
University of Illinois at Urbana-Champaign	266,487	266,912	0.2%
Stony Brook University (all campuses)	112,452	106,419	-5.4%
Syracuse University (all campuses)	34,559	24,207	-30.0%

³ Source: NSF R&D Expenditures at Universities and Colleges, Institutions ranked by R&D expenditures, FY2001-08, federally financed.



When the total FY2008 expenditures are ranked, Nebraska ranks 49th among of all AAU institutions in total dollars expended, as displayed in Table 3.

TABLE 3.
NSF R&D Federal Expenditures at Colleges and Universities (in thousands)
sorted by 2008 Expenditures, 2003-2008⁴

INSTITUTION	2003	2008	PERCENT INCREASE
Johns Hopkins University	1,106,971	1,425,100	28.7%
University of Washington	565,602	614,069	8.6%
University of Michigan (all campuses)	516,818	592,768	14.7%
Stanford University	483,540	509,477	5.4%
Massachusetts Institute of Technology	356,206	495,008	39.0%
University of California, San Diego	400,100	490,963	22.7%
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Washington University in St. Louis	357,364	393,918	10.2%
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Emory University	228,255	291,126	27.5%
The University of Chicago	201,129	284,616	41.5%
Georgia Institute of Technology (all campuses)	203,582	281,184	38.1%
University of Arizona	259,074	277,897	7.3%
University of Rochester	208,148	276,268	32.7%
University of California, Davis	208,327	268,957	29.1%
University of Illinois at Urbana-Champaign	266,487	266,912	0.2%
Northwestern University	200,316	264,984	32.3%
University of California, Berkeley	238,206	249,163	4.6%
Texas A&M University	177,119	245,607	38.7%
California Institute of Technology	219,097	243,624	11.2%
University of Maryland	183,206	236,417	29.0%
University of Florida	194,958	230,999	18.5%
University of Iowa	197,260	229,903	16.5%
University of Virginia (all campuses)	173,442	219,429	26.5%
New York University	166,033	199,363	20.1%
Indiana University (all campuses)	153,625	186,711	21.5%
University of California, Irvine	133,873	178,299	33.2%
Purdue University (all campuses)	129,199	176,592	36.7%
Carnegie Mellon University	157,583	170,978	8.5%
University at Buffalo (all campuses)	129,794	157,578	21.4%
Michigan State University	133,820	152,907	14.3%
Rutgers (all campuses)	110,041	140,399	27.6%
University of Nebraska (all campuses)	96,627	136,317	41.1%
Princeton University	104,011	125,102	20.3%
University of Kansas (all campuses)	92,888	122,401	31.8%
University of California-Santa Barbara	88,422	111,601	26.2%
Tulane University	82,118	109,152	32.9%
University of Missouri-Columbia	84,211	108,131	28.4%
Stony Brook University (all campuses)	112,452	106,419	-5.4%
Iowa State University	82,297	102,771	24.9%
Brown University	81,445	95,145	16.8%
University of Oregon	36,127	55,190	52.8%
Rice University	43,706	54,959	25.7%
Brandeis University	33,722	38,204	13.3%
Syracuse University (all campuses)	34,559	24,207	-30.0%

⁴ Source: NSF R&D Expenditures at Universities and Colleges, Institutions ranked by R&D expenditures, FY2001-08, federally financed.



In addition to the amount and quality of funded research, the quality of the faculty is the other central indicator used by the AAU Membership Indicators. Of course, faculty quality is more difficult to measure objectively than research activity. The AAU membership indicators utilize membership in the National Academies and significant national awards as proxies for faculty quality in its methodology. Academy membership is a trailing indicator of faculty quality as such awards typically are bestowed to recognize previous accomplishments. UNL historically has been unable to achieve a critical mass of National Academy members, although we expect that our research trajectory and recent election into the Big Ten Conference will increase our success. UNL is pursuing a strategic initiative to add five National Academy members to our faculty by 2015. We are currently negotiating with a National Academy member to join the UNL faculty to lead a major initiative in the life sciences.

Neither the National Academies nor other honors and awards included in the AAU membership indicators fully index faculty quality across the breadth of a comprehensive institution. For example, sustained scholarly achievements in educational research are not included in the indicators. In August of 2008 the *American Educational Research Association* (AERA) announced the selection of 300 scholars nationwide to be AERA Fellows in recognition of their exceptional scientific or scholarly contributions to education research or significant contributions to the field through the development of research opportunities and settings. UNL had eight members selected as shown in Table 4. Only three institutions – Stanford, Michigan and UCLA – had more inaugural fellows.

TABLE 4.
Number of Inaugural AERA Fellows

INSTITUTION	NUMBER OF FELLOWS
Stanford University	18
University of Michigan	10
University of California, Los Angeles	9
University of Nebraska-Lincoln	8
Harvard University	8
University of Wisconsin, Madison	8
University of Minnesota	7
Columbia University	7
University of California, Berkeley	6
Vanderbilt University	6
University of Illinois	5
University of Pittsburgh	5
University of Southern California	5
Syracuse University	5
University of Chicago	4
University of Iowa	4
Northwestern University	4
Penn State University	4
University of Pennsylvania	4
University of Washington	4
Emory University	3
Ohio State University	3
Purdue University	3
University of Colorado at Boulder	3
Carnegie Mellon University	2
Duke University	2
Johns Hopkins University	2
Michigan State University	2
Texas A & M University	2
University of Arizona	2
University of California, San Diego	2
University of California, Santa Barbara	2
University of Florida	2
University of Missouri	2
University of Rochester	2
Washington University in St. Louis	2
Brown University	1
Cornell University	1
Georgia Institute of Technology	1
Iowa State University	1
McGill University	1
New York University	1
Stony Brook University	1
University of California-Irvine	1
University of Kansas	1
University of North Carolina at Chapel Hill	1
University of Oregon	1
University of Toronto	1
Yale University	1



On August 17, 2010 President Barack Obama announced the 2009 *Presidential Awards for Mathematics and Science Teaching*, the nation’s highest honor for teachers of mathematics and science. Of the 103 winners, UNL had three recipients as shown in Table 5. Only Columbia, with four, had more.

UNL is particularly proud that our faculty includes the 2004-2006 U.S. Poet Laureate and winner of the Pulitzer Prize in Poetry, the 2010 Winner of the Bancroft Prize in History, the 2005 Winner of the President’s National Medal of Technology – the nation’s highest award for technology and innovation, the Senior Economist with President’s Council of Economic Advisors (2005-2006), and the researcher with two of the top 50 most exciting discoveries in *Nanotechnology 2010*.

UNL’s early career faculty members are competing successfully against faculty from other AAU institutions to win the DOE Early Career Research Program and DOD Young Investigator Awards, in addition to an increasing number of NSF CAREER and NIH K Awards. A recent independent study conducted by Battelle, Columbus, Ohio, revealed that UNL’s scientists are some of the most-cited agricultural researchers in the world, ranking ninth among U.S. universities, and 11th among universities worldwide. Our faculty’s work has appeared often in Discover Magazine’s Top 100 Science Stories in recent years.

Over the past decade we believe UNL has made more advances in research and in the quality of its programs and faculty than most universities.

TABLE 5.
Number of Presidential Awards for
Mathematics and Science Teaching, 2009

INSTITUTION	NUMBER OF HONOREES
Columbia University	4
University of Nebraska-Lincoln	3
Harvard University	3
Rutgers University	2
University of Iowa	2
University of North Carolina at Chapel Hill	2
University of Rochester	2
Emory University	1
Indiana University	1
Iowa State University	1
Penn State University	1
Purdue University	1
Rice University	1
University of Arizona	1
University of California, Berkeley	1
University of California, Irvine	1
University of Chicago	1
University of Iowa	1
University of Kansas	1
University of Missouri	1
University of Pennsylvania	1
University of Texas, Austin	1
University of Virginia	1
University of Wisconsin, Madison	1
Yale University	1



Commitments to the Research Mission

UNL is Nebraska's only comprehensive research and land-grant university. We have enjoyed membership in AAU since 1909. We are AAU's only land-grant member located in the Great Plains and, as a public university, are supported by the smallest population. UNL is the flagship campus of the University of Nebraska System, which consists of three other campuses: the Medical Center in Omaha, the University of Nebraska at Omaha (a metropolitan university) and the University of Nebraska at Kearney (a small, largely undergraduate institution). The CEO of each campus is called the Chancellor and the CEO of the University System is the President. The System has one Board of Regents. Until the creation of the system in 1972, the Medical Center was administered as a part of UNL but it now has a separate Chancellor. This administrative change resulted in research for UNMC being reported separately from UNL's research.



UNL is a comprehensive research university with approximately 20,000 undergraduate students and 5,000 graduate students aligned in nine academic colleges and the Institute of Agriculture and Natural Resources. It has a statewide presence and the land-grant obligation to serve the interests of the people of Nebraska. Thus UNL has special responsibilities relating to assuring access to Nebraska students, supporting the Nebraska economy through its research, and maintenance of an active cooperative extension unit throughout the State with particular emphasis on agriculture.

The AAU membership indicators place a university like UNL at a particular disadvantage. While we will analyze those criteria at greater length in the appendix, we merely observe here that in comparing UNL with other AAU members, the failure to include its medical school research, its USDA-funded research, and its industry-funded research must be taken into account in determining whether there is, in the words of the AAU membership principles, a “significant and sustained disparity between the mission or accomplishments of a member institution and that of other members of the association.”

The reemergence of UNL as a research university began with the appointment of Graham Spanier as Chancellor in 1992. He set the tone and began the change in culture necessary to enhance graduate education and research. His efforts made the *2020 Vision Report* possible. These initiatives were continued when James Moeser succeeded Chancellor Spanier in 1996.



As noted earlier, the *2020 Vision Report* was a candid self-assessment of the gap between the university's accomplishments and its potential. The recommendations of the report challenged the campus community to do what was necessary to "become one of the leading public research universities in the nation and ranked among the strongest state universities in academic quality." The university community views this report as a turning point in the work and direction of the university. In 2000, Moeser left to become chancellor of the University of North Carolina at Chapel Hill and Harvey Perlman became chancellor of UNL.

From the outset, Chancellor Perlman, with concurrence of the campus community, adopted a focused set of priorities designed to emphasize improvement in undergraduate education and the pursuit of the "2020 Vision" to become a leading public research university. Throughout the last decade all strategic planning, investments and disinvestments, hiring, capital construction, and campus policies and activities have been directed toward those two priorities.

Currently, the University of Nebraska's planning is guided by the Strategic Framework adopted by the Board of Regents. That framework provides specific goals with accountability measures for each goal. One of the six Board goals reads:

The University of Nebraska will pursue excellence and regional, national and international competitiveness in research and scholarly activity, as well as their application, focusing on areas of strategic importance and opportunity.

<http://www.nebraska.edu/strategic-framework.html>

The "accountability measure" for UNL and for UNMC reads:

Increase UNL and UNMC federal research awards from all federal agencies at a rate 20 percent higher per year than weighted total national federal awards per year on three-year rolling average.

<http://www.nebraska.edu/strategic-framework.html>

In response, UNL has adopted a "Strategic Compass" that provides the goals and strategies for pursuing the Board objectives. The Compass is consistent with the *2020 Vision Report* and emphasizes the twin priorities of undergraduate education and research.

<http://www.unl.edu/ucomm/chancldr/compass/plan.shtml>



The State of Nebraska also supports the research mission of the university. The Nebraska Research Initiative, adopted by the State in the late 1980s, provides \$11 million annually to support the development of research capacity at primarily UNL and the Medical Center. In 2001, the State of Nebraska began allocating \$12 million annually from the proceeds of its settlement with the tobacco companies for health-related research, again primarily at UNL and UNMC. The University of Nebraska Board of Regents reallocated funds to invest \$9 million annually in UNL programs of excellence. A large part of those funds was used to create excellence in research and graduate education. In 2009, the Legislature and the governor supported moving the Nebraska State Fair from its 100-year home adjacent to UNL to permit the university to build an Innovation Campus, a campus designed to attract private-sector research partners. And this year in his proposed budget the governor, notwithstanding that the state faces a billion-dollar shortfall, provided \$25 million for initial construction at Innovation Campus and recommended no reduction in the university's budget.

It should be clear from these documents, from the directives of the Board of Regents, and from the commitments of the State of Nebraska that the mission of the university is aligned with that of AAU. The rapid growth in federal research expenditures, as well as the increase in overall research at the university, demonstrates that our mission is being pursued energetically and successfully. These commitments, and the resulting trajectory, supported the invitation and acceptance of the university to membership in the Big Ten Conference and its Committee on Institutional Cooperation beginning July 1, 2011.

