

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

March 24, 1967

Dr. John W. Coutts
President, MACTLAC
Lake Forest College
Lake Forest, Illinois 60045

Dear Dr. Coutts:

Your letter of March 9, directed to Dr. Haworth, has been forwarded to me for reply.

You have raised an interesting set of questions. We can respond to some of them with reasonably specific data, although not by the enrollment-size categories that you specified. Since our interests are directed primarily toward science, it has been more useful to us to categorize institutions in terms of their science degree productivity rather than in terms of over-all enrollments. Attached hereto are several tables and explanatory notes that we hope will provide some of the answers you seek. You will find also a separate sheet that will enable you to interpret the two "institution-type" codes used in some of the tables.

If, after reviewing the materials enclosed, you have further questions, may I suggest that you direct them to Dr. Phillips, Director of our Division of Undergraduate Education in Science. I know that he is familiar with your organization, and will be happy to provide further information, if available, upon request.

Thank you for your interest, and that of MACTLAC, in this program - which we view as one of the important programs of the Undergraduate Division. We would be interested in receiving from your Association the factors which have led you to form the opinion "that one of the most effective programs sponsored by the National Science Foundation is its Undergraduate Research Participation Program."

Sincerely,

Thomas D. Fontaine
Associate Director (Education)

Enclosures (9)

Question 1. What has been the URP budget and the total NSF budget?

[Extensive table not included with this mailing]
 \$2 million for URP in 1966, \$1.6 million in 1967.

Question 2. How many grants were given?

UNDERGRADUATE RESEARCH PARTICIPATION PROGRAM

Number of Proposals Requested and Granted by Discipline

Fiscal Years 1959 through 1967

	<u>BC</u>	<u>BZ</u>	<u>CH</u>	<u>EN</u>	<u>EZ</u>	<u>MA</u>	<u>PY</u>	<u>SZ</u>	
1959 Requested	10	69	63	23	14	4	14	6	
Granted	6	45	53	13	10	4	9	1	
1960	7	190	204	117	26	23	71	37	
	5	118	154	73	22	13	49	26	
1961	9	153	160	92	17	23	64	29	
	5	95	116	48	12	16	47	18	
1962	28	260	220	113	49	73	123	103	
	11	129	125	51	24	37	71	42	
1963	36	249	248	151	63	74	113	108	
	12	143	136	104	38	57	77	57	
1964	31	226	273	116	52	62	96	90	
	20	134	167	73	34	34	64	49	
1965	35	257	294	168	67	82	119	115	
	18	143	172	69	29	32	65	57	<u>IN</u>
1966	23	365	432	220	82	88	172	201	40
	12	161	188	82	35	43	86	95	8
1967	(Entered under BZ and CH)	264	317	144	47	59	125	131	10
		140	180	73	28	34	69	71	4

TYPE OF INSTITUTION CODES

For Fiscal Years 1959 through 1962:

- 1 - 100 or more doctorates in science
- 2 - 30 to 99 doctorates in science
- 3 - 1 to 29 doctorates in science
- 4 - 30 or more master's in science
- 5 - 1 to 29 master's in science
- 6 - at least one baccalaureate in science
- 7 - four-year institutions not offering a baccalaureate in science but offering a university-parallel program in science
- 8 - junior or community college offering a university-parallel program in science
- 9 - non-academic or non-degree granting institution
- 0 - information not available
- blank - information not available

For Fiscal Years Beginning 1963:

- 1 through 5 - same definition as FY-59 through FY-62 period
- 6 - more than 200 baccalaureates in science
- 7 - 100 to 199 baccalaureates in science
- 8 - 50 to 99 baccalaureates in science
- 9 - 1 to 49 baccalaureates in science
- 0 - grants degrees, but no science degrees
- - grants no degrees (includes junior and community colleges)
- blank - data not available

Notes:

1. All type of institution data from FY 59, 60, and 61 are as the institution was classified in FY 62.
2. Funds granted in URP include all funds eventually awarded to proposals submitted in that year.

UNDERGRADUATE RESEARCH PARTICIPATION PROGRAM

Number of Proposals Received and Grants Made
in Fiscal Years 1959 Through 1967

Type of Institution	1	2	3	4	5	6	7	8	9	0	-	(blank)
1959 ¹ Requests	72	46	27	38	37	68				12		
Grants	49	35	19	23	31	49				7		
1960 ¹	148	129	82	93	78	179				16		4
	105	91	57	59	58	110				11		2
1961 ¹	120	125	77	72	71	103				19		2
	95	88	42	40	45	60				14		2
1962 ¹	207	163	86	122	126	260				13		3
	131	94	53	55	59	93				6		2
1963 ²	229	198	111	100	110	120	74	30	36	22	9	5
	170	130	53	55	77	65	35	9	16	14	2	1
1964 ²	276	113	107	98	76	104	90	35	18	7	19	4
	205	80	65	50	47	58	41	8	7	2	12	1
1965 ²	355	122	122	118	106	123	96	26	29	7	19	14
	195	74	48	66	52	59	46	8	8	5	15	9
1966 ²	430	159	183	182	183	182	142	51	30	14	46	21
	222	94	70	75	75	76	46	9	2	8	22	11
1967 ²	357	120	114	116	100	144	78	18	11	3	22	14
	228	73	64	60	51	69	27	2	2	1	17	5

1. See Type of Institution for 1959-1962
2. See Type of Institution for 1963-1967

Question 3. What fraction of the grants have been new grants as opposed to continuation of existing programs?

This question cannot be answered completely. The count of new and renewal requests was not maintained regularly until FY66, and our figures for FY67 were categorized by type of institution only through a hand tally. Total new vs. renewal figures are available for FY62 and FY63 as a result of a study conducted about that time.

UNDERGRADUATE RESEARCH PARTICIPATION PROGRAM

Number of New and Renewal Grants by
Type of Institution in FY 67

Type of Institution	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>0</u>	<u>-</u>	<u>(blank)</u>
<u>New Grants</u>	30	16	15	8	6	13	4				6	2
<u>Renewal Grants</u>	160	46	37	45	37	46	20	2	2	1	10	2
"Moral Com- mitments"	38	11	12	7	9	9	3				1	1

Question 4. How many URP participants continued on to graduate school?

This question cannot be answered. We receive one information sheet from each participant at the close of each term of participation, but we do not require later reports. We know that the proportion of ex-participants going on to graduate school is very high and our experience leads us to believe that the variation is small and spread randomly among the types of institutions.

Question 5. What is the relationship between grants made and proposals received

[See Table presented after Question 2]

Question 6. Does the Foundation have any information with regard to the projected future of this program?

The Undergraduate Division views the Undergraduate Research Participation program as one of its most important programs. As I think you know, there has been some tapering-off of support for the academic year segment of the program, and an attempt to orient that segment toward support of institutions endeavoring to determine whether participation by undergraduates in research should become a part of the normal undergraduate curriculum. At the same time, we have attempted to maintain the level of the summer phase of the program. As with all other programs, URP is reviewed annually, and what its future will be depends on our assessment of its accomplishments vis a vis those of other programs supported by the Foundation.

Question 7. Are URP funds at large universities with graduate programs more productive than at undergraduate liberal arts colleges?

It is sufficiently difficult to arrive at a definition of "productive" in this context to make any attempt to answer this question almost meaningless. It is our feeling, however, that if we concentrate on the identification of projects involving high quality of research opportunity (scientific merit) and high potential for providing valuable experience to the student (education merit), we can provide maximum benefits to the participating students - regardless of whether the institutions at which the project is carried out is large or small.