

MACTLAC REPORT 1960-63

In 1952, Mattill (J.Chem.Ed. 29, No. 11: 556-9(Nov., 1952) studied the researching being carried on by chemistry teachers in 1000 universities and colleges. In the 104 universities, 89% of the qualified faculty had research in progress. For the 93 smaller universities, the figure is 62% while for 279 liberal arts colleges, 52% of the qualified faculty were researching. In the year 1962-63, 69% of the MACTLAC teachers have been carrying on research. So, a higher per cent of our teachers are working on research programs than was the case in the earlier study.

Likewise, the money available for college research has been on the increase. The average of the five years before MACTLAC showed an annual income for research among the MACTLAC colleges of \$57,336. The income for the second year of MACTLAC (1953-54) was \$138,083; the third year, \$143,740; the sixth year, \$173,790; the ninth year, \$286,744; the tenth year, \$292,507; and the eleventh year, \$384,062. Almost a million dollars has been given to MACTLAC colleges for research in the last three years. Of these grants, 91 originated in N.S.F. (figured on a yearly basis), 22 yearly grants were from N.I.H., 31 came from Research Corporation. Other sources included the duPont grants, Argonne Laboratories, and research grants from the colleges themselves. In 1953, Research Corporation, the duPont grants and industrial grants were the chief source of funds while N.S.F. and N.I.H. were not supporting small college research to any extent. The N.S.F. faculty and undergraduate research programs have been of enormous help to many of the colleges. A steady gain both in the number of colleges receiving grants and in the average size of the grant is also seen. The year 1962-63 showed an increase of more than six times the amount of money granted during the average pre-MACTLAC year.

It is also clear that MACTLAC colleges have shown a great increase in the number of senior chemistry majors. During the last three years the increase has been about 25%. A similar gain is noted during the past three years in undergraduates carrying on research. Here the increase is about 33%.

I am sorry not to be with you. I know you will have a fine meeting. I am also sorry that this report is so sketchy; there has been no time for a better job.

Regards,

Harry
Harry F. Lewis

October 16, 1963

TABLE I

 NUMBER OF CHEMISTRY STAFF MEMBERS AND SENIOR MAJORS
 AND NUMBER OF SAME IN RESEARCH

	Chemistry Staff			Senior Majors			Faculty in Research			Students in Research			
	60-1	61-2	62-3	60-1	61-2	62-3	60-1	61-2	62-3	60-1	61-2	62-3	
Albion	5	5	5	4	3	6	2	2	3	14	13	16	
Alma	3	3	3	8	11	7	3	3	3	3	4	3	
Alverno	3	3	3	1	1	5	1	1	0	0	1	5	
Augsburg	3½	3½	4	3	5	11	3	3	3	0	2	4	
Augustana	4	4	4	8	13	9	4	4	4	5	3	7	
Aurora	1	1	2	1	2	3	0	0	0	0	1	2	
Beloit	4	3	4	6	7	4	2	2	2	10	14	9	
Blackburn	3	3	3	5	4	5	2	2	3	2	2	4	
Bradley	5	5	5	1	6	11	3	3	3	2	3	3	
Briar Cliff	2	3	2	1	0	2	0	0	0	0	0	0	
Calvin	5	5	5	5	6	7	2	2	3	3	6	4	
Carleton	4	4	4	9	8	12	4	4	4	12	8	14	
Carthage	2	2	3	6	3	10	1	1	2	0	1	3	
Central	2	2	2	5	4	7	2	0	1	3	0	2	
Coe	3	3	3	1	2	3	2	2	2	5	6	4	
Colorado	4	4	4	9	6	6	2	4	3	2	6	4	
Concordia	4	4	4	10	0	10	2	2	3	5	3	4	
Cornell	3	3	3	3	6	2	3	3	3	4	5	6	
DePauw	6	6	7	11	9	17	3	3	4	3	5	9	
Drake	3	3	3	3	2	0	2	2	3	1	1	2	
Earlham	4	4	4	9	12	10	3	4	4	6	9	10	
Elmhurst	3	3	3	7	7	6	0	0	0	0	0	0	
Evansville	4	4	4	3	6	4	2	2	2	3	3	2	
Goshen	3	3	2	6	2	6	3	3	2	8	6	7	
Greenville	2	2	2	5	4	8	1	1	2	5	2	3	
Grinnell	4	4	5	13	7	8	4	3	5	12	16	14	
Hamline	3½	3½	4	5	6	5	2	2	1	8	9	7	
Hope	4½	4	4	8*	10*	14*	1	2	2	6	7	5	
Indiana Central	1	1	1	6	7	6	1	1	1	0	0	0	
Iowa Wesleyan	2	2	2	4	1	3	0	1	1	0	1	1	
Kalamazoo	3	3	3	10	8	9	2	2	2	4	3	6	
Knox	3	3	3	13	19	16	2	2	2	8	14	10	
Lake Forest	2½	2½	3½	4	6	6	1	1	1½	1	1	2	
Lawrence	3	3	3½	1	4	8	3	3	3	1	4	4	
Macalester	4½	4½	4½	7	4	8	4	4	4	4	7	11	
MacMurray	3	3	3	6	7	6	3	3	2	3	3	3	
Manchester	3	2½	3½	14	16	15	1	1	2	5	4	6	
McKendree	0	0	0	0	0	0	0	0	0	0	0	0	
Millikin	3	3	3	3	8	6	3	3	3	4	5	14	
Monmouth	3	3½	3½	9	8	12	2	3	3	1	2	4	
Mundelein	-	-	-	10	14	20	1	1	2	4	4	7	
Muskingum	3	3	3	10	15	14	2	3	3	3	3	8	
Ohio Wesleyan	7	7	7	11	12	20	3	4	3	8	24	31	
Olivet	1	1	1	0	1	3	0	1	1	0	2	3	
Principia	3	2	2	0	2	0	2	2	2	0	2	1	
Ripon	2	3	3	6	8	7	1	1	2	1	3	4	
St. Catherine	3	3	4	3	4	7	1	1	1	3	5	3	
St. Olaf	6	6	6	21	39	27	6	6	5	6	8	6	
St. Thomas	7	7	7	11	12	11	4	5	3	8	7	7	
Simpson	2	2	2	3	2	3	1	1	1	2	0	2	
Tarkio	1	1	1	2	2	1	0	0	1	0	0	2	
Upper Iowa	2	3	3	4	0	3	2	0	2	3	0	3	
Valparaiso	6½	6½	6½	3*	5*	3*	4	4	3	2	4	3	
Wartburg	2	2	2	3	3	4	2	2	2	1	2	2	
Wheaton	6	6	6	14	18	18	4	3	5	6	3	3	
William Jewell	2	2	2	2	3	2	2	2	2	0	0	0	
Wooster	6	7	7	21	21	27	6	7	7	21	21	28	
	57	188	189	197	360	374	463	123	127	136	221	268	324