PART TWO

*Achievement
within a
Comprehensive
Mission*





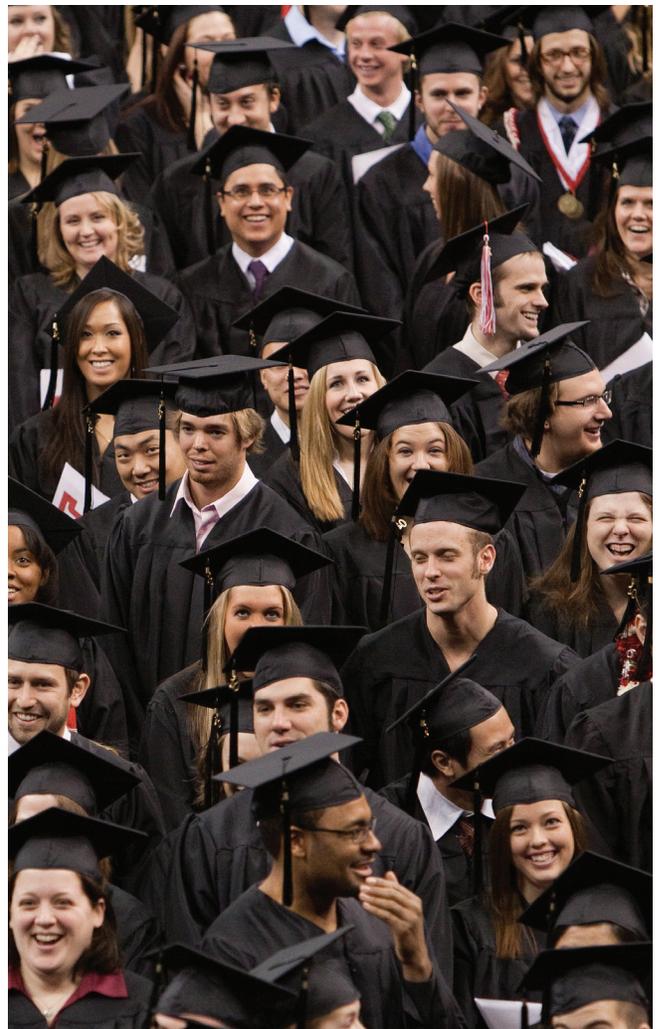
University of Nebraska–Lincoln
AAU Membership Review 2011

Part Two:

Achievement within a Comprehensive Mission

In Part 2, we provide texture and context to the rapid trajectory of success that UNL has experienced over the last decade. We hope to provide a sense of the vibrancy of the university, the significant role we are playing within the national research agenda, and the engagement we have around the world. We sense these are the aspects of our mission most pertinent to our membership in AAU. Our progress should be viewed, however, in the context of our land-grant mission and our obligation to serve directly the people of Nebraska. We have avoided the temptation to catalogue in a comprehensive way the individual successes of our students and faculty.

Similarly we have not provided an evaluation of each discipline, department, or college at the university. UNL is a relatively small research university serving a geographically large, and in many respects, diverse state. Our primary strategy for building the reputation and success of the university has been a focused one. Thus, because of our size and scale, it is more difficult to build a reputation for a discipline in its entirety; rather we have focused on where we have particular strengths within disciplines. We also have creatively pursued interdisciplinary opportunities that are excluded from comparative rankings but yet are critical for the future of university-based research and for addressing the pressing problems of our nation and the world. We acknowledge such a strategy makes it more difficult to have success in national rankings conducted by discipline. However, we believe that we have built a number of initiatives that are among the best in the country.





Significant Achievements and Major Initiatives in Research and Graduate Education

Life Sciences, Human Health, and Agriculture

Plant Sciences. UNL has historic strengths in plant sciences, particularly in food crops. UNL faculty in the plant sciences (including plant pathology) are national leaders, including National Academy member and AAAS Fellow James Van Etten and AAAS Fellows Don Weeks and Sally Mackenzie. Graduate education programs in Plant Biology (interdisciplinary) and Agronomy are top ranked in the NRC study (5th and 6th among smaller and larger departments respectively⁵). Recently, UNL developed an innovative professional degree, a doctorate in Plant Health, to translate basic plant science innovation into the fields to improve yield.

UNL has unique, nationally distinctive facilities to engineer and evaluate genetic modifications at the production scale with its USDA Animal and Plant Health Inspection Service (APHIS) certified Plant Transformation Facility. UNL faculty are nationally prominent in the application of plant science to sustainable energy solutions, including a collaborative USDA Biofuels Center sited on the UNL campus (one of five nationally) and active participation in the Algae Biofuels Consortium.

UNL plant science faculty are impacting national policy. For example, UNL Professor Kenneth Cassman, former head of the Department of Agronomy and Horticulture and founding director of the Nebraska Center for Energy Sciences Research, serves as chair of the new Independent Science and Partnership Council of the newly reorganized Consultative Group on International Agricultural Research (CGIAR) system, a consortium of 15 international research centers focused on Food for People, Environment for People, and Policies for Food Security, with an annual budget of \$600 million. Cassman will chair a council that includes five other scientists from around the world with support from the Secretariat Office of FAO-Rome that includes six full-time Ph.D.s and four staff members.

Central to UNL's work in food plant science is the Center for Plant Science Innovation (CPSI), which has funding from NSF, NIH, USDA, DOE, and the Bill & Melinda Gates Foundation, including an NSF-funded Plant Genomics Center. CPSI is a basic plant sciences interdisciplinary research and training program whose faculty develop plant breeding programs that incorporate modern technologies for crop improvement, integrate an understanding of plant function to their natural environment, and investigate the food safety, environmental impact, and economic implications of agricultural biotechnology. Because agriculture is a key and vital industry in Nebraska, the CPSI serves a critical function to the state and the nation.

⁵ Source: Ph.Ds.org, using data from the NRC Assessment of Research Doctorate Programs.



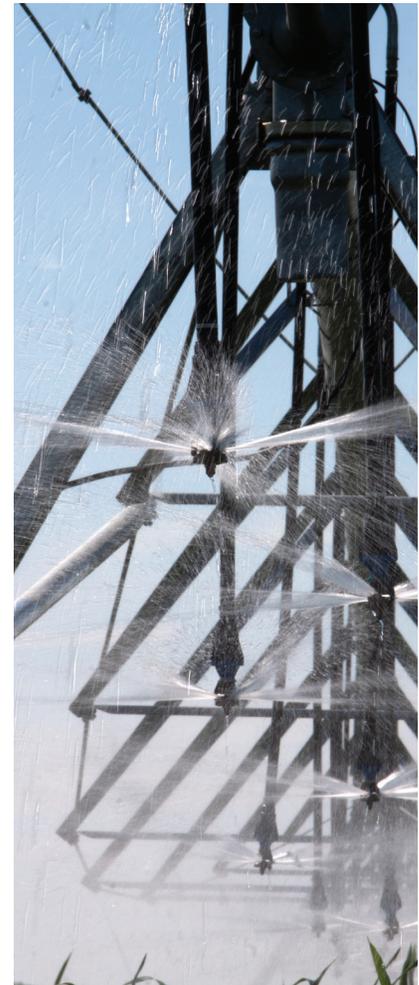


The success of UNL's efforts in plant innovation can be recognized not only by the significant federal research support it has received but also by its attraction to international private sector companies. Monsanto will soon be marketing a dicamba (a major herbicide) resistant soybean that was discovered by UNL scientists. And, Bayer Crop Science, a major German company, has recently announced it will provide significant funding to UNL for access to its wheat germplasm and will construct its North American Wheat Breeding facility in Nebraska in order to collaborate with UNL scientists.

Water for Food Institute. Funded with a charitable gift of \$50 million in 2010, the university's global Water for Food Institute builds on UNL's expertise in water management and seeks to become the focal point for research and talent production for the world's effort to provide more food with less water. The Institute has held two major international conferences and is establishing hubs in China, Africa, and Latin America. UNL has recently joined a consortium with Harvard and MIT related to global water security with projected projects in Pakistan, India, and Brazil. UNL holds the only annual international conference focused on water for food, which has been funded by the Bill & Melinda Gates Foundation, Robert B. Daugherty Charitable Foundation and industry partners. This effort draws upon our long-term leadership in irrigation technology research, reflected by Professor William Splinter's recognition in the National Academy of Engineering, and integrates with other expertise in climate science.

The High Plains Regional Climate Center is nationally recognized for its climate data and information services, and UNL's partnership with NCAR and other AAU universities in the DOI Climate Science Center is central in understanding landscape level climate impacts. NSF recently awarded a competitive IGERT award in Resilience and Adaptive Management to support interdisciplinary graduate education in this area with our faculty.

Food Allergy Research and Resource Program. The renowned Food Allergy Research and Resource Program (FARRP) is "the tester" for products of every major food company. Adverse physical reactions to food are of growing concern to both consumers and to food product manufacturers. Liability and recall issues, as well as recent changes to labeling laws, are having a significant impact on the way food manufacturers develop and process their products. To address these issues for food manufacturing companies, FARRP conducts cutting-edge food safety research, provides confidential testing services for industry, and conducts food-allergen workshops all over the world. UNL has expanded our strength in food and its link to health with an interdisciplinary research effort, the Gut Initiative, focused on the gut microbiome, diet, and disease. With cutting-edge metagenomics capabilities, this initiative has experienced significant early success that bodes well for continued growth, winning two ARRA challenge grants. This team has also received new competitive USDA and NIH funding.





Center for Virology. UNL's Center for Virology is the only such center that focuses on viral processes across cellular organisms, plants, animals and humans. Led by Professor Charles Wood, the center focuses not only on basic science, but also has led international outreach efforts to expand in-country science and clinical infrastructure in Zambia (in collaboration with the University of Zambia) through a long-standing Fogarty grant. Center faculty, including AAAS Fellow Prem S. Paul, have received national recognition and early career development awards. The center is training the next generation of interdisciplinary scholars through a T32 NIH training grant.

Biological Process Development Facility. The Biological Process Development Facility (BPDF), a unique on-campus cGMP facility with science and engineering faculty, is a leader in the development of vaccine processes and therapeutic agents from bacterial and yeast expression systems. BPDF has received major funding from NIH, DOD, and industry for national defense and biomedical applications. Last fall, UNL announced \$3.8 million in new funding from the Mintaka Foundation of Medical Research supported by the Wellcome Trust to enable the BPDF to develop a process to manufacture a stable and affordable microbicide to protect women from contracting and spreading HIV.

INTSORMIL. The International Sorghum and Millet Collaborative Research Support Program (INTSORMIL) is headquartered at the University of Nebraska-Lincoln and for nearly 30 years has provided life-sustaining aid to some of the poorest nations in the world. To date, more than \$80 million has been invested in INTSORMIL, which supports collaborative research to improve nutrition and increase income in developing countries through enhanced production and use of sorghum and millet, which are staple grains for millions of people around the world.

Both sorghum and millet are produced in a dynamic environment in which new diseases emerge, diseases and pests evolve resistance to treatments, climatic conditions change and cycle, and market demands and preferences change. Within this changing environment, INTSORMIL plays a critically important role in predicting U.S. issues and needs relating to sorghum and millet and proactively working to develop new grain varieties, forage varieties, diagnostic tools, treatment chemistries, and specific strategies to keep these crops at the cutting edge of agriculture productivity. INTSORMIL plays a key role in combating hunger and poverty and is a significant economic driver nationally. It is estimated that between 50 and 60 percent of the sorghum grown in the U.S. contains germplasm from INTSORMIL-affiliated university research programs totaling between \$358 million and \$429 million worth of U.S. grain sorghum production. Since INTSORMIL began operations in 1979, sorghum yields have trended from 59 bushels per acre up to 65 bushels per acre (by 2005). This is a 10.2 percent yield increase, the direct value of which is \$71.5 million annually.





INTSORMIL recently won \$9 million in competitive funding from USAID to bring animal nutritionists, biotechnologists, breeders, cereal chemists, economics, entomologists, food scientists, plant pathologists and weed scientists from several U.S. universities (including Ohio State, Purdue, Kansas State, Texas A&M) together with the ARS/USDA in collaboration with national research programs in East Africa, West Africa, Southern Africa and Central America.

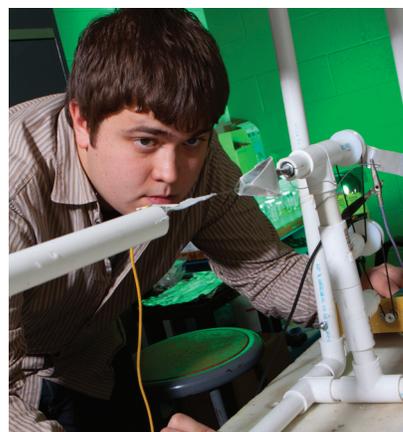
National Drought Mitigation Center. The National Drought Mitigation Center (NDMC) develops and implements measures to reduce societal vulnerability to drought, stressing preparedness and risk management rather than crisis management. Most of the NDMC's services are directed to state, federal, regional, and tribal governments that are involved in drought and water supply planning. The NDMC activities include maintaining an information clearinghouse and drought portal; and it is best known for its leadership in preparation of the U.S. Drought Monitor that appears in newspapers weekly. The NDMC is also participating in numerous international projects, including the establishment of regional drought preparedness networks in collaboration with the United Nations' Secretariat for the International Strategy for Disaster Reduction.

Science and Engineering

Nanoscience and Materials. UNL faculty members have achieved national recognition in nanoscience and materials despite the comparatively smaller number of UNL physical science faculty relative to other AAU institutions. UNL has a long-standing NSF-funded Materials Research Science and Engineering Center, a recently awarded NSF-funded Center for Nanostructured Hybrid Materials, as well as the distinguished W.M. Keck Center for Mesospin and Quantum Information Systems. Reflecting our strengths in this area, the National Institute of Standards and Technology awarded UNL an ARRA grant to construct the Nanoscience Metrology Facility (one of 12 awards out of 166 applications).

Among the faculty working in nanoscience is Xiao Cheng Zeng, professor of chemistry and a Guggenheim Fellow and an AAAS Fellow, who led the development of gold nanocages that was the cover story in the Proceedings of the National Academy of Sciences in May 2006; Yongfeng Lu, professor of mechanical engineering, whose lab produced two of the recent "Top 50 Advances in Nanotechnology in 2010" as judged by the journal Nanotechnology; and Ravi Saraf, professor of chemical engineering, who earned one of the top 100 science stories of 2006 for his touch sensor. Many of our pre-tenure faculty in this area have won early career awards and related recognition.

