RESEARCH CORPORATION

405 LEXINGTON AVENUE, NEW YORK, NEW YORK 10017
212/599-5700 CABLES: RESCORP NEWYORK

Willard Marcy, Ph.D.
Vice President
212/599-5714

Invention
Administration
Program

November 17, 1978

Dec 11 or 12th

Dr. David T. Mowry
Office of Government Inventions
and Patents
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

Re : Consultation Services - NTIS Licensing Procedures

Dear Dr. Mowry:

Referring to our recent telephone conversation, we at Research Corporation have given considerable thought to the problems inherent in the licensing of patents resulting from research and development activities supported by various administrative agencies of the Federal government. We understand that the National Technical Information Service has been designated to perform this function for a number of such agencies, and has, indeed, set up and manned an office to carry out the needed activities.

Since licensing of patents, whether derived using public or private funds, is frequently a complex operation requiring technical, legal and business expertise to be successful, the NTIS staff charged with developing industrial licensing interest and negotiating licenses might well profit from the knowledge developed by license negotiators having previously accumulated extensive experience. Transfer of such knowledge at an early stage in the life of NTIS's licensing group should increase both its efficiency and effectiveness to the benefit of the general public.

With these ideas in mind it has occurred to us that a brief period of consultation and discussion between Research Corporation's experienced licensing staff members and the NTIS staff would help in setting up sound administrative procedures and would aid the NTIS staff in the development of both general and specific licensing terms, as well as give some valuable insights into the negotiation process itself.

Accordingly, we propose that our Mr. H. Gordon Howe, Manager of Licensing, and myself spend one or two days, as seems appropriate, consulting at the NTIS office in Washington, D.C. and/or Springfield, Va., with the NTIS staff responsible for its licensing effort to review and study the present NTIS licensing operation in detail. At the end of this two-day period we would present our conclusions and recommendations orally and follow this up with a written report, if desired.

We propose to carry out this study entirely at our expense as a contribution to NTIS' very worthwhile effort to make available to the general public inventions resulting from research carried out in government laboratories.

We hope you will accept this offer and will suggest an early date for carrying out the consultation and study.

Sincerely yours,

Willard Marcy

Willard Marcy

WM:kp

Copies : J. S. Coles
H. G. Howe

UNITED STATES DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

December 14, 1978

MEMORANDUM TO: P. F. Urbach

FROM: D. T. Mowry

SUBJECT: Notes on Meeting with Research Corporation (RC)

RC has a staff of 11, plus Dr. Marcy and their in-house attorney, who writes most of the license agreements. There are 6 members in the evaluation section and 5 in licensing. The latter each carry a docket load of 60 to 70 inventions for promotion, licensing and maintainance. Domestic and foreign filing is done by domestic patent law firms.

Most of their inventions originate in government-funded or combined government and industry funded university projects. Annual royalty revenue had been in the $2 to 3 million range, but dropped to $1.4 million in 1977 and about $0.5 million in 1978 with invention administration expense of about $1.5 million annually. The decline was caused by the expiration of a few important patents.

They are required by IPA guidelines to promote inventions via non-exclusive licenses. However, few licensees are interested in non-exclusives, and the end result has been that over 90% of the inventions are licensed on a limited exclusive basis. Typical length of license term, following HEW guidelines is for 5 years from first sale but no more than 8 years from effective date of the license.

They find that clients will more readily sign an option for a license than a license itself. This option might last from 6 months to 2 years, and contains only major terms and conditions,paying minimums of several thousand per year. This preference is due to the fact that approval authority for an option usually rests in the department head or division manager, whereas a formal license requires corporate top management and legal department approval and is given only for projects well documented on capital, costs, markets, etc. They agree that our options for exclusives would require FR publication according to GSA regulations, but this might be much faster than corporate license approval, and permit the licensee to develop the invention

to the point of major investment decision with the confidence that a license would be available. Another popular feature is to have premarketing minimum payments credited against future running royalties. Another is to delay minimum payment until the option is exercised when they would be paid retroactively back to the option date.

On non-exclusives offered to several firms, the option may provide a reward to whichever company first enters the market, via a lower minimum or perhaps 20 or 25% lower running royalty. The first commercialization time bracket might extend for a 6 months to 1 year period, a second from 1 to 2 years, etc. The usual favored-nation clause does not prevent a higher royalty to subsequent licensees. They felt this kind of incentive was in the spirit of the GSA regulations.

On portfolio management, they recommended switching all fee and annuity payments to a single firm like Master Data in Detroit after the prosecution is complete. It is much cheaper, and consolidates small billings from 20 to 30 foreign prosecuting firms into one. Using a computer print-out of future payments supplied by Master Data, they have a quarterly meeting of their staff to weed out and abandon cases that have not shown licensing potential, particularly after five years have expired. Other firms, such as Alcott do this also. RC will send information. Before they finally abandon, they usually move a case into an inactive status, where they do not spend effort on promotion.