*ACS

RESEARCH GRANTS BY NUMBER, AMOUNT AND SOURCE

	1960-1961		1961-1962		1962-1963		Total No. and Amount
Albion	\$ 3,500 NSF 9,153 NIH		\$ 3,500 NSF 6,891 NIH		\$ 4,200 PRF 7,071 NIH		(6) \$34,335
Alma	1,350 Res.Corp. (ext.)		5,800 NIH		5,800 NIH		(3) \$12,950
Alverno	0		0		0		(0)
Augsburg	2,000 3-M 3,000 NSF		2,000 3-M 3,000 NSF 2,000 Res.Corp.		2,000 3-M 2,000 Chem.Dept. 1,000 Res.Corp.		(6) \$17,000
Augustana	7,000 Geo.Evans Corp.		7,000 Geo.Evans 7,500 Corn Indus.		4,000 Geo.Evans 10,000 Corn Indus.		(5) \$35,500
Aurora	0		0		0		(0)
Beloit	5,765 NSF 700 Johnson Found.* 500 Allen-Bradley*		9,625 NSF 700 Johnson* 500 Allen-Bradley* 1,450 DuPont*		8,870 NSF 700 Johnson* 1,250 Allen-Bradley* 1,080 DuPont* 500 Union Carbide*		(12) \$31,640
	*Part research.						
Blackburn	0		0		700 (Heavy water from AEC)		(1) \$ 700
Bradley	1,000 Res.Corp. 75 Bradley		0		0		(2) \$1,075
Briar Cliff	0		0		0		(0)
Calvin	4,000 ONR		2,200 PRF 4,000 ONR - + 20% DuPont money -		2,400 PRF 4,000 ONR 7,000 Air Force		(6) \$23,600
Carleton	4,392 NSF 530 NSF 2,635 PRF 1,769 NSF-URP 1,231 RC 16 RC		1,739 NSF 3,210 NSF 1,863 PRF 5,559 NSF-URP 1,744 RC		2,967 NSF 823 NSF-URP 1,842 PRF 6,241 NSF-URP 145 RC		(16) \$36,713
Carthage	0		300 Parke-Davis		300 Parke-Davis		(2) \$ 600
Central	1,875 Res.Corp. 1,150 Central Col. Res.Corp.		400 NSF		865 Res.Corp. 800 Central Col. Res.Corp.		(5) \$ 5,090
Coe	9,660 NSF-URP (2 yr.) 7,000 NSF (2 yr.) 2,500 DuPont (part res.)		1,400 Res.Corp.(ext.) 1,000 DuPont (part r.)		2,800 NSF-URP 2,000 DuPont(part r.)		(7) \$26,360

TABLE II, Con't.