Additionally, faculty in these areas have longstanding records of innovation, including the world renowned spin-off company, J.A. Woollam & Co., a leader in ellipsometry and materials characterization. The Nebraska Center for Materials and Nanoscience brings





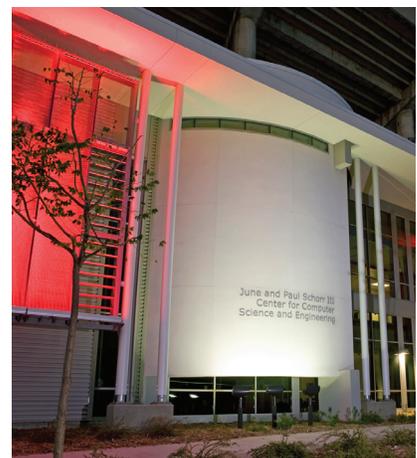
together experts from chemistry, engineering and physics to study and create new materials and structures for a wide range of applications. Its researchers are one of the top magnetism groups in the country and recently partnered with collaborators at the University of Delaware and other universities to win a highly competitive (37 funded awards out of approximately 3,700 proposals) Advanced Research Projects Agency – Energy grant from the U.S. Department of Energy to develop a better way to power hybrid cars, wind turbines and computer discs.

Polar Research. Antarctic Drilling Project (ANDRILL) is the current NSF-funded multinational collaboration in which UNL faculty play a lead role. UNL is also responsible for overall scientific management of the project. ANDRILL comprises more than 200 scientists, students, and educators from five nations (Germany, Italy, New Zealand, the United Kingdom and the United States) who work to recover stratigraphic records from the Antarctic margin using Cape Roberts Project (CRP) technology. Collaborating U.S. universities include The Ohio State University; Northern Illinois University; Florida State University; Stanford University; Penn State University; University of California, Santa Barbara; University of California, Davis; University of Michigan; Johns Hopkins University; and the University of Massachusetts-Amherst.

A NOVA television documentary, “Sheets Beneath the Ice,” premiered nationally on PBS on December 28, 2010. The documentary explored the ANDRILL research program and its exploration of Antarctica’s past to find clues that carry ominous implications for coastal cities around the globe.

UNL has maintained a continuing leadership position in polar research, the objective of which is to monitor and predict climate change. In the early 1970s, then-UNL Chancellor James Zumberge also conducted research in this field and served as president of SCAR (Scientific Committee on Antarctic Research). Later, UNL was awarded contracts for the Polar Ice Coring Office from the NSF Office of Polar Programs.

Computer Science and Engineering. UNL’s Computer Science and Engineering Department is recognized as a top 20 program in the NRC rankings, drawing upon the expertise of faculty, including Matt Dwyer who recently won the “Most Influential Paper Award” by the International Conference on Software Engineering®, the premier software engineering conference; Peter Revesz, a Jefferson Science Fellow and Fulbright Fellow; and five junior faculty, all NSF CAREER award winners. With well-recognized strengths in software engineering, a recent ranking of International Software Engineering Scholars placed UNL’s Laboratory for Empirically-based Software Quality Research and Development team fifth in the world.

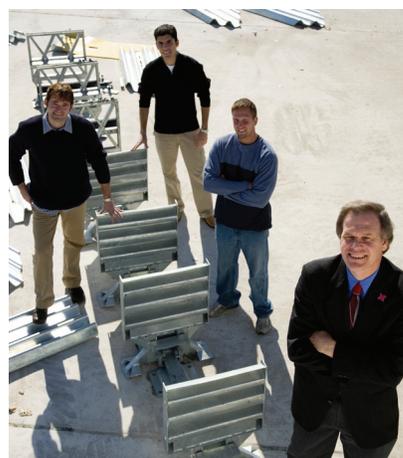




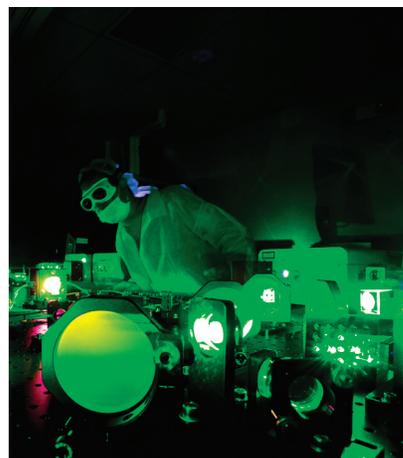
Hadron Collider Project. The University of Nebraska's Holland Computing Center features four supercomputers and is funded by the NSF to support participation in research at the Hadron Collider Project at the European Organization for Nuclear Research (CERN), the world's largest particle accelerator. The UNL high-energy physics team provides leadership for one of the two largest experiments, the Compact Muon Solenoid (CMS), which hopes to discover new fundamental subatomic particles and to understand the origins of mass. UNL is one of seven Tier-2 sites that participate in data collection and analysis from the project. Other Tier-2 sites include the Massachusetts Institute of Technology; California Institute of Technology; University of Wisconsin-Madison; Purdue University; the University of California, San Diego; and the University of Florida. The Holland Computing Center's supercomputer has become the largest contributor in the world to the production of CMS simulations. More than 900 scientists from 48 U.S. institutions participate in this collaboration, supported by the Department of Energy and National Science Foundation.



Mid-America Transportation Center (MATC). The University of Nebraska-Lincoln is the lead institution of this multi-institution consortium, which is headquartered at UNL. MATC is funded by the U.S. Department of Transportation and is focused on improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system. Among the faculty associated with the Transportation Center is Dean Sicking, professor of civil engineering. With funding from NASCAR, Sicking and colleagues developed the SAFER Barrier, a flexible railing/wall system used in NASCAR tracks nationwide that has improved safety and reduced driver injuries. This technology was listed on the R&D top 100 list, and for this work, in 2006, Sicking was awarded the President's National Medal of Technology, the nation's highest honor in innovation and technology. The entry of these technologies into the marketplace is expected to save state transportations departments more than \$60 million annually.



Atomic, Molecular, Optical and Plasma (AMOP) Physics. With the installation of new ten-times-higher-energy pump lasers, the Diocles Extreme Light Laboratory, led by Professor Donald P. Umstadter, will reach a peak power level of 1-petawatt early in 2011. The Diocles laser will operate at the highest duty cycle of any petawatt laser ever built anywhere. At the laser's focus, light can reach the highest intensities ever achieved in the laboratory, 10^{23} W/cm², providing UNL scientists with numerous scientific opportunities that can now be exploited in a new physical regime of physics, that of Relativistic Optics. It is also expected to enable breakthroughs in the development of new technologies, such as advanced accelerators and x-ray sources, which are priorities of federal research agencies including NSF, DOE, DOD, NIH, and DHS.





A recent NSF ARRA award will help expand the lab into a High Power Laser Science Collaboratory (HPLSC), which will house a new AFOSR-funded high-power-laser with additional capabilities (ten times higher duty cycle than any multi-terawatt laser ever built). This renovation will give UNL and the U.S. one of the most powerful and versatile research laser laboratories in the world, creating the capability for potentially transformative research in hyper-spectral, ultrafast radiation sources, advanced accelerators, relativistic nonlinear optics, high field physics and extreme light. The HPLSC will enable UNL to extend the use of these unique capabilities to internal and external interdisciplinary teams working on the development of applications in AMOP and nuclear physics, materials science and biomedicine.

The work of Professor Herman Batelaan's group on the Aharonov Bohn effect was featured on the cover of the September 2009 issue of *Physics Today*, the monthly magazine of the American Institute of Physics. Canada's renowned Perimeter Institute created a half-hour video program titled "The Challenge of Quantum Reality" that featured experiments done in Batelaan's laboratory, among a few others elsewhere in the world. The video program includes a cameo appearance by Stephen Hawking of Cambridge University and is being distributed to 3,500 high schools.

The two most recent AMOP hires have succeeded in winning highly competitive early career funding, including a Junior Faculty Award from the Plasma Physics Program within Basic Energy Sciences (BES) at DOE and a Junior Faculty Award from the AMO Science Program within BES.

Education and Social Sciences

Science, Technology, Engineering, Mathematics (STEM) Education. Under the leadership of Mathematics Professor James Lewis and colleagues in the College of Education and Human Sciences, UNL leads national efforts in STEM education. With two large, NSF-funded Math & Science Partnership projects (Math in the Middle and NebraskaMATH), UNL is a national model of partnering with school districts to improve teacher training in math across the K-12 spectrum. With recently awarded companion Noyce Scholarship grants in both Math Education and Science Education programs, UNL is broadening its impact.

UNL's STEM education prowess extends beyond formal methods. Professor Judy Diamond and colleagues provide leadership in informal science, reflected in an NIH Science Education Partnership Award for the "World of Viruses" project, and collaborate with Harvard University in a recent NSF-funded "Life on Earth" project focusing on innovative evolution education. More generally, these STEM education efforts are a part of a longstanding commitment and award-winning efforts in diversity. UNL's Mathematics Department won a Presidential Award for Excellence in Science, Mathematics and





Engineering Mentoring. UNL's Department of Mathematics is also a partner department in the Carnegie Initiative on the Doctorate. The initiative is a multi-year research and action project aimed at improving doctoral education at American universities. The project is funded by the Carnegie Foundation and Atlantic Philanthropies and also includes Duke University, Ohio State University, Stony Brook University, University of Chicago, University of Illinois at Urbana-Champaign, University of Michigan, and University of Southern California.

National Center for Research on Rural Education. The National Center for Research on Rural Education (R²Ed), funded in July 2009 for five years by the U.S. Department of Education's Institute of Education Sciences, is housed in the Nebraska Center for Research on Children, Youth, Families and Schools, and directed by Susan Sheridan, professor of educational psychology. Rural schools are not just smaller versions of urban schools existing in sparsely populated areas, but rather have distinct needs and challenges. R²Ed is the sole center of its kind nationwide and it serves a leadership position in better understanding and serving rural schools. The center's goals are to improve students' acquisition of reading and science knowledge and skills by identifying effective practices that lead to the systematic provision of evidence-based instruction in rural settings; and to establish an infrastructure for conducting and disseminating nationally relevant, cutting-edge research and leadership related to rural education.

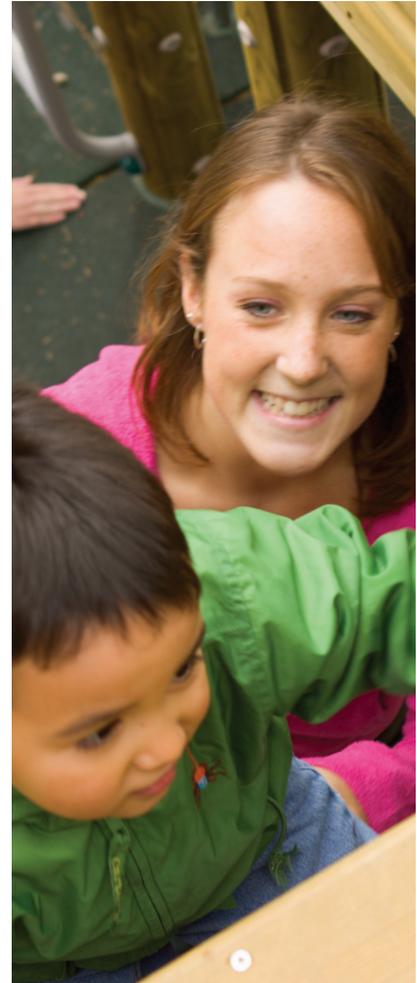
Buffett Early Childhood Institute. On January 31, 2011, a major gift from Susie Buffett established the Buffett Early Childhood Institute. The Institute builds on the national reputation of UNL faculty in early childhood education and the research success of the Nebraska Center for Research on Children, Youth, Families and Schools. Through private philanthropy and university reallocation, the University of Nebraska is making more than a \$100 million commitment to the Buffet Institute, which should continue the university's leadership in research in early childhood education. The formation of the Institute has benefited from the engagement with other leaders in early childhood education including Jack Shonkoff, M.D., director of the Center on the Developing Child, Harvard University; Samuel J. Meisels, president of the Erikson Institute; and Harriet Meyer, Ounce of Prevention Fund.



Center for Brain, Biology, and Behavior. This new interdisciplinary center is in its formative stages, led by Dennis L. Molfese, professor of psychology who joined UNL in Fall 2010 to direct this research initiative. Molfese is an internationally recognized expert on the use of brain recording techniques to study brain development, language acquisition and cognitive processes. A prolific scientist, Molfese has been continuously funded since 1975 through grants from the National Institutes of Health, the National Science Foundation, Department of Education, The National Foundation/March of Dimes, the MacArthur Foundation, the Kellogg Foundation, NATO, and NASA. The center includes other social scientists such as Political Science Professor John Hibbing (a 1996 winner of the Richard F. Fenno, Jr. Prize for the best book in legislative studies and author of the recent discovery of a genetic link to political attitudes) and others in exploring the relationship between brain function, neurobiology, and social behavior.

Ethnic Studies/Diversity. Les Whitbeck is an international expert in community-based, participatory research, recognized for his long-standing NIH-funded research with Native Americans in the Great Plains that explicates the social contributions to health disparities. Whitbeck is a professor in the Department of Sociology, which was recently listed as No. 5 (for smaller programs) by PhDs.org and includes a number of pre-tenure faculty with early career awards. Through the Institute for Ethnic Studies, interdisciplinary collaborations between social scientists and humanists is common, including the recently awarded NEH grant to Professor Mark Awakuni-Swetland for his work in creating a comprehensive Omaha and Ponca language digital dictionary.

Center for Children, Families & the Law. Professor Brian Wilcox, who was awarded the Public Service Award by the American Psychological Association for his longstanding work in public policy and social program improvements, directs this center to accelerate child welfare reform and improve foster care services. This center is a national leader using child development research to advocate for policy change. Wilcox and other colleagues in the College of Education and Human Science and the College of Law jointly administer the graduate program in the Law/Psychology Program, one of the first and most well known of such graduate programs combining law and psychology. It is the world's oldest ongoing integrated program in psycholegal studies. It remains unique in the breadth of training with students specializing in virtually all areas of psycholegal studies.





Arts and Humanities

Digital Humanities. The Center for Digital Research in the Humanities is a joint initiative of the UNL Libraries and the College of Arts and Sciences. A world leader in digital scholarship in the humanities, the center’s greatest strengths are textual editing and data mining (the finding of significant patterns in large bodies of information). Signature projects include *The Walt Whitman Archive*, *The Willa Cather Archive*, *The Journals of the Lewis and Clark Expedition* and *Railroads and the Making of Modern America*.

