A PROPOSAL TO

NATIONAL INSTITUTES OF HEALTH

PUBLIC HEALTH SERVICE

per letter rec

For Support Of A

PROGRAM TO ENHANCE TRANSFER OF RESEARCH RESULTS AT EDUCATIONAL INSTITUTIONS

Submitted By:

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Duration of Program: Three Years

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Purpose of Proposal

Research Corporation is proposing herewith a program to enhance the transfer of research results at ten selected institutions of higher learning in the United States. This program is expected to improve the surfacing of university-developed technology resulting from the support and/or sponsorship by the Public Health Service. The identification and encouragement of the flow of such technology is expected to result eventually in the development of better preventive, diagnostic and therapeutic measures. However, this technology must be in a form which is acceptable to and can be utilized by the industrial community since marketable products can be developed only through industrial cooperation.

Effecting Transfer By Use of the Patent System

The successful development of the results of scientific research, particularly in the health area leads to the production of equipment, instrumentation and drugs, the sale of which must first be approved by a government agency as to their safety and efficacy. Obtaining such approval is expensive and time-consuming. The prudent and proper use of the patent system in most cases is necessary to provide the health-care industry with motivation to expend its funds for the continuing technical and market development of university-developed technology.

Statement of the Problem

The academic researcher has traditionally communicated the results of his research by publishing in standard scientific journals. Where the information being disseminated can be used without further

Statement of the Problem - contd.

development, such publication is an acceptable medium for transfer of such results for the benefit of the general public. However, publication, by itself, is not effective in those cases where substantial additional development by the industrial community is needed to make the research results useful to the public. Generally speaking, the university researcher is not aware of the need to seek patents in addition to publishing in scientific or technical journals, in order to expedite the development of the technology. At many universities means and procedures are available for handling patentable material once it has surfaced, but most do not have active programs to encourage the recognition and disclosure of inventive concepts which could lead to patents. The problem, then, is to find effective ways to make the researcher aware of and disclose to others the fruits of his research so that judgments can be made on the advisability of obtaining patent coverage.

Proposed Educational Program

We are proposing to conduct an educational program for research administrators and all Public Health Service grantees at ten institutions. While the program at any one institution will require an elapsed time of twenty-seven months, the most effective use of manpower requires that the program be initiated at the ten institutions sequentially. Thus, the overall program will require about thirty-eight months to complete.

Proposed Educational Program - contd.

The educational program proposed will involve these concepts:

1. Proper use of patents facilitating the transfer of university-developed technology.
2. Methods for identification of inventive concepts which could be amendable to patenting.
3. Necessity for disclosing of such concepts for action by the institutions' administrators.
4. Barriers to technology transfer.

Program Summary

We are proposing a broad concept of an educational program to be undertaken at ten institutions having a significant amount of Public Health Service funding.

The proposed program consists of three separate and distinct educational approaches:

... a series of information sheets

... a seminar

... individual interviews

The series of information sheets will be distributed to all grantees over the two-year program period. Taken as a whole, the sheets will cover all of the basic concepts.

The seminars will be given early in the program immediately following a pre-educational effort consisting of the first three information sheets. The seminars at each institution should be completed in three (3) days. The seminars will cover all of the material contained in the information sheets in addition to specific case histories.

Program Summary - contd.

The individual interviews will extend over a twenty-month period and are designed to provide an opportunity to discuss the researchers' programs as a personal example of uncovering actual inventive comcepts.

A typical program activity chart at each institution is attached as Appendix C.

Scope of the Program

The inclusion of ten institutions into the program will provide a broad base of research effort on which to apply this program. The total annual funding of a random sample of ten institutions selected from the list of potential participants in Appendix A would be about $200,000,000 or about 17% of all Public Health Service research support in universities. The total number of researchers involved amounts to 4,000.

Identification of Grantees

All institutions selected for inclusion in this program carry out a sizable amount of research sponsored by the Public Health Service. The successful functioning of the program requires that all of the grantees be identified for the preparation of mailing lists for the information sheets and seminar publicity announcements. Grantee information is readily available at most institutions from computer print-outs of active grants. Such print-outs giving project titles can also provide an initial classification of grantees for the purpose of establishing a priority listing for the subsequent interviews.