	1960-1961		1961-1962		1962-1963		Total No. and Amount
Colorado	\$ 200	Colorado Col.	\$ 750	Colorado Col.	\$ 2,700	Marathon Oil	(13)
	3,500	Res.Corp.	200	Colorado Col.	750	Colorado Col.	\$16,200
	750	Colorado Col.	200	Colorado Col.	200	Colorado Col.	
	600	DuPont	3,000	NSF	850	DuPont	
			2,500	DuPont			
Concordia	118	Minn.Div.	81	Am.Cancer So.	1,600	Res.Corp.	(5)
		Am.Cancer So.	600	PHS-Cancer			\$ 4,000
			1,600	Res.Corp.			
Cornell	3,833	NSF	3,450	NSF	1,380	NSF	(13)
	3,500	NSF	1,380	NSF	800	DuPont	\$29,323
	3,450	NSF	1,350	Res.Corp.			
	1,380	NSF	2,100	DuPont			
	3,000	PRF					
	1,350	Res.Corp.					
	2,350	DuPont					
DePauw	2,000	ACS-PRF(B)	800	El.Chem.Soc.	6,720	NSF	(15)
	2,500	DuPont	2,400	NSF-Res.Asso.	6,000	ACS-PRF faculty	\$35,586
	200	Lubrizol	200	Lubrizol	200	Lubrizol	
	166	Shell Oil	6,500	NSF	2,400	NSF-Res.Assoc.	
	500	Int.Com.on Travel	2,500	DuPont	2,500	DuPont	
Drake	0		0		2,000	PRF	(1)
							\$ 2,000
Earlham	4,500	NSF	4,500	NSF	7,000	NSF	(9)
	700	Res.Corp.	1,800	NSF	800	Res.Corp.	\$28,900
	600	NSF			7,000	NSF	
	3,000	Kettering F.					
Elmhurst	0		0		0		(0)
Evansville	3,105	NSF	2,875	NSF	2,875	NSF	(6)
	2,519	PRF	2,519	PRF	500	NSF	\$14,393
Goshen	3,926	NSF(3 yr.)	3,926	NSF	2,900	NSF	(9)
	5,253	NIH(3 yr.)	5,253	NIH	5,254	NIH	\$32,837
	6,145	NSF	80	NSF			
	100	NIH					
Greenville	1,000	Res.Corp.	1,000	Res.Corp.	0		(2)
							\$ 2,000
Grinnell	8,000	NSF	8,000	NSF	8,000	NSF	(10)
	5,000	PRF	4,300	PRF	4,300	PRF	\$87,200
	4,800	NSF	4,800	NSF	39,000	NIH	
			1,000	DuPont			
Hamline	5,175	NIH	5,175	NIH	5,175	NIH	(8)
	4,450	Minn.Cancer	5,000	Minn.Cancer	4,500	Minn.Cancer	\$40,895
	4,700	AEC	6,720	Pet.Res.Fund			
Hope	5,000	PRF	5,000	PRF	5,000	PRF	(5)
	2,500	Res.Corp.			2,500	NSF	\$20,000
Ind.Central	4,000	Dow Chem.Co.	4,000	Dow Chem.Co.	4,000	Dow Chem.Co.	(3)
							\$12,000
Iowa Wesleyan	0		0		0		(0)

TABLE II, Con't.