The center contributes to the refinement of international data standards and develops tools to mine, analyze, and visualize humanities data. Through such programs as the Nebraska Digital Workshop and the recently approved graduate certificate program, it is fostering the next generation of digital humanities scholars.

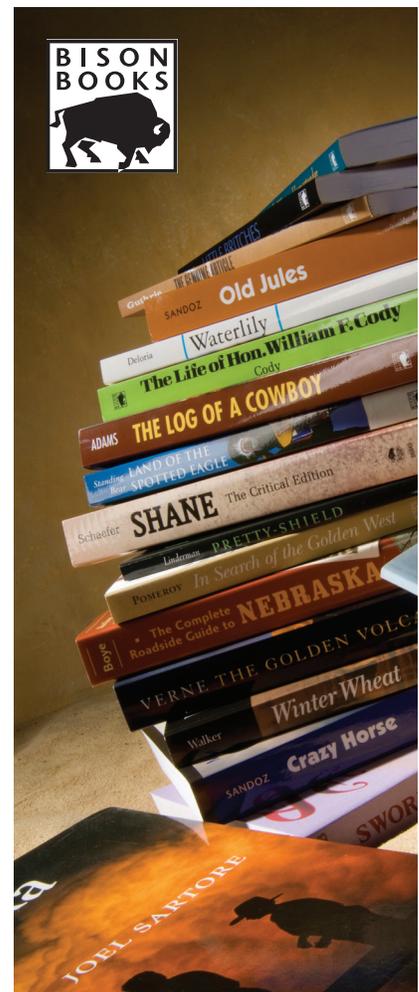
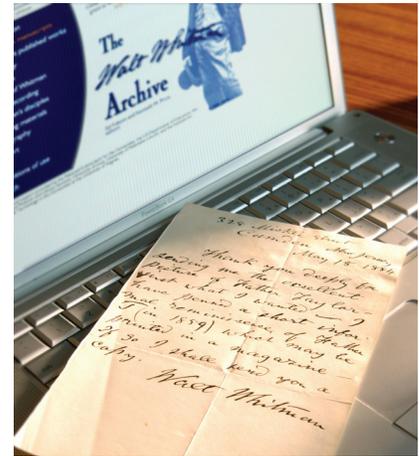
The center has been awarded several prestigious National Endowment for the Humanities-funded grants, including two Challenge grants to build a permanent endowment to support ongoing work. In 2010, center researchers received a grant from NEH to expand digital research on Civil War-era Washington, D.C., especially its pivotal role in the antislavery and civil rights movements. The grant will enable researchers to study how race, slavery and emancipation changed the capital 150 years ago. Researchers will investigate how African Americans living in Washington during the Civil War gained their freedom, won the fight for the Union and against slavery, and achieved legal equality.

Other Arts and Humanities. More broadly, UNL has a distinguished and longstanding record of scholarship and impact in the Arts and Humanities dating back to the founding of the university. This record of scholarly impact continues today with particular strengths in 19th Century American studies that are rooted in our Great Plains heritage. Impact in these disciplines is more difficult to quantify and is not well reflected in commonly used science and engineering metrics. Distinguished programs and faculty in the arts and humanities include:

Ted Kooser, professor of English, served as *U.S. Poet Laureate* (2004-2006) and won a *Pulitzer Prize* for poetry in 2005. He is the award-winning author of 12 full-length collections of poetry in addition to personal essays and literary criticism.

Margaret Jacobs, professor of history, is the winner of the *2010 Bancroft Prize* from Columbia University for the best book in the field of American History for her book “White Mother to a Dark Race: Settler Colonialism, Maternalism, and the Removal of Indigenous Children in the American West and Australia, 1880-1940,” published by the University of Nebraska Press.

The University of Nebraska Press is the only academic press in the U.S. that has published works by each of the last three winners of the Nobel Prize in Literature. It is the largest university press between Chicago and California. Its Bison Books imprint was the first





university press imprint to put classic works of literature into paperback, a mission it continues today, 50 years later. The press, in collaboration with other major presses and universities, regularly engages in externally funded projects from the Andrew W. Mellon Foundation, the NEH and other agencies and foundations.

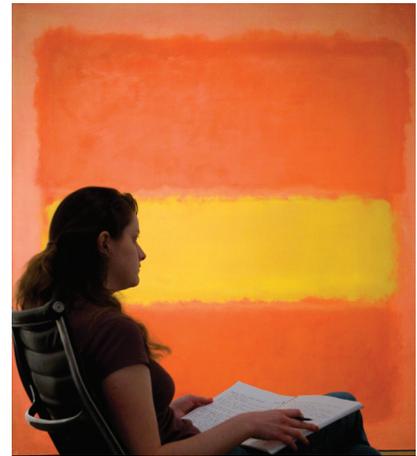
The Sheldon Museum of Art includes collections of more than 12,000 works of art in all media. Housed in an architectural masterpiece designed by Philip Johnson, the Sheldon has a nationally acclaimed collection of modern American art and has an extensive outreach program in Nebraska, the region and nationally.

The International Quilt Study Center and Museum opened in 2008. Housed in a Robert A.M. Stern-designed building, the center has the largest publicly held collection of fine art quilts from around the world. The center is both an exhibition gallery and a research center devoted to this “common person’s” art form. Its more than 3,500 quilts date from the early 1700s to the present and represent more than 25 countries. UNL Professor Michael James, whose creations have garnered broad acclaim, is considered one of a select few top artists in his field. His quilts are part of permanent collections at the Smithsonian Institute’s Renwick Gallery in Washington, D.C., and the Museum of Arts and Design in New York City, in addition to being widely exhibited around the world. His international reputation as an artist and scholar of quilts, quilt design and techniques has led to the preeminence of UNL’s International Quilt Study Center and Museum.

Prairie Schooner is a nationally recognized literary journal and is a member of the Council of Literary Magazines and Presses, the Council of Editors of Learned Journals, is indexed with Humanities International Complete, Book Review Index, Index of American Periodical Verse, Current Contents, and Humanities Index. It has successfully endured for more than 80 years, published consistently throughout that time, instituted very successful poetry and short fiction book prizes, and stayed true to the region even while broadening its national appeal.

The Johnny Carson School of Theatre and Film offers a full complement of production opportunities in all disciplines, including film, new media, production, design, acting, directing and management. In partnership with Hollywood industry professionals, the School recently released a short film titled “Vipers in the Grass.” This film is the only project of its kind in the United States – blending a student academic project with a creative product that will be submitted to film competitions and festivals around the country. Written by Hollywood mainstay Jorge Zamacona, the production attracted to UNL writers, actors, directors and production workers with hundreds of TV shows and motion pictures to their credit. During their time at UNL, the industry professionals mentored and instructed students in the intricacies of building a motion picture from start to finish.

UNL is proud to have many nationally recognized faculty in the Arts and Humanities, including several recent American Council of Learned Societies (ACLS) fellows. They include: Effie Athanassopoulous, anthropology and classics and religious studies; Stephen Behrendt, English; Stephen Burnett, classics and religious studies; and Will Thomas, history.





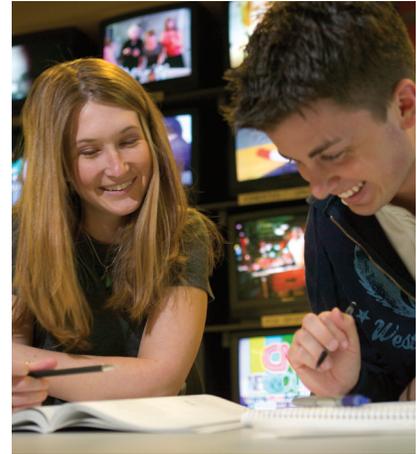
Professional Programs

College of Journalism and Mass Communication. This college is nationally recognized in student and faculty achievement and regularly ranks in student competitions among the nation's best. It is the only journalism program in the nation that hosts a student-staffed ABC News on Campus bureau, serves as a Dow Jones Newspaper Fund pre-internship training center and participates in the News21 national initiative to advance the news business.

Additionally, UNL is also the only U.S. journalism college to produce a national champion in three of four categories – writing, broadcasting and photography – in the Hearst Journalism Awards program. In the most recent national Hearst competition (among 40 U.S. journalism colleges), UNL students placed first overall. Individually, one student placed first in the radio features competition, another placed second in television features, and others placed in the top ten. Advertising students recently placed fourth in the 2010 National Student Advertising Competition.

UNL is one of 12 universities (others include Arizona State University, the University of California, Berkeley; Columbia University; Harvard University; the University of Maryland, the University of Missouri; the University of North Carolina at Chapel Hill; Northwestern University; the University of Southern California; Syracuse University; and the University of Texas at Austin) to participate in the Carnegie-Knight Initiative for the Future of Journalism Education, an \$11 million investment in strengthening curriculum.

College of Law. The college offers a unique Space and Telecommunications Law LL.M. degree drawing upon UNL's unique connection to U.S. STRATCOM and is the first of its kind in the United States and the only degree of its kind in the world taught in English. NASA provided initial funding. Students are recruited from private sector companies, public agencies, and the armed forces. The college was proud to be the national champion in the 2008-2009 National and International Client Counseling competitions.





Assessment of Quality of Undergraduate Students and Programs

UNL is the only comprehensive research university in Nebraska and we embrace our particular obligation to provide access to higher education for Nebraska high school graduates. While some would see this as a barrier to selectivity, we view it as an important reason that the people and elected officials of our state still strongly support the university.

Our tradition has been to utilize our entry requirements as leverage to improve K-12 education in Nebraska rather than to limit access. For example, we are the only institution in Nebraska that requires four years of mathematics for admission. We believe this approach has been one factor in the noteworthy success of Nebraska’s K-12 system, which consistently ranks among the top nationally. This balance between selectivity and access has allowed us to increase the size of our student body while also increasing the academic credentials of our entering class every year in the last five. We have enrolled an increasing proportion of high-ability students from Nebraska, attracted a growing portion of non-resident students and simultaneously increased both the diversity and the academic quality of the student body as a whole. UNL’s enrollment has continued to increase and in Fall 2011 we expect to exceed our historic high of 25,075 students.

Like many land-grant research universities, we structure specific highly selective programs within the general undergraduate environment to attract and nurture students with exceptional academic credentials. A notable example is the Jeffrey S. Raikes School for Computer Science and Management. Named after Jeff Raikes, CEO of the Bill & Melinda Gates Foundation and previous Microsoft division president, the Raikes School is a unique residential program that has a blended curriculum of computer science and business management and is designed to produce premier entrepreneurial leaders for information technology companies.

The quality of students in the Raikes School is reflected in their entering average ACT scores, which are detailed in Table 6.

Consistent with our land-grant mission, UNL is also determined to provide closely mentored research experiences for a diverse group of our undergraduate students. Our faculty have had noteworthy success with NSF and NIH funded undergraduate research programs. But we also invest significant university resources in the Undergraduate Creative Activity and Research Experience (UCARE) program. The distinguishing characteristic of our UCARE approach is that we involve faculty and students from the full breadth of arts, humanities, social science and STEM disciplines. The results are impressive. In 2009-10, 30 percent of



TRICIA AND JEFF RAIKES

TABLE 6.
Average ACT Composite Score for Students Entering the Raikes School

Fall 2007	32.6
Fall 2008	32.8
Fall 2009	33.4
Fall 2010	33.4



UNL graduating seniors reported that they had a meaningful faculty-mentored research experience, which is at or above the rate of our Big Ten peers.

While retaining our commitment to access and increasing both the size and diversity of our student body, we have also made impressive gains in our overall graduation rate. Table 7 demonstrates that UNL has been among the most successful of the AAU public universities in improving this very important metric.

TABLE 7.
Change in Six-year Graduation Rates at AAU Public Institutions⁶

INSTITUTION	% CHANGE (2002-08)	CHANGE IN AVERAGED GRADUATION RATES ⁷	CHANGE IN ADMISSIONS SELECTIVITY
Ohio State University	14	12	more
University of Pittsburgh main campus	13	12	more
University of Maryland, College Park	13	11	less
University of Minnesota-Twin Cities	12	10	none
University of California, Santa Barbara	10	8	none
University of Nebraska-Lincoln	10	7	none
Georgia Institute of Technology	9	9	less
University of Oregon	8	7	none
Purdue University, West Lafayette	8	6	more
University at Buffalo	8	6	none
University of Texas, Austin	7	7	none
University of Washington	7	6	none
Stony Brook University	7	5	none
Michigan State University	6	6	more
University of Wisconsin, Madison	6	5	less
University of California, Berkeley	6	4	more
University of North Carolina, Chapel Hill	6	3	none
University of California, Irvine	5	3	less
University of Florida	5	5	none
Penn State, University Park	5	3	less
University of California, Los Angeles	4	4	more
University of Michigan, Ann Arbor	4	3	none
Indiana U, Bloomington	4	2	none
University of California, San Diego	4	3	more
University of Missouri, Columbia	4	2	more
Texas A&M University, College Station	3	3	none
Rutgers University, New Brunswick	3	2	na
University of Kansas	3	2	more
University of California, Davis	3	1	none
Iowa State University	2	1	more
University of Arizona	2	2	less
University of Illinois, Urbana-Champaign	2	2	none
University of Virginia	1	1	less
University of Colorado, Boulder	0	0	none

As a testament to the quality of our students, in 2010, UNL was named a Truman Scholarship Honor Institution, reflecting its support for and success with the Truman Scholarship program. Of the current 63 AAU Schools, only 25 are Truman Honor Institutions.

⁶ Source: The Chronicle of Higher Education, <http://chronicle.com/article/Sortable-Table-Graduation/125587/>

⁷ Calculated using data from The Chronicle.