Information Sheets

The information sheets will consist of a series of ten issues which will be sent to all grantees at the participating institution. The first three issues will serve as a pre-education effort in order to generate interest in the grantees to attend the seminars. The remaining seven issues will comprise a complete course in patent awareness.

The pre-education set of three issues will be distributed at a rate of one issue per month during the three months prior to the month in which the seminars are to be given. Widespread publicity alone is usually insufficient to motivate researchers to attend seminars on a subject in which they have little or no knowledge.

The remaining seven issues of the information sheets will be distributed on a quarterly basis during the remaining twenty-one months of the program. They will serve as a reinforcement to the patent awareness generated by the initial set of information sheets and as a result of the seminars. They will also serve as the only means to reach researchers who choose neither to attend the seminars nor make themselves available for personal interviews.

Seminars

The seminar approach is a time and cost efficient technique to present a block of information to a multi-person audience. It combines the learning efficiency of both the audio-visual mode of communication. Since it represents a unique event in the researchers varied activities, the information presented has a greater probability of being retained.

Each seminar will consist of a 30-minute presentation followed by a question-answer period. A self-explanatory seminar outline is distributed prior to the presentation in order to minimize the need for note taking. The slides used in conjunction with the oral presentation are reproduced in the outline. It has proved to be quite useful as the slide contents highlight the important ideas for subsequent reference.

Six seminars will be conducted over a three-day period at the beginning of the second quarter of the program. Care will be given to scheduling seminars at a time and place conducive to maximizing attendance. Two additional seminars will be given approximately one year after the initial set of seminars to provide an additional opportunity for attendance as well as to accommodate new faculty members.

Seminar Content

The seminar mode of communication was an essential element in an earlier program conducted for the National Science Foundation. The experience gained from delivering over one hundred such seminars has developed an understanding of the issues, problems and barriers faced by the university researcher and administrator. From this understanding, we have identified all of the major elements into an effective presentation.

Individual Interviews

As a result of a review of active grant lists, followed by a study of Summary Progress Reports (NIH 2006-1), conferences between Research Corporation staff members and individual researchers will be started in the month following the month of the seminar. Approximately two man-days per month will be expended for a period of twenty-one months. During this period we would expect to meet with almost three-hundred faculty researchers at each institution or about 75% of the total grantees.

These conferences are designed to develop both a better knowledge on our part of the nature and direction of the individual research project, and also to develop a rapport with the researcher. Historically, we have found that the establishment of a personal sense of mutual trust and respect between researchers and Research Corporation staff members overcomes much of the natural reluctance to disclose inventions adequately. During these individual meetings, the general material covered at the seminars is refined and related to the specific problem and situation of the individual researchers. In addition, it is possible to develop a time frame for future monitoring of the research process and establishing a basis for future meeting dates.

Participating Institutions

Attached to this Proposal in Appendix A is a list of institutions from which the selection of ten institutions can be made for inclusion in this program. These institutions have a significant research effort supported by PHS and can be expected to provide reasonable cooperation if selected for the program. Not included

Participating Institutions - contd.

in this list are those institutions which have been involved in the previous NSF sponsored program nor those institutions which have active patenting program of their own. Approval of the institution will be obtained before inclusion in the program.

Evaluation

The final report will contain a short-term statistical study on the number of identified invention disclosures at each institution covering the five-year period prior to the program and for the two-year period thereafter. All inventions disclosed at each institution during the program will be evaluated for patentability and commercial potential either by the institution or by Research Corporation. In the long term, those inventions accepted for technology transfer will be followed through their development and commercial phases within the time frame of the program and beyond, if desired.

Cost Summary

An estimate of the costs by area of activity for conducting a program at ten institutions is as follows:

Program Development and Management	$ 25,300
Preparation of Printed Matter	45,400
Preliminary Visits	22,360
Preparation of Seminar Material	8,870
Conducting Seminars	13,890
Individual Interviews	200,130
Reporting	10,496
Total	$ 326,446

Cost Summary - contd.