For specific market evaluation studies they use Charles Kline of Fairfield, New Jersey, who does small or large jobs on a task order basis. They feel his fast service and flexibility gives more for the market research dollar than any other firm, especially in the chemical process industry fields.

Running royalty rates are frequently set at 1/4 to 1/3 of the average profitability for that company. On a cost saving process, it would be a similar percentage of the cost savings. A 6% rate is not unusual for pharmaceuticals. They usually have a front end execution fee of $100 to $10,000, a "license maintainence fee" or annual minimum of up to $10,000. Sometimes the minimums escalate annually, approximating 1/4 to 1/2 of the anticipated annual running royalties.

In cases where potential licensees are dragging out negotiations, they recommend establishing a date for acceptance

of terms otherwise the terms will be withdrawn. Or another way is to make the license effective on a specific date.

They make periodic visits to Japan and selected European countries to meet with industry representatives.

Where an exclusive license reverts to nonexclusive, the terms remain the same unless another nonexclusive license is granted.

They have not yet used PCT or European Patents but expect to. The payment deferral in the former is usually more important than overall money savings.

They get little value from agents like Dvorkovitz or from technology brokers generally. The corporate diversification programs are also of little value and they concentrate on firms already in the business. They emphasized the importance of meeting licensees face-to-face during negotiations. Sometimes one meeting can accomplish more than six months letter writing.

The best contacts are corporate know-how and patent acquisition people in each company, such as Jack Denton at Lederle. A cross-indexed company file of contacts and correspondence with these key people is essential.

RC filed for the first cis-Platinum II cancer drug in 1970 and licensed it exclusively in 1977 to Bristol, who are finally expected to get their NDA in 1979. RC has some improvements, the malonato derivative and the "platinum blues" group. We have five second generation applications on which Bristol has requested an exclusive. We agreed to exchange these applications to determine if the improvement patents also require a license under the original Rosenberg patent or any earlier case.

RC uses about six different standard clauses on patent enforcement, depending on the situation, and they will send us copies. They will also send us one of their more elaborate exclusive agreements as a sample.

They occasionally have a "know-how only" license, and suggest an initial transfer payment plus royalties of possibly 2% for eight years to achieve a paid-up status.

Dr. Marcy commented that our respective programs were similar and more complementary than competitive. He offered to consult with us periodically, possibly semi-annually on an informal basis.

The above incorporates some notes made by George Kudravetz. The meeting agenda is attached.

RESEARCH CORPORATION

405 LEXINGTON AVENUE, NEW YORK, NEW YORK 10017
212/599-5700 CABLES: RESCORP NEWYORK

Willard Marcy, Ph.D.
Vice President
212/599-5714

Invention
Administration
Program

August 12, 1980

Dr. David T. Mowry
Patent Licensing
Office of Government Inventions and Patents
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

Dear Dr. Mowry:

This very belated letter is a follow-up on the pleasant meeting Mr. H. G. Howe and I had with you and your colleagues in the Office of Government Inventions and Patents (OGIP) on December 11 and 12, 1978. You will recall that we discussed in great detail the policies and procedures of OGIP and of Research Corporation, and that we agreed to give some thought as to what suggestions we might have about your operation and send you some additional information and background material which might help improve things a bit.

By this time, a year and a half later, such input may no longer be pertinent as you have learned by doing, I am sure. In any event, neither Mr. Howe nor I could think of any specific areas in evaluating, patenting and licensing inventions where you were not only well experienced, but also knowledgeable, and, indeed, successful.

Nevertheless, you appeared to have some concerns about license terms about which you asked our advice. Specifically, you were interested in typical diligence clauses and exclusive license terms. In the hope that our experiences and the terminologies we use might still be helpful to you, I am including herewith a sampling of clauses which we have used successfully. You will recognize, of course, that these general statements need to be modified to fit each specific case. Furthermore, the licensee will almost invariably want to have some of his own words appear. In such situations, the actual word is not so important as its meaning in context.

You had an interest in the approaches we use in contacting and communicating with university inventors and administrators. You

will recall we left you two different booklets addressed to the problem of educating such people about the patent system and its proper use. Enclosed herewith is a copy of the questionnaire for inventors which we developed and have found very useful in eliciting crucial information at an early stage. You should feel free to use this questionnaire in any way you wish since it is not copyrighted nor do we require any recognition as to its origin.

You will find the booklet entitled "Stimulating Invention Disclosures by Faculty Researchers" of some interest and help to you as it describes in a general way the procedures we find effective in obtaining invention disclosures from science-oriented university researchers. The same procedures may well be effective with government employee inventors.