PART THREE

*Looking Ahead:
The Next 10 Years
and Beyond at UNL*



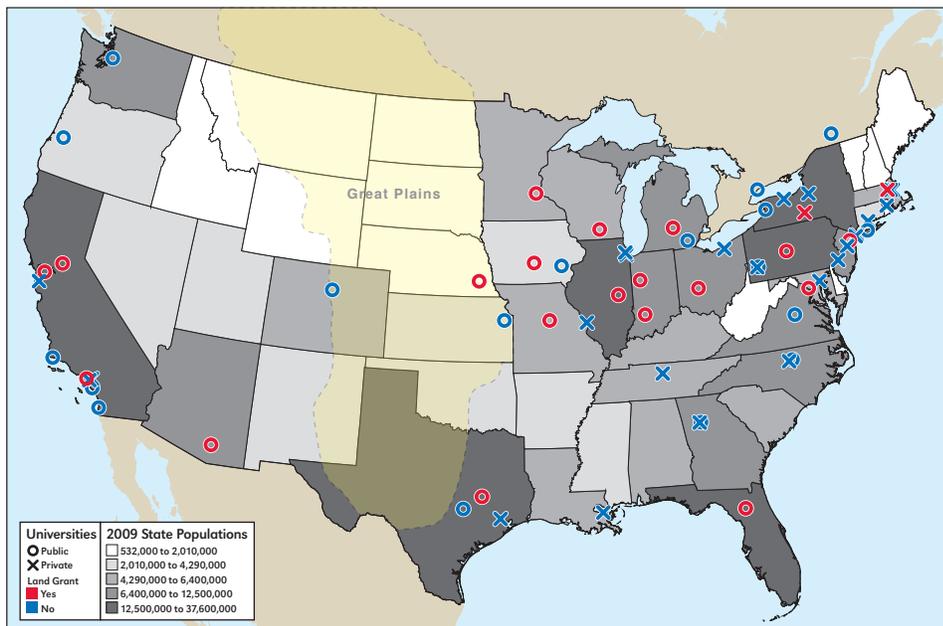


Part Three:

Looking Ahead: The Next 10 Years and Beyond at UNL

UNL has only begun to reach its potential as a comprehensive research university. We have no reason to doubt that we will build on our current strengths and formulate new initiatives that address critical issues facing the nation and the world. By reasons of talent and location, UNL is uniquely positioned to take a leading role in many of the critical natural resource related issues and brings assets and opportunities that could be exploited only by a very few AAU institutions. Indeed, AAU is best served by a diverse membership, one that can assure the talent and capacity to address the full range of critical national needs. Figure 4 provides a map of the current AAU institutions that demonstrates that UNL provides that much needed diversity.

FIGURE 4.
Location of AAU Institutions by Type with State Population





Feeding the World: A matter of national and global security

While it is clearly true that UNL has benefited by its membership in AAU, we believe we have also contributed to the Association's success and will continue to do so. We are the only AAU member located clearly within the Great Plains. Because of our location and our land-grant status, we are poised to make significant contributions to one of the most serious research challenges facing the global community—how to feed a growing population with limited resources, particularly water. Nebraska is one of the top five states in production of corn, soybeans, and cattle, with four distinct ecological climate zones, making it a unique resource for agricultural research applicable around the world. No other AAU member can replicate this opportunity.

For example, UNL's new global Water for Food Institute initiative (described earlier) allows the university to become a global resource for developing solutions to the challenges of hunger, poverty, agricultural productivity and water management. The institute has already developed major partnerships around the world, including a consortium with Harvard and MIT addressing international water security; a partnership with the UNESCO-IHE Institute for Water Education to provide an international curriculum in water management to help build capacity in the developing world; an agreement with USAID to address water issues in the Middle East; and a collaboration with the Indo-U.S. Science and Technology Forum to host a conference for Indian government officials on water management policies. Additionally, UNL faculty members continue to explore a variety of other regional, national and international partnerships and collaborations with other public and private institutions around the world.

Knowing how much food each acre of land can produce is essential to increasing global food capacity without significantly expanding farmland. To this end, faculty leaders in the Agronomy and Horticulture Department and the Nebraska Center for Energy Sciences Research are developing a transparent, science-based method to measure yield gap, the difference between average and potential crop yields. Identifying underperforming areas where yield could easily be increased will help prioritize research and inform agricultural policies. Using crop simulation modeling and geographic information systems technology, researchers are creating an atlas that shows yield potential for cropland in all countries that can provide data on crop, soil type and climate, and can develop future forecasts that account for anticipated climate variability. Atlas users will be able to compare an area's potential yields with actual yields. Having detailed, field-level information will help researchers and policymakers strategize ways to help producers close the gap, thus contributing to an important global issue. Another major UNL initiative is in stress biology where scientists are working to genetically improve crops to reduce losses due to drought and disease. Further, our expertise in irrigation technology and soil management will also contribute to this worldwide need.





Early Childhood Education and Development

One of the most significant domestic issues facing the nation is the growing educational gap between the United States and the rest of the world. The evidence is clear that young children who fall behind in their first eight years of life will find it exceedingly difficult to catch up. The changing demographics of the United States are increasing the number of at-risk children in this age group. The recent announcement of the Buffett Early Childhood Institute at the University of Nebraska positions UNL to make a major contribution to this effort. A major gift from Susie Buffett, which will be more than matched by the university, provides \$100 million investment in this initiative. Early childhood leaders across the country have recognized the significance of the university's initiative in this field.

“This investment by Susie Buffett and the University of Nebraska provides a golden opportunity to break down the silos in academia, policy, and programs and works across sectors to bring science and research to bear on the pressing needs of our youngest and most vulnerable citizens.” Jack P. Shonkoff, M.D., director, Center on the Developing Child at Harvard University, Julius B. Richmond FAMRI Professor of Child Health and Development, Harvard School of Public Health and Harvard Graduate School of Education, Professor of Pediatrics, Harvard Medical School and Children's Hospital Boston.

“The Buffett Early Childhood Institute sets a new course for Nebraska and the nation. Susie Buffett's vision and commitment are enormously encouraging to all of us who believe that all children deserve an equal chance to develop their potential. By raising to prominence the critical importance of a comprehensive approach to studying and educating children in the first eight years of life and preparing and supporting those who care for them, the new Institute will have a lasting impact for generations to come.” Samuel J. Meisels, president, Erikson Institute.

“This is a really big deal that means very good things for young children and families in Nebraska and across the country. With the building of new Educare schools and the Institute's focus on the first eight years of learning, the new Institute moves Nebraska to the forefront of states doing innovative work in early childhood. And given the University's involvement, the new Institute also serves as a model for how other public universities should be thinking about early education.” Harriet Meyer, Ounce of Prevention Fund.



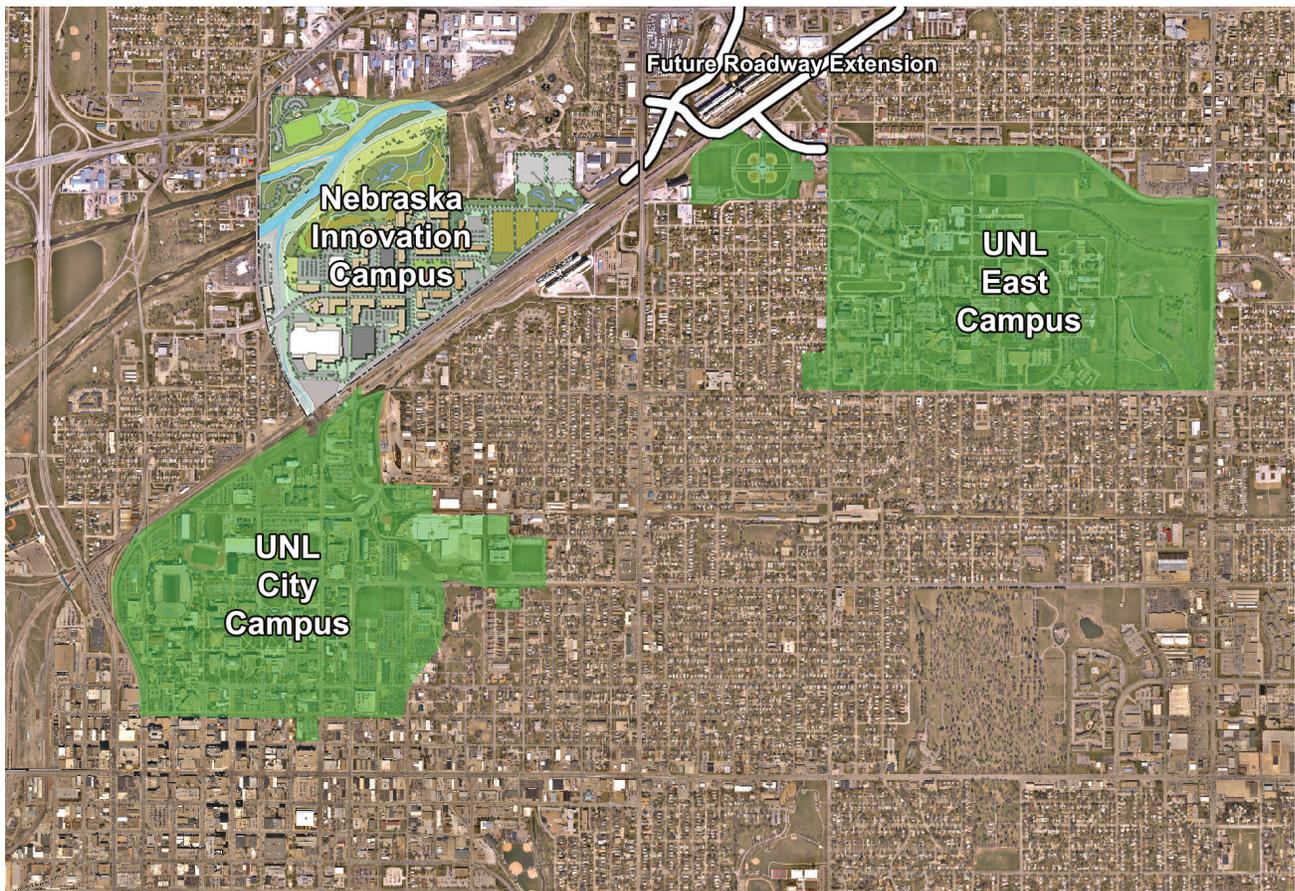
Innovation Campus

In January 2010, UNL acquired 233 acres adjacent to its landlocked campus to develop into an Innovation Campus, providing an unprecedented opportunity for the university and its research mission. For 100 years, this land was home to the Nebraska State Fair. In 2009, the Nebraska Legislature agreed to move the Fair, allowing the university to create Innovation Campus. The goal is to leverage university research to provide economic growth and diversity in Nebraska by attracting private-sector companies to locate on the property if they interact with the university. Now in the early stages of development (i.e., land clearing and building out basic infrastructure), the campus will soon be in a position to accommodate tenants. While Innovation Campus will be open to companies that form partnership with any discipline or initiative at the university, the emphasis is on research related to food, fuel and water. Initial discussions with leading private-sector companies give us reason to be extremely optimistic that Innovation Campus will be a success.



NEBRASKA **INNOVATION** CAMPUS
UNIVERSITY OF NEBRASKA-LINCOLN • INNOVATE.UNL.EDU

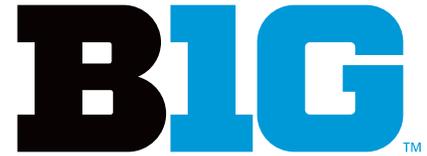
FIGURE 5.
Aerial view of UNL campuses and Innovation Campus





Big Ten Conference and Research and Academic Implications

Another emerging opportunity will begin July 1, 2011 when UNL joins the Big Ten Conference and the Committee on Institutional Cooperation. Our association with this distinguished collection of universities, all members of the AAU, is likely not only to sustain but to escalate UNL's academic trajectory. Our colleagues at Penn State have acknowledged that its entry into the Big Ten in 1989 was a pivotal point for increased success in faculty recruitment. In granting us membership, the Big Ten recognized the foundation of quality built at UNL over the past decade. Our increased association with Big Ten institutions and the accompanying stature will enhance our ability to recruit a high quality faculty, assist us in achieving broader representation in the National Academies, and attract a higher credentialed student body at both the graduate and undergraduate levels.



Current Capital Campaign

The University of Nebraska Foundation, the private fund-raising arm of the university, celebrates its 75th anniversary this year. With an endowment of \$1.1 billion, the NU Foundation ranks 54th in size among all public and private higher education foundations in the U.S. and Canada, and ranks 18th in size among public institutions. This is significant considering the state of Nebraska has a population of only 1.8 million. The foundation is engaged in a \$1.2 billion capital campaign, Campaign for Nebraska: Unlimited Possibilities, which is set to close in 2014. Notwithstanding the economic recession, the foundation had its two strongest years in 2008 and 2009 and is well beyond its target to meet the campaign goal.



Most of the major campaign goals relate to funding research initiatives. The \$50 million gift to fund the Water for Food Institute was a campaign objective. Two other initiatives are "Early Childhood Education" and "Architectural Engineering and Construction." We recently announced a major gift in Early Childhood Education to create the Buffett Child Education Institute. We have already been successful in raising an endowment of \$30 million for our new Durham School of Architectural Engineering and Construction – the only school in the country that integrates all elements of comprehensive building education into one academic school – to focus on the energy efficiency of the built environment.



Voluntary Separation Incentive Program

UNL initiated a voluntary faculty retirement incentive program in 2010 that netted 78 faculty lines (about \$11 million). Unlike other institutions, where salary resources gleaned from retirement incentive programs have been used to fund budget reductions, UNL designed its program to create strategic resources for new faculty hires that will advance our highest priorities. We have already begun the campus planning process that will identify both the targets and the strategies for hiring prominent faculty to lead our new initiatives and enhance our areas of existing strength.