Details of Program Cost:

1. Program Development and Management

Supervising Associate	100 hrs. @	$63.00	$ 6,300
Technical Associate	400 hrs. @	44.00	17,600
Secretary	100 hrs. @	14.00	1,400
	Subtotal		$ 25,300

2. Printed Matter

a. Editorial Cost

Per Issue

Associate: 35 hrs. @ $44.00 = $1,540

Per 10 Issues

10 x $1,540 $ 15,400

b. Mailing System

Per Institution: $1,000

Per 10 Institutions $ 10,000

c. Mailing and Printing

Per Issue $ 200

Per 10 Issues: $2,000

Per 10 Institutions - 10 x $2,000 $ 20,000

Subtotal $ 43,400

3. Preliminary Visits

a. At Beginning of Program (One man-day per Institution)

Average 1-Day travel			$ 193
Visit:	Associate 8 hrs. @	$44.00	352
Analysis:	" 4 hrs. @	44.00	176
	Secretary 8 hrs. @	14.00	112
	Subtotal		$ 833

3. Preliminary Visits - contd.

b. Prior to Seminars (Two man-days per Institution)

Average 1-day travel		$ 193	
Per diem		42	
Visit:	Associate 16 hrs. @ 44.00	704	
Analysis:	" 8 hrs. @ 44.00	352	
	Secretary 8 hrs. @ 14.00	112	
	Subtotal	$ 1,403	
Per Institution		$ 2,236	
Per 10 Institutions (10 x $2,236)			$ 22,360

4. Preparation of Seminar Material

Associate 70 hrs @ $44.00	$ 3,080	
Secretary 35 hrs. @ 14.00	490	
	$ 3,570	
Expendable Supplies	5,300	
Total		$ 8,870

5. Conduct Seminars

(Three man-days per Institution)

Average 1-day travel		$ 193	
Associate	24 hrs. @ $44.00	1,056	
Secretary	4 hrs. @ 14.00	56	
Per diem	2 days @ $42.00	84	
	Subtotal	$ 1,389	
Per 10 Institutions (10 x $1,389)			$ 13,890

6. Individual Interviews

(Forty-two man-days per Institution)

Travel (Two-day visits)	21 X $193	$ 4,053
Per diem	21 X 42	882
Associate 336 hrs. @	$44.00	14,784
Secretary 21 hrs. @	14.00	294
	Subtotal	$ 20,013
Per 10 Institutions (10 X $20,013)		$ 200,130

7. Reporting

a. Quarterly Reports (12)

Associate:	96 @ $44.00	$ 4,224
Secretary:	48 @ 14.00	672
	Subtotal	$ 4,896

b. Final Report

Associate:	105 @ $44.00	$ 4,620
Secretary:	70 @ 14.00	980
	Subtotal	$ 5,600
	Total	$ 10,496

A Proposed Budget for the program is attached as Appendix B.

APPENDIX A

POTENTIAL UNIVERSITY PARTICIPANTS

Institution	HEW Funding $1,000,000 Per Year	Institutional Patent Agreement
Johns Hopkins	41.0	No
Harvard	36.5	No
Pennsylvania	26.8	Yes
Columbia	26.4	No
Yale	26.4	No
Duke	25.8	No
New York	23.4	No
Baylor Medical	15.9	No
North Carolina	15.5	No
Alabama	14.6	Yes
Rochester	14.4	No
Texas	12.3	No
Rockefeller	11.9	Yes
Temple	11.2	No
Vanderbilt	11.1	Yes
Howard	8.1	No

APPENDIX B

PROPOSED BUDGET

A.	Salaries & Wages				
	Supervising Associate:	100 hrs. X	$25.40	$	2,540
	Technical Associate:	4,981 hrs. X	17.74		88,363
	Secretary:	663 hrs. X	5.65		3,746
		Subtotal Salaries		$	94,649
B.	Staff Benefits				33,127
C.	Total Salary & Benefits			$	127,776
D.	Permanent Equipment				-
E.	Expendable Equipment & Supplies				5,300
F.	Domestic Travel & Per Diem				56,400
G.	Publication Cost				30,000
H.	Computer Cost				-
I.	Other Costs				-
J.	Total Direct Costs			$	219,476
K.	Indirect Costs				106,970
L.	Total Cost			$	326,446

APPENDIX C

TYPICAL PROGRAM ACTIVITY AT EACH INSTITUTION

Month	Planning and Protocol Visits	Information Sheets	Seminars	Monthly Visits
-3	X			
-2				
-1	X			
1		X		
2	X	X		
3		X		
4			X	X
5				X
6		X		X
7				X
8				X
9		X		X
10				X
11				X
12		X		X
13				X
14				X
15		X		X
16			X	X
17				X
18		X		X
19				X
20				X
21		X		X
22				X
23				X
24		X		X