	1960-1961		1961-1962		1962-1963		Total No. and Amount
Kalamazoo	\$ 4,000	NSF	\$ 2,000	PRF	\$ 4,500	Elder-Upjohn Co.	(8)
	2,000	PRF	1,000	Res.Corp.	1,500	Kalamazoo Spice Ext.Co.	\$20,500
	1,000	Res.Corp.					
	4,500	Elder-Upjohn					
Knox	2,575	NSF	2,345	NSF	2,345	NSF	(5)
			2,690	NSF(Bio.Chem.)	2,000	NSF(Bio.Chem.)	\$11,955
Lake Forest	0		1,200	Col.to Martin	3,200	Col.to North	(7)
			10,000	Res.Corp. (part res.)	1,200	Col.to Martin	\$32,600
					2,000	Abbott Labs.	
					10,000	Res.Corp.(part res.)	
					5,000	DuPont (part res.)	
Lawrence	3,000	NSF	3,000	NSF	3,000	NSF	(6+2)
	-	Unrestricted	-	Unrestricted	2,800	NSF	\$27,800
		Kimberly-Clark		Kimberly-Clark	11,000	U.S.A.F.	
			5,000	PRF			
Macalester	1,375	Res.Corp.	1,000	Res.Corp.	5,200	NIH	(10)
	1,000	Macalester	2,000	Res.Corp.	600	Macalester	\$13,875
	500	Macalester	1,000	Macalester	600	Macalester	
			600	Macalester			
MacMurray	2,250	Res.Corp.(ext.) (still being used)	0		1,380	Pet.Res.F. (ext.)	(2) \$3,630
Manchester	500	Amer.Oil(Std.) (part res.)	500	Amer.Oil(Std.) (part res.)	2,500	DuPont (part res.)	(5) \$ 8,500
	2,500	DuPont(part res.)	2,500	DuPont(part res.)			
McKendree	0		0		0		(0)
Millikin	2,400	Joint res.at U. of Utah	2,200	U.of Utah res.	4,635	NSF	(3+3)
	450	NIH	600	U.of Utah res.	1,935	NIH	\$12,220
Monmouth	3,000	PRF	6,000	NSF Match.Fund	3,000	PRF	(3) \$12,000
Mundelein	0		150	Ill.State Acad.	11,380	NIH	(2) \$11,530
Muskingum	900	Pet.Res.Fund	900	Pet.Res.Fund	1,870	Pet.R.F.	(6)
			2,500	Res.Corp.	3,195	NSF	\$ 9,465
					100	Ohio Acad.Sci.	
Ohio Wesleyan	500	Sigma Xi	3,010	NSF-URP	3,010	NSF-URP	(13)
	3,650	NSF-URP	5,025	NSF-URP	5,645	NSF-URP Amend.	\$43,414 +
	2,300	NSF-Research	2,300	NSF-Research	2,433	NSF-HSST	\$26,500
	2,500	DuPont(3 yr.) (part res.)	1,970	NSF-HSST	5,025	NSF-URP	beginning
			200	Jenkins Found.	600	Heart Assn.	6/63
			5,240	NSF			
Olivet	0		0		0		(0)
Principia	7,350	PRF	2,550	PRF	3,300	PRF	(4) \$15,565
			2,365	PRF			
Ripon	350	Sigma Xi	4,800	NSF	5,800	NSF	(3) \$10,950

TABLE II, Con't.

	1960-1961		1961-1962		1962-1963		Total No. and Amount
St.Catherine	\$ 638 NSF		\$ 996 NSF		0		(4)
	2,616 PRF		1,883 PRF				\$ 6,133
St.Olaf	3,900 Metal Hydrides		2,500 Metal Hyd.		500 Johnson		(16+6)
	2,800 NSF		7,765 NSF		8,400 NSF		\$51,944 +
	6,700 Res.Corp.		1,250 DuPont		1,250 DuPont		\$ 8,500
	1,250 DuPont		6,350 NIH		4,730 NIH		DuPont &
	500 Johnson		500 Johnson		3,249 NSF, gen.res.		Johnson
					300 Alumni gift		
	2,500 DuPont($\frac{1}{2}$ res.)		2,500 DuPont($\frac{1}{2}$ res.)		2,500 DuPont($\frac{1}{2}$ res.)		
	1,000 Johnson($\frac{1}{2}$ res.)		1,000 Johnson($\frac{1}{2}$ res.)		1,000 Johnson($\frac{1}{2}$ res.)		
St.Thomas	20,000 NIH		7,000 NIH		7,000 NIH		(4)
	2,500 Res.Corp.						\$36,500
Simpson	400 Iowa Heart Asso. from last yr.						(1) \$ 400
Tarkio	0		0		4,000 PRF		(1) \$ 4,000
Upper Iowa	0		0		0		(0)
Valparaiso (amounts not clear)	5,000 Mink Farmers' Res.Found.		2,000 Mink F.R.F.		2,500 Mink F.R.F.		(7)
	2,500 Res.Corp.		1,000 NSF		2,500 Res.Corp.		\$18,000
			2,500 Res.Corp.				
Wartburg	150 Wartburg		175 Wartburg		200 Wartburg		(4)
					750 NSF - student at Ind.Univ.		\$ 1,275
Wheaton	3,500 Alumni grant		500 DuPont		0		(5) +
	500 DuPont		200 NSF				Argonne
	500 NSF						\$ 5,200
	plus Argonne summers	- - - - -					
	plus Argonne during year	- - - - -					
William Jewell	0		0		0		(0)
Wooster	7,820 NSF-RPHST		8,140 NSF-RPHST		9,160 NSF-RPHST		(23)
	3,795 NSF-URP		3,795 NSF-URP		7,600 NSF-URP		\$83,716
	3,500 NSF-Basic Res.		3,075 NIH		3,980 NSF-Basic Res.		
	3,075 NIH		2,800 NSF		1,355 DuPont		
	2,800 NSF-Basic Res.		2,600 OOR		2,000* PRF-ACS		
	2,600 OOR		1,646 DuPont		2,000* von Humboldt Stiftung		
	500 DuPont		1,975* PRF-ACS		7,000 NSF-Sup. Mat.6/63-6/64		
	1,500 Smith Kline French						
	1,000 Ohio Oil Co.						