PART FOUR

Conclusion





University of Nebraska–Lincoln
AAU Membership Review 2011

Part Four:

Conclusion

The mission and trajectory of the University of Nebraska–Lincoln corresponds comfortably with the Membership Principles of AAU. We have one of the fastest-growing research enterprises of any AAU institution. When combined with UNMC, our research expenditures exceed several AAU institutions with medical schools. UNL is a comprehensive university with a breadth of undergraduate, graduate, and professional programs. Faculty members across the disciplines are achieving distinction at a growing rate. Many collaborate with and often lead initiatives with some of the most highly ranked of AAU institutions. Yet, as a land-grant university, we continue to fulfill our obligation to serve the people of Nebraska in ways that are not reflected in, and often detract from, our ability to rank high within the AAU membership criteria. As a public institution in the least populated state represented by AAU, we remain competitive with many institutions with far greater resources.

UNL has benefited by its membership in AAU; we believe we have also contributed to the Association's success and will continue to do so. We have served as the host institution for the AAU Data Exchange and its National Coordinator since 2004. Our administrative leadership has been active in AAU activities nationally.

We have tried, as directed by the Review Committee, to be focused in this response. In one sense we have welcomed this opportunity to document and report the success we have achieved. Yet we also have to be mindful of why we have been asked to do so. UNL has been identified for review by the application of indicators that do not have the precision now being attributed to them.



The potential loss of AAU membership within this review process would have a far more negative impact on a member institution than failure to achieve membership in the first place. Indeed we would be less than honest not to acknowledge that a negative outcome puts our current trajectory at risk. These are very high stakes for the university. The temptation to document and elaborate fully is powerful in this circumstance. At the same time, we believe the report, as written, makes a compelling case. If you remain doubtful regarding our mission and trajectory, we would welcome the opportunity to elaborate or to host a site visit so that you can experience the university first-hand.

Thank you for the opportunity for internal review and to state our strong case for continuation as a member of the Association of American Universities.

APPENDIX

*Discussion of the
AAU Membership
Indicators and
Rankings*





University of Nebraska–Lincoln
AAU Membership Review 2011

Appendix:

Discussion of the AAU Membership Indicators and Rankings

The purpose of this appendix is to analyze the AAU membership indicators and to demonstrate how established metrics may differentially impact certain types of institutions, including the University of Nebraska–Lincoln and other land-grant universities. This analysis has relevance not only in the context of the review of members but also raises issues regarding the credibility and appropriateness of the current AAU methodology generally. No claim is made here that if the indicators were revised, UNL would suddenly rank with Harvard or Caltech in the AAU rankings. What we do claim is that a fair assessment of the membership indicators would not identify UNL as an outlier among AAU institutions. If the ultimate judgment is whether a member institution’s mission and trajectory makes it a “leading comprehensive research university distinguished by the breadth and quality of its research and graduate education,” then UNL is comfortably situated within the existing membership.

The membership indicators are used to rank AAU institutions as well as non-members. In one sense, ranking of institutions is not of great significance. While there may be some satisfaction if Institution X is ranked higher than Institution Y, the diversity of higher education in the U.S. makes comparisons very difficult and one could devise indicators that give an edge to one type of institution over another. However appropriate the indicators may be as a rough calculation of relative accomplishment over time, the rankings are now being used to identify member institutions who appear to be outliers from the general membership for review of their membership status or to identify other institutions who may be candidates for membership. Because only two institutions were identified for review out of the 14 that fall below the “top 63” ranked universities under the existing methodology, the application of the membership indicators takes on considerable significance for those universities. And, in this context, the indicators are assumed to have a precision that cannot be justified.



The methodology does not identify institutional trajectory

Because the indicators are provided for only a single year, they do not evaluate the trajectory of any university. As discussed in the body of the report, the trajectory for the University of Nebraska–Lincoln has been substantial and positive in the last ten years. Indeed based on growth in research expenditures, UNL is among the leaders of all AAU institutions. The snapshot of a single year provides a view only of where an institution is, but not where it has come from to get there nor does it portend what the institution is poised to achieve in the future.

In addition to not identifying trajectory, the methodology relies on measures of “cumulative,” not current, performance. The indicators are divided into Phase I and Phase II indicators. However, only Phase I indicators are used for purposes of the rankings. Thus, Phase II indicators, although acknowledged, play no role in the comparative assessment of institutions. The four Phase I indicators are: federal research expenditures adjusted to exclude all USDA funding, National Academy members, awards and fellowships (from designated lists), and citations. Each of these indicators is normalized by the number of tenure-line faculty, then institutions are ranked for each normalized indicator, and an overall ranking is determined by the average of the resulting ranks.

The methodology gives equal weight to each of the normalized Phase I indicators. However, only research expenditures and citations can be seen as measures of current performance. Certainly membership in the Academies and other prominent awards are important measures of cumulative performance of the faculty, but awards always lag performance. Even research expenditures, rather than receipts, are, to some degree, a lagging indicator of research productivity because faculty and facilities must be in place and awards must be made before funds can be expended.

The normalization process does not account for differences in mission

Each indicator is normalized by the size of the tenure-line faculty, recognizing the need to accommodate a diversity of membership size. Normalizing by size can be, but is not necessarily, a signal of the quality of the faculty. For example, if the College of Engineering of Institution A and Institution B have the same research expenditure, it is meaningful to know the relative size of the engineering faculty. However, applied institution-wide, one institution may focus faculty resources in areas for which research expenditures are a poor measure of quality or performance, even though in science and engineering they are highly productive. Size alone does little to account for the very different missions pursued by AAU institutions.

The current normalization process runs counter to the AAU’s stated objective of including only “comprehensive” universities in its membership. (Indeed the top two institutions



ranked by the AAU are ineligible for membership.) The more specialized a university is toward science and technology disciplines, the higher it is likely to be ranked with the current methodology. Thus universities such as Georgia Tech or Caltech will receive a much higher normalized ranking on research expenditures than a more comprehensive university that allocates faculty to those activities with fewer opportunities for securing large federal grants. Similarly, the National Academies and many awards are largely tailored for scientific disciplines. Thus, if the AAU is truly interested in comprehensive universities, the existing metrics do not fully match that objective.

Eliminating USDA and industry funds ignores important contributions and sends a mixed message

Land-grant universities are particularly disadvantaged in the normalization process, especially when it comes to research funding. The indicators include USDA and industry funding as a Phase II indicator, but that funding is excluded from the ranking algorithm. Though the stated desire of the Membership Committee is to exclude expenditures from USDA formula funds, in practice the adjustment eliminates all USDA expenditures, including competitive funding. However, not all USDA funding is formula funding; in fact the majority of UNL's funding from USDA was competitively awarded and has been increasingly so over the past few decades. This is most likely true with USDA funds in general and, therefore, the exclusion of USDA funding in its entirety is inappropriate. Similarly, while often not peer-reviewed in a formal sense, industry-sponsored research may be very competitive because the grantor is spending its own funds and often does considerably greater due diligence than is true with federal grants.

The exclusion of industry-sponsored research is also problematic, if for no other reason than it symbolically suggests that AAU does not believe collaboration with industry to be important for its members. AAU's efforts to support increased federal research budgets may depend on its ability to convince Congress of the commercial potential of research activities. And, AAU is currently working with the federal government to enhance the commercialization of research—a more likely prospect with industry-sponsored research. Moreover, as federal funding for research faces the pressure of competition for dollars with entitlement programs, industry-sponsored research may emerge as increasingly important. If AAU is committed to the conduct of research in the national interest, then excluding industry-sponsored research from its “ranking” formula is no longer consistent with research realities or the organization's future.

Furthermore, no exclusion is made for earmarked federal research dollars that are non-competitive in other federal agencies and no different from USDA formula funds “earmarked” for particular institutions.¹ Given the same logic, one could exclude all DOD or DOE funding because a portion of their funding is awarded via non-competitive processes.

¹ In fact, the adjustment employed by the current methodology excludes all contributions to research expenditures from USDA, not just formula funds.



The current methodology disadvantages land-grant institutions

Whatever one’s view regarding USDA funding, land-grant institutions are obligated to conduct agricultural research and to devote faculty resources to cooperative extension. However, no effort is made to take these faculty members into account in the normalization process; the dollars are removed but the faculty are not. This can disadvantage public institutions in those states where the comprehensive research and land-grant functions are placed in the same institution. In states like Kansas, for example, the University of Kansas is the comprehensive research institution with a medical school whereas Kansas State University is the land-grant institution. The consequence is that the faculty with responsibility for agricultural research and extension activities are separated into a non-AAU institution and thus do not impact the normalization of the AAU member as they do at UNL. The separate comprehensive and land-grant institutions in Iowa and Michigan are both AAU members, but these are exceptions rather than the rule. UNL is both the comprehensive and land-grant institution for Nebraska.

Even within land-grant research institutions, location may influence the allocation of faculty. Land-grant schools where the economic base of the state is dominated by agriculture are likely to allocate significantly more resources to agricultural research and extension. Nebraska is among the top five states in the production of corn, cattle, and soybeans. Table 8 demonstrates the impact on the allocation of faculty resources on the four AAU institutions that are land-grants and do not have a medical school:

TABLE 8.
Comparison of select land-grant institutions without medical schools to agricultural faculty headcounts

	AAU FACULTY COUNT * (AVG FY07-09)	PERCENT LARGER THAN UNL	COUNT OF AG FACULTY^ (FALL 2008)	ESTIMATED % FACULTY IN AG^ (FALL 2008)
Nebraska	1,011	-	158	15.4%
UC Berkeley	1,352	34%	73	5.3%
Illinois	1,839	82%	154	8.4%
Iowa State	1,078	7%	178	15.9%

* Source: IPEDS EAP

^ Source: AAUDE Faculty Profile by CIP (using same selection criteria as the AAU faculty count)

As a land-grant institution in a heavily agricultural state, it is not the exclusion of USDA funding but the retention of agriculture faculty in the normalization process that has a significant negative impact on UNL’s ranking, far beyond just the reduction in research expenditures.²

² In 1999 report, a Technical Advisory Working Group reviewed and made recommendations on the membership indicators to the membership committee. In it, the report showed the effect for excluding USDA funds from the then-used NSF Obligations data. The reduction in research for UNL was 74 percent, second only to Iowa State. Though the data source has been shifted to NSF R&D Expenditures, those numbers are still adjusted to eliminate all USDA expenditures.



The current methodology disadvantages institutions without medical schools

Over the course of time, many states have formed university systems that have separated administration of the state’s medical center from its flagship university. In Nebraska, the University of Nebraska Medical Center has its own chancellor. The AAU indicators, and after next year the NSF reports of research expenditures, do not allow the medical school research expenditures to be included with the flagship university where separate administrative structures exist. Because a medical school would be ineligible on its own for AAU membership, this disadvantages institutions without a medical school in two ways. First, because NIH funding has grown significantly, universities without medical schools have less opportunity to grow federal research expenditures. Second, clinical and research faculty at medical schools are expected to generate external funding, but the FTE of these individuals is often not included as “faculty.” As a result, the normalization of research expenditures in the AAU methodology will favor those universities with medical schools.

The data are not precise enough for the current purpose

Awards. The normalized ranking for “Awards” is treated equally with research expenditures or National Academy membership. However the ranking is based on a mere counting of awards with no effort to assess the importance of the award, or to assure that the listed awards reflect the comprehensiveness of AAU’s mission. While all of the awards are distinguished, an institution with three Nobel Laureates would rank below an institution with 10 members of AAAS. We make this point not to argue against including awards as a measure of quality but to show the imprecision of the ranking—particularly when it is given equal weight in the ranking process.

Citations. The normalized ranking for “Citations” is treated equally with research expenditures or National Academy membership. AAU obtains its citation figures from Academic Analytics. The University of Nebraska–Lincoln recently subscribed to Academic Analytics. In conversations with their staff, we learned that they had already recalculated the 2008 Faculty Scholarly Productivity Index rankings that were provided to AAU. As a result of that recalculation, the ranking of UNL moved from 84 to 71 due solely to the changes, corrections, and additions to their database. This provides further evidence that the current methodology and data available are not precise enough to be used for the purposes of ranking institutions.



The rankings do not identify UNL as an outlier

From the 2005-2007 ranking of AAU and other research universities, the University of Nebraska-Lincoln's overall rank is 109 out of some 126 institutions. We examined three AAU member institutions; two are neither land-grant nor have medical schools and one is land-grant with a medical school. All three were ranked higher than UNL. A comparison of the rankings of these institutions with UNL is summarized in Table 9:

TABLE 9.
Comparison of select AAU institutions by Phase I and II AAU indicators

	AAU ranking	PRIVATE A 48	PUBLIC B 71	PUBLIC C 94	UNL 109
	Faculty count	488	586	1818	1011
Phase I Indicators	Fed. Exp.	103	109	58	100
	Fed. Exp. Norm	81	99	101	115
	Natl Acad	54	75	72	96
	Natl Acad Norm	29	63	92	104
	Awards	62	61	49	75
	Awards Norm	36	47	67	79
	Citations	88	98	54	97
	Citations Norm	53	84	91	106
	<i>Avg of Phase I Norm Indicators</i>	<i>50</i>	<i>73</i>	<i>88</i>	<i>101</i>
Phase II Indicators	S, L & I USDA	121	124	15	64
	S, L & I USDA Norm	119	124	36	72
	Doc.	94	87	23	63
	Doc. Norm	50	64	73	72
	Post Docs	76	99	30	83
	Post Docs Norm	37	89	57	90

Private Institution A, the 48th ranked institution, is a small, private institution, with 74 percent of its undergraduate students and 81 percent of its graduate students in engineering, natural sciences, or social sciences; one suspects that its faculty members are similarly allocated. Thus it is not surprising that, though UNL has a higher rank in terms of federal expenditures, we suffer significantly when the indicator is normalized. Yet, if one were measuring the overall research contribution of the two institutions, UNL would, at the least, be competitive. Yet the ranking is dramatically different because of the differences in mission, composition and size. Normalizing by size may have some utility, but normalizing by mission would seem equally appropriate.

Public Institution B, ranked 71st, is one of two major public universities in its state, the other being the land-grant institution. While UNL's research expenditures are higher, UNL suffers in the ranking from the comprehensiveness of its mission when the indicators are normalized. Public Institution B does not have the burden of an agriculture faculty whose numbers are counted but whose research is not.

Public Institution C, ranked 94th, is a large land-grant university with a medical school, and has significantly larger research expenditures than UNL. Because of its responsibility as a land-grant and comprehensive institution, like Nebraska, the normalization process substantially lowers its ranking.



As compared to Private A and Public B, UNL has greater federal expenditures for research and is fairly close, and in some instances ranked higher, on most other criteria. Also, with investigation of just another land-grant institution, it is evident how the normalization process dramatically impacts relative placement and produces significant differences in the overall ranking. There may be other plausible explanations for this disparity but on its face, this does not appear to give credence to the current indicators as a justification for identifying UNL as an outlier among the AAU membership.

Finally, as we have seen recently with the NRC Assessment of Research Doctorates, the process of compiling even useful, valid data into institutional rankings creates controversy and does not necessarily result in information that can help with decision-making.

Adjustments to Nebraska's Membership Indicators

In reviewing the membership indicators for purposes of this submission, we discovered two adjustments that would alter our ranking to some degree. While the adjustments and the change in ranking are modest, in this context we ask they be taken into account.

Faculty Counts

UNL has had a tradition of including Library faculty in our IPEDS reports for historic and internal campus political reasons. This practice, which is against instructions from IPEDS and is not done by any other AAU institution to our knowledge, results in an over-count of our tenured/tenure-line faculty and damages our normalization rank within the AAU membership indicators. The average number of librarians for 2006-2008 was 39.

Postdoctoral Fellows

The count of postdocs at the University of Nebraska is underrepresented using the methodology of the membership committee. Specifically, the source for this indicator is the NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering (NSF GSS), which distinguishes between “postdocs” and “doctorate-holding nonfaculty researchers.” Only those identified as “postdocs” are included in the indicator.

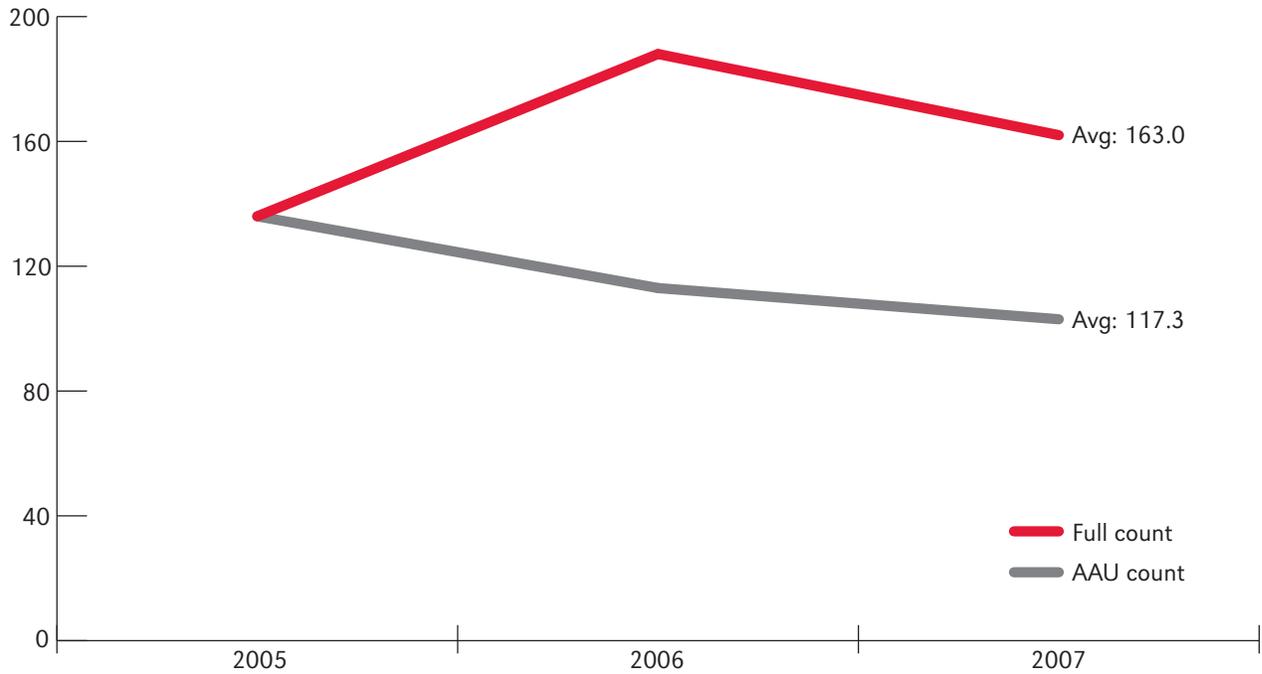
At UNL, “postdocs” are appointed with varying titles (e.g., postdoctoral research associate, senior research associate) and reported on the NSF GSS literally based on those titles. Specifically, postdoctoral research associates are reported as “postdocs” and all other titles as “doctorate-holding nonfaculty researchers.” Other than title – and in some cases, length of time at UNL – there is no distinction in the background, preparedness, or work assignments between these groups. Thus, the current membership indicators undercounts the number of “postdocs” at UNL.

Using the full count of both “postdocs” and “doctorate-holding nonfaculty researchers” from NSF GSS would better represent the actual postdoctoral activity on our campus.



As is shown in Figure 6, our three-year average is 28 percent higher when using the full count. (It is 35 percent higher when looking at counts for FY06-08 and 33 percent higher for FY07-09.)

FIGURE 6.
Discrepancy in count of postdocs at UNL

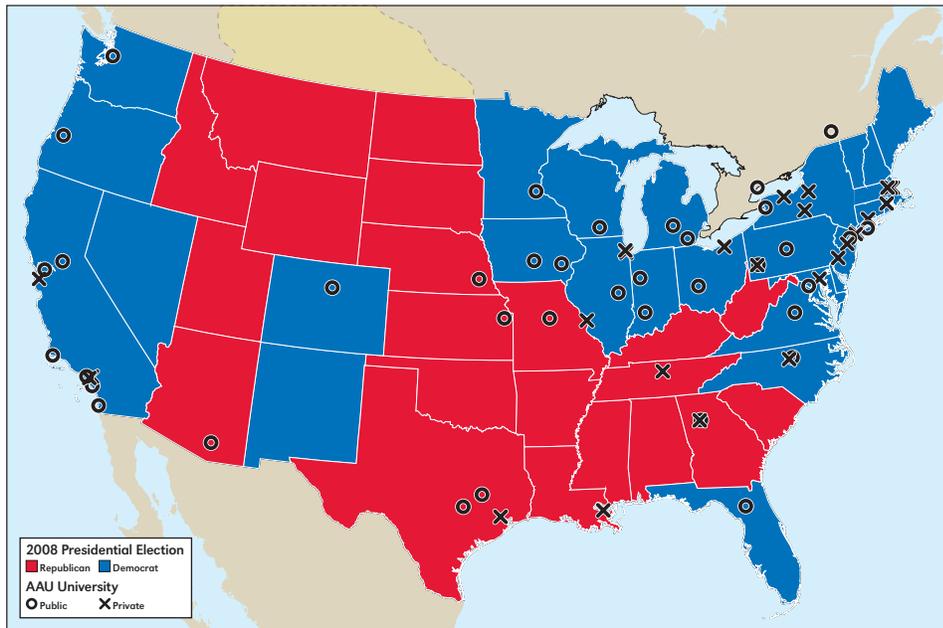




A Final Observation

Certainly, AAU membership should be elite and ultimately be determined by a university's mission, the trajectory of its research agenda as well as the stature of its faculty. At the same time, AAU as an organization can be said to represent the diversity of this nation's research enterprise and can speak for a national research agenda. In preparing this submission we were struck by the uneven distribution of AAU membership across the country. In our efforts to promote an agenda that supports a national commitment to research and innovation, the uneven distribution may limit AAU's political effectiveness in this hyper-partisan environment.

FIGURE 7.
Location of AAU Institutions by type with 2008 Presidential results.





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**AAU Review Committee Teleconference
March 26, 2011
Remarks of Harvey Perlman**

Thanks for the opportunity.

Uncertain how I can be the most helpful.

If our understanding of the AAU Membership Principles is correct, we believe our submission reflects a strong case for Nebraska.

We need not contest the substance of the membership principles, the indicators, and the data, nor that the ranking by the AAU methodology identifies Nebraska for review.

If the ranking were determinative, then Nebraska is a candidate for expulsion, and 13 other institutions are in jeopardy.

Our understanding, however, is that the ranking is not determinative.

AAU seeks COMPREHENSIVE research universities. The breadth and quality of research and graduate education is central. You have been asked to make “a qualitative set of judgments about our mission, characteristics, and trajectory” and then to determine whether there is a “SIGNIFICANT DISPARITY” between Nebraska and other AAU members.

To perform this task, and to understand our ranking, you are obliged to consider the following:

- That we are not allowed to include our medical school's research even though most AAU members have medical schools. If our medical school research were included we would be 49th among AAU institutions in total federal expenditures.
- That we are a land-grant institution in a heavily agricultural state. For now, I'm not arguing that USDA funding should be included. I do suggest that you should recognize, as we have argued in our report, that the normalization process diminishes the significance of a land-grant university's accomplishments. If you doubt this phenomenon, you should observe that every AAU land-grant drops considerably in the ranking when its data is normalized.
- That AAU seeks comprehensive research universities but the normalization process favors narrowly focused institutions. Rice, for example, has less federal expenditures than Nebraska but is much higher ranked because a high percentage of its students and faculty are in the sciences.
- That we are among the leaders in our growth in research expenditures among all AAU institutions for the last ten years.

Our submission makes six fundamental points:

FIRST, we have an institutional commitment to the research mission.

SECOND, we have strong and successful research initiatives across a broad spectrum of our comprehensive program.

THIRD , in our signature programs, we are capable of leading or participating as equals with the highest ranked AAU institutions. For Example:

1. We provide leadership and scientific management of the NSF funded Andrill Polar Drilling Project—a collaboration with, among others, John Hopkins, Michigan, Stanford, Penn State, and UC Santa Barbara.
2. In the Hadron Collider Project at Cern, we play a leadership role in one of the largest experiments and we were selected to be a Tier 2 site for data collection and analysis with MIT, CalTech, Wisconsin, Purdue, and Florida.
3. We lead the InSorMil project doing collaborate research in food crops for developing countries. Among our collaborators are Ohio State, Purdue, and Texas A & M.
4. Our Mathematics Department was among a small number of institutions chosen by the Carnegie Initiative on the Doctorate to improve doctoral math education. Others chosen include: Duke, Ohio State, University of Chicago, Illinois, Michigan, and USC.
5. We have separate existing collaborations in water management with Harvard and with UNESCO's Institute for Hydrological Education and are developing joint graduate programs with both.
6. Our College of Journalism was chosen with 11 other universities by the Carnegie-Knight Institute to explore the Future of Journalism Education with Berkeley, Columbia, Harvard, Northwestern, USC, and Texas.

FOURTH, we have unique facilities or programs related to research and graduate education. For example,

1. Capacity within federal guidelines to scale transgenic crops to field conditions.
2. A Virology Center that studies viruses across the plant, animal, and human condition.
3. A bioprocessing development facility that has certified by FDA to produce vaccine materials sufficient for Phase 1 testing.
4. The nation's only National Center for Research on Rural Education funded by the U.S. Department of Education.
5. An International Quilt Study Center that contains the largest publicly held collections of fine art quilts from around the world.
6. The only graduate program in Space and Telecommunications Law, originally funded by NASA.
7. One of the most powerful high intensity lasers that is competitively funded by the U.S. Department of Homeland Security and the Department of Defense.
8. We are told by others we have the leading Digital Humanities program in the country.

FIFTH, our faculty have significant national and international achievements. For example:

1. Poet Laureate of the United States
2. Winner of the Bancroft Prize in History
3. Winner of the Presidential National Medal of Technology
4. Only American member and chair of the Science Council for the Consultative Group on International Agricultural Research, the priority setting panel for this \$600 million dollar program funded by the World Bank and other international governments and organizations.
5. Within the last five years our faculty have produced
 - a. A cover story in the Proceedings of the National Academy
 - b. Two of the top 50 advances in Nanotechnology as ranked by the Journal Nanotechnology.
 - c. Three of the top 100 science stories in the world as ranked by Discover Magazine.
 - d. The most influential paper as judged by the International Conference on Software Engineering.
6. Our faculty have been recognized as follows:
 - a. More inaugural fellows in the American Education Research Association than all but 3 AAU institutions.
 - b. More recipients of the Presidential Awards for Math and Science Teaching than all AAU institutions except Columbia.
 - c. Presidential Award for Excellence in Science, Mathematics and Engineering based on successfully producing women Ph.ds in math.

SIXTH, most significantly, our submission demonstrates our trajectory is strong. We experienced the **SEVENTH** fastest growth rate over the last 10 years of all AAU institutions in federal research expenditures. We have no doubt that trajectory will accelerate because:

1. We have made major investments in research facilities and faculty recruitment in the last few years and will continue to do so.
2. We have seen increasing young investigator awards and career awards among our younger faculty, including a faculty member who was one of only 10 awarded a challenge grant by the Department of Defense.
3. We have made the equivalent of \$100 million investments in each of two projects that address the most significant challenges we face:
 - a. Water for Food
 - b. Early Childhood education
4. \$25 million competitive grant from USDA on food safety recommended for funding (confidential) with co-pi from John Hopkins.
5. Big Ten: We see significant increases in the quality of the students, faculty, and administrators we are able to recruit.

In accordance with the AAU Membership Principles, I believe that a qualitative judgment of our mission, characteristics, and trajectory precludes a finding that there is a substantial disparity between Nebraska and our AAU peers.