*Funds to staff members on leave.

TABLE III

NUMBER OF RESEARCH PUBLICATIONS AND SCIENTIFIC PAPERS

	<u>Number of Research Publications</u>	<u>No. of Research Reports Before a Scientific Society</u>	<u>Summary of Research Grants</u>
Albion	1	0	\$34,335
Alma	0	0	12,950
Alverno	0	0	0
Augsburg	1	1	17,000
Augustana	(Project work permits no publication)	0	35,500
Aurora	0	0	0
Beloit	1	3	31,640
Blackburn	0	0	700
Bradley	0	0	1,075
Briar Cliff	0	0	0
Calvin	0	2	23,600
Carleton	9	0	36,713
Carthage	1	1	600
Central	0	2	5,090
Coe	0	0	26,360
Colorado	3	6	16,200
Concordia	1	2	4,000
Cornell	5	8	29,323
DePauw	15	2	35,586
Drake	3	1	2,000
Earlham	0	1	28,900
Elmhurst	0	0	0
Evansville	0	0	14,393
Goshen	2	2	32,837
Greenville	0	0	2,000
Grinnell	2	7	87,200
Hamline	3	7	40,895
Hope	4	0	20,000
Indiana Central	1	2	12,000
Iowa Wesleyan	0	0	0
Kalamazoo	13	1	20,500
Knox	1	6	11,955
Lake Forest	0	0	32,600
Lawrence	9	3	27,800
Macalester	0	0	13,875
MacMurray	0	5	3,630
Manchester	0	0	8,500
McKendree	0	0	0
Millikin	3	16	12,220
Monmouth	3	1	12,000
Mundelein	0	3	11,530
Muskingum	0	1	9,465
Ohio Wesleyan	1	26	43,414
Olivet	1	3	0
Principia	1	0	15,565
Ripon	0	3	10,950
St. Catherine	0	3	6,133
St. Olaf	5	0	51,944 +
St. Thomas	2	0	36,500
Simpson	0	1	400
Tarkio	0	0	4,000
Upper Iowa	0	3	0
Valparaiso	2	3	18,000
Wartburg	0	0	1,275
Wheaton	2	4	5,200 +
William Jewell	0	0	0
Wooster	9	0	83,716
	<u>28-104</u>	<u>31-129</u>	<u>48-\$992,069</u>

TABLE IV

STAFF AND STUDENT RESEARCH IN MACTLAC COLLEGES

<u>Year</u>	<u>No. of Colleges Responding</u>	<u>No. of Chem. Teachers</u>	<u>No. of Chemistry Teachers Researching</u>	<u>No. of Students Researching</u>	<u>No. of Colleges Researching</u>
1953-54	59		64	128	43
1955-56	61	162	105	188	49
1956-57	61	168	106	273	54
1960-61	57	188	123	221	50
1961-62	57	189	127	268	51
1962-63	57	197	136	324	54

TABLE V

RESEARCH GRANTS IN MACTLAC COLLEGES

<u>Average Year</u>	<u>No. of Colleges Responding</u>	<u>No. of Colleges Receiving Grants</u>	<u>Total Annual Grants</u>	<u>No. of Grants</u>	<u>Gain Over Average Pre-MACTLAC Year</u>
1948-52		36	\$ 57,336		1
1953-54	59		138,083	68	2.4
1954-55	54		143,740		2.5
1957-58	57	38	173,790	89	3.0
1960-61	57	45	286,744	107	4.9
1961-62	57	44	292,507	109	5.0
1962-63	57	47	384,062	105	6.4

TABLE VI

1960-63 SUMMARY OF PUBLICATIONS
AND SCIENTIFIC PRESENTATIONS

<u>No. of Colleges Publishing</u>	<u>No. of Publications</u>	<u>No. of Colleges Reporting Scientific Presentations</u>	<u>No. of Presentations</u>
38	104	31	129