ASSOCIATION OF AMERICAN UNIVERSITIES

April 7, 2011

To: AAU Executive Committee

From: AAU Membership Review Committee

Larry R. Faulkner, Chair
Gene D. Block
Nannerl O. Keohane
Carolyn "Biddy" Martin
George Rupp
Robert H. Shelton
Shirley M. Tilghman
Mark S. Wrighton

Copy: AAU Executive Vice President John C. Vaughn

Re: Report on a Review of the University of Nebraska - Lincoln's Membership in the Association

At the 2010 Spring Meeting of the AAU, the Membership Committee determined that the University of Nebraska - Lincoln had apparently become an outlier in terms of the membership criteria adopted by the Association and so reported to the Executive Committee, which elected to follow the AAU's prescribed process leading to an in-depth review. That process is defined in *Procedures for Monitoring and Reviewing the Qualifications of AAU Members* (May 24, 1999). Following initial steps, taken by President Berdahl, the Executive Committee appointed this *ad hoc* Membership Review Committee to carry out the required evaluation. Here the Committee reports its findings and recommendation.

Membership Review Committee's Charge and Process

In effect, Section 4 of the *Procedures for Monitoring and Reviewing* provides both a charge and a blueprint for the required process. The Committee followed its provisions. The Committee also met jointly with the Membership Committee on October 17, 2010, to discuss the issues and the manner of proceeding.

After initial organizational discussion, the Committee approved an initial letter to Chancellor Perlman, outlining the process and requesting submission of an institutional portfolio by February 15, 2011. This letter is included as Attachment A. Chancellor Perlman's immediate reply is Attachment B.

In the course of its work, the Membership Review Committee was required to form a judgment about the weight to be given to the AAU Membership Indicators. The reality is that members are chosen for a review like this one largely because of low percentile standing across the spectrum of the indicators; consequently any institution under review can be expected to argue, in one way or another, that the profiles do not capture the “disciplinary breadth and quality of [its] programs in graduate education and research.” Sometimes, these arguments are based on the idea that the indicators are wrongly chosen, or are so inaccurate as to be misleading. Often, these arguments focus on positive trends in the indicator profile or the existence of especially distinguished programs or extraordinary, perhaps unique, research facilities.

The Membership Review Committee gradually came to the view that the chosen Membership Indicators are indeed valid and provide the best available picture of the degree to which an institution meets the standard stated in the second bullet point above. We generally reject arguments that the indicators are poorly chosen or lack fidelity. While there is certainly room for argument in fine comparisons among institutions on one dimension or another, as reflected in any of these indicators, the main point to bear in mind here is that no review like this one is based on fine comparisons. It is triggered by the appearance of “significant and sustained disparity.”

The Committee notes the following language from Section 1 of the *Procedures for Monitoring and Reviewing*, concerning the earliest steps leading to this review:

If the Membership Committee determines after careful analysis that a particular institution has become an outlier in terms of the set of membership criteria adopted by the Association, the Committee will report this to the Executive Committee. The Executive Committee will discuss this finding, and determine whether to take the next step in the process.

In the Committee’s interpretation, an institution is appropriately characterized as an outlier in the AAU context if it has low percentile rankings in the indicators across the board, with few exceptions, and is separated in the AAU rankings from the main body of AAU members by a significant number of non-members. An *ad hoc* committee such as this one appropriately begins its review by addressing whether it agrees with the Membership Committee’s prior judgment of outlier status for the institution under review. If that judgment is sustained, arguments from the institution under review about special programs, special facilities, or favorable trends should then be evaluated in the context of a presumption toward discontinuation: Would those arguments justify a deferral or reversal of a recommendation in that direction?

With these general ideas in mind, the Committee developed its conclusions regarding individual institutions.

Conclusions specific to the University of Nebraska - Lincoln

Nebraska falls below the 9th percentile in all indicators except a) research support from USDA, state, and industry, in which case it reaches figures near the 35th percentile on both a total and a normalized basis, and b) total doctoral production, for which the University is at about the 19th

Discontinuation of Nebraska's membership is justified by the facts in the profile; but the Committee considered whether mitigating elements, particularly the strong percentage growth in federally-funded research and the University's sound position regarding support from the USDA, state, and industry, are sufficient to justify a deferral.

To address the promise of growth in research funding, the Committee carried out projections of where Nebraska could realistically rank in 2015 and 2020 in the AAU's indicators of federal R&D expenditures on both a total and a normalized basis. Over the past decade, Nebraska has had an average compounded growth rate of 9.25% in federal R&D expenditures, outperforming the AAU median by 2.1% per year. In our projections, we assumed that Nebraska could sustain that outperformance for the decade ahead. Currently Nebraska is the 99th ranked institution on the AAU's indicator relating to total federal R&D expenditures, and holds the 114th position on a normalized basis. If Nebraska can continue to grow its research base 2.1% faster per year than the AAU at large, the University would most likely move by 2020 to somewhere near the 85th position on total expenditures and the 100th position on normalized expenditures. On these measures, Nebraska would probably pass 1-3 current AAU members. Roughly 20 non-members of AAU would remain above Nebraska on the basis of total expenditures and about 35 non-members would be more highly placed on a normalized basis.

The Committee recognizes Nebraska's notable success over the past decade in achieving such strong percentage growth; however the Committee also judges that there is not enough promise in that growth to justify a deferral of action. Even if Nebraska were to continue through 2020 exactly as in the recent past, the University would remain in the lowest percentiles of the AAU, with many non-members presenting notably stronger credentials for membership. Recognizing these circumstances, the Committee recommends that the Executive Committee proceed with the next steps toward discontinuation.

Attachments

- A. Initial letter to Chancellor Perlman, November 2, 2010
- B. Chancellor Perlman's initial reply, November 8, 2010
- C. Chancellor Perlman's letter covering the submitted portfolio, February 9, 2011
- D. The University of Nebraska - Lincoln's Portfolio, February 2011
- E. AAU indicator profile for The University of Nebraska - Lincoln and AAU indicator ranking table
- F. Letter to Chancellor Perlman on meeting with the Review Committee, March 21, 2011
- G. Chancellor Perlman's text for opening statement to the Review Committee, March 26, 2011

MEMO

April 8, 2011

To AAU Executive Committee
From Harvey Perlman, Chancellor University of Nebraska-Lincoln
Re Response to Membership Review Committee Report

I was frankly surprised and disappointed with the Report from the Membership Review Committee that recommended unanimously that the membership of the University of Nebraska-Lincoln be discontinued. That report fails to comply with the AAU Membership Principles which were given to us as the basis for this review. Similarly, the Committee either did not understand or chose not to respond to the arguments we made with regard to this review.

Failure to Follow AAU Membership Principles

In its Report, the Committee states that after the Membership Committee identifies an institution as an outlier, its task is to first determine if it agrees with the Membership Committee. In doing so in this case, the Committee accepted the Membership Indicators, and discounted any effort on the part of the institution to argue about the accuracy or appropriateness of the indicators. It then concluded that the University of Nebraska-Lincoln is an outlier in accordance with the ranking of Membership Indicators. It then stated that upon this finding a "presumption" arises toward discontinuation of membership with the burden on the institution to convince the committee otherwise. It then assessed the data we provided against the indicators and concluded the burden had not been met.

We can find no reference in the Membership Principles to any "presumption" against continued membership for an institution designated an outlier on the indicator ranking. To the contrary, the Membership Principles clearly state that the "inquiry" is a two-stage process. "The second-stage involves a more qualitative set of judgments about an institution's mission, characteristics, and trajectory." The Review Committee Report discloses no effort to conduct a second-stage inquiry. There is no qualitative judgment regarding the mission or characteristics of the University of Nebraska-Lincoln. There is an analysis that purports to project its research trajectory into the future but this is accomplished without regard to mission or characteristics.

The University of Nebraska-Lincoln did NOT rest its argument on an assertion that the AAU Membership Indicators were inappropriate. We did not argue with the fact that the ranking methodology identified Nebraska as well as 14 other institutions as outliers. What we did argue, and there is no response from the Review Committee, was that the required second-stage inquiry must examine the indicators in light of the institution's mission. Without such a "qualitative judgment", the rankings become a comparison of apples and oranges. The limits of attempting to objectively rank the diversity of institutions of higher education is recognized in the AAU Membership Principles but was ignored by the Review Committee.

For example, the Review Committee suggests that we argued that our medical school research expenditures should be included with our own. We made no such argument. We argued that one way to obtain a "qualitative judgment" about UNL's research expenditures, when compared to the 51 AAU institutions that have medical schools was to see where Nebraska would rank if the medical school figures were included. The result was that we would rank 49th among AAU institutions—certainly not an outlier position. Our understanding is that beginning next year NSF will report medical school data separately for all institutions so a more accurate comparison can be made.

We also demonstrated that an evaluation of mission is consistent with the AAU Membership Policy that seeks "comprehensive" institutions. The normalization of the data by size of faculty seriously understates the "qualitative judgment" to be made of the accomplishments of land-grant universities or of universities that are in fact "comprehensive". We demonstrated, for example, that Rice, an institution with smaller research expenditures than Nebraska, is a small institution focused almost exclusively on disciplines that are eligible for federal research dollars. We mean no disrespect for Rice which is a quality institution with a focused mission. We seek no disrespect for the University of Nebraska-Lincoln because it has a more comprehensive land-grant mission.

Any "qualitative judgment" of our University would also understand that while USDA funding is excluded, the faculty doing that research are included in the normalization process. At UNL, 25% of our faculty are in agriculture and extension.

We demonstrated in our material that UNL has a vibrant research agenda and that we engage in leadership roles with the highest ranked AAU institutions. We described our distinctive facilities and opportunities that can contribute to the AAU research profile. In response the Review Committee argues that the same could be said for "all AAU members and for all serious contenders among non-members." If this is true, it hardly supports the Review Committee's view that Nebraska is an "outlier" among AAU institutions once the required "qualified judgment" is made.

Conclusion

I would find it quite remarkable that an organization such as AAU governed by university presidents would adopt a “presumption” against continued membership for a member that has been a member since 1909. AAU did not adopt such a presumption but it was applied in this case.

I would find it quite remarkable that an organization governed by university presidents would purport to discontinue a long-standing member based on a ranking system that compares apples and oranges. AAU did not adopt such a system. It requires a “qualitative judgment” relating to the mission and characteristics of each member. Such a judgment was not made in this case.

It is, of course, conceivable that an organization could be formed that based its membership exclusively on total federal research expenditures regardless of mission. AAU did not adopt such a system. Indeed, the two institutions that rank the highest on our metrics are ineligible for membership because of their mission.

I cannot help but conclude that this has been a flawed process and cannot stand the standard of fairness and transparency we owe to each other.



RE: AAU Membership Vote 
Harvey S Perlman to: Berdahl, Robert
Bcc: "Gee, Gordon", gspanier

04/23/2011 11:11 AM

Bob,

I think this is a very stark departure from the process that was announced to the membership and is very unfair to Nebraska. It is preposterous that the announcement of a deadline as clearly as you announced was not intended to be a deadline after all. I have checked my impression with others of my AAU colleagues and they all recollected that it was clear that April 18th was the deadline and that to terminate our membership required a 2/3rd affirmative vote cast by that date. I didn't set these rules, the leadership did. And frankly, it was one of several rules, provided with little notice, that demonstrated the urgency with which the leadership wanted this matter concluded. This is one more instance where the process as defined and implemented has created the impression in my mind, and in the mind of others, that the leadership is determined to achieve a particular result regardless of the rules. When the details of this process become public, it will hardly serve the reputation or credibility of the AAU. I have tried hard throughout this episode to be respectful of the organization, its members, and the processes that were provided. I am sorry but I cannot now think that Nebraska has been fairly treated.
Harvey

"Berdahl, Robert" Dear Harvey:

04/22/2011 03:40:59 PM

From: "Berdahl, Robert" <robert_berdahl@aau.edu>
To: "Harvey S Perlman" <hperlman@unlnotes.unl.edu>
Date: 04/22/2011 03:40 PM
Subject: RE: AAU Membership Vote

Dear Harvey:

The process we are using is somewhat different from what you describe below. In the written materials we distributed at the meeting, we asked people to place their ballots in the ballot box at the meeting or, if they wanted to delay voting, to send their ballots to AAU postmarked by Monday, April 18. The day after the meeting – Wednesday, the 13th -- we sent ballots to all AAU presidents and chancellors who hadn't attended the meeting and asked them to return their ballots by the anonymous process postmarked by Monday, April 18. We thought that any ballot sent by the 18th via regular US mail service should arrive by yesterday, the 21st. There were several presidents and chancellors from whom we hadn't heard yesterday; accordingly, we sent them emails asking them either to return a marked ballot by overnight mail – again, in order to maintain the anonymous voting process – or indicate that they did not intend to vote. We have established no hard deadline after which we would disqualify votes; Jerry Cohon shares our view that it is important to receive a formal response from every AAU member. We have two cases of presidents out of the country from whom we will hear on Monday or Tuesday at the latest, and we will then have heard from everybody. As soon as we have heard from all AAU members, we will tally the votes, and I will call you with the outcome.

Harvey, I know how difficult this is, and we are doing everything we can to conclude this process quickly, fairly, but also completely. Please let me know if you have any further questions.

With best regards,

Bob

From: Harvey S Perlman [mailto:hperlman@unlnotes.unl.edu]

Sent: Friday, April 22, 2011 3:48 PM

To: Berdahl, Robert; Vaughn, John

Subject: AAU Membership Vote

Bob and John:

I am very troubled to learn from a colleague at an AAU institution that as late as Thursday, April 21, you sent an email soliciting votes on Nebraska's membership. My understanding was that the deadline for voting was Monday, April 18th. This can't help but raise in my mind whether the process is being conducted in the manner described to the membership. Perhaps I misunderstood. Please advise.

Harvey