You inquired as to our experience with filing patent applications under Patent Cooperation Treaty (PCT) and European Economics Community rules and regulations. Our experiences are not yet clear cut. Our present understanding is that the PCT patent system will probably prevail and the so-called European patent system will gradually fall into disuse as the two systems are more or less duplicative. We have filed a number of EPO applications, but patents have not issued as yet, so we have had no experience in licensing these. We visualize no particular difficulties in doing so, however. As to cost, the breakpoint seems to be at three or four depending on the countries in which coverage is sought. For fewer than four countries filing and prosecuting individual national patents would probably be less expensive than filing and prosecuting a EPO application. On the other hand, if coverage is desired in more than four countries, the EPO route would be more economical than the national patent route.

As to keeping track of the maintenance of foreign patents, we told you we were using Master Data Center, Inc. computerized services for this. We find their services very satisfactory as both we and our patent attorneys are relieved of much tedious detail work. Whether it saves any money is hard to determine although I suspect it does. While Master Data has a number of competitors, we have had no experience with any of them. I am enclosing some general information about Master Data in case you might like to contact them.

Keeping track of royalty payments is a very big problem especially as the complexity and number of active license agreements increase. We have not yet evolved a completely satisfactory system which

provides the needed information in a timely fashion. At present we are entering the royalties received in a Wang System 25 unit as they come into our office. Then, periodically, in our case every three months, a print-out is then used as a basis for manually calculating distributions of royalties as required. We also use the print-out to alert our project administrators to the absence (or late payment of royalties) as well as whether license issue fees, minimum royalties or license maintenance fees have been timely paid. I expect that, in time, we will be able to gradually eliminate most of the remaining manual operations with further computerizing. An example of the type of print-out we find useful is included herewith.

A short bibliography of helpful information sources on licensing techniques is included herewith.

In reviewing my notes of our meeting I see that you felt we might be able to help you to license selected NTIS inventions in Japan. Since meeting with you we have continued with and increased substantially our contacts with Japanese companies, particularly those in the pharmaceutical industry. We would be pleased to discuss further with you how our experiences and acquaintanceships with both Japanese companies and Japanese people might aid your licensing efforts. The best way to do this might be to submit a specific project to us for our study and recommendations. Please let me know if you are still interested in this type of joint effort. We could, of course, undertake similar activities on behalf of NTIS in other foreign countries as well.

I hope the information in this letter and its enclosures will be helpful to you and that we will maintain frequent contact with each other. Do not hesitate to get in touch with me at any time if you feel we can be of further assistance.

Sincerely yours,

Willard Marcy.

Willard Marcy

WM:kp
Enclosures

Letter to Dr. David T. Mowry dated August 12, 1980

List of Enclosures

Exclusivity Terms
Diligence Terms
Inventor Questionnaire
Stimulating Invention Disclosures by Faculty Researchers
Quarterly Bulletin, Fall 1978
MDC Update, June 1980
Bibliography on Evaluating, Patenting and Licensing

Evaluating, Patenting and Licensing Bibliography

Patent Policy, Government, Academic and Industry Concepts, W. Marcy Ed., ACS Symposium Series No. 81, (1978) American Chemical Society, Washington, D.C. 20036. get have

Licensing Guide for Developing Countries, World Intellectual Property Organization, Geneva (1977). have

The Law and Business of Licensing, M. G. Finnegan and R. Goldscheider, Eds., 4 Volumes, Clark Boardman Co., Ltd. New York (1980)

Drafting Patent License Agreements, H. R. Mayers, The Bureau of National Affairs, Inc., Washington, D.C. 20037 (1971). have

Successful Licensing to and from Japan, Y. Matsunaga, Nihon Brain Corp., Sankei Annex 901, 1-7-2 Otemachi, Chiyoda-ku, Tokyo, Japan (1974). have

Licensing Bibliography, Licensing Executives Society (1970). have

COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
SUITE 2321 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515
(202) 225-6371

April 22, 1982

JFC 4/28/82

Joseph F. Caponio, Acting Director
National Technical Information Service
U. S. Department of Commerce
Springfield, Virginia 22161

Dear Dr. Caponio:

Thank you for your letter of April 12th with the news of the granting of licenses for government held inventions to several firms in Pennsylvania.

The work done by the NTIS in this area is most valuable, and I am delighted that your agency is making good progress. Thank you for keeping me posted.

Sincerely,

DOUG WALGREN
Chairman
Science, Research and
Technology Subcommittee

DW/Hmr

CW 4-28-8

CHEMICAL ENTERPRISES, INC.
8582 Katy Freeway, Suite 202 / Houston, Texas 77024-1874 / (713) 461-0606

April 22, 1982

Mr. Douglas J. Campion
Program Coordinator
Office of Government Inventions & Patents
U. S. Department of Commerce
NTIS
5285 Port Royal Road
Springfield, Virginia 22161

Dear Doug:

On behalf of Chemical Enterprises, Inc., I would like to commend the Office of Government Inventions and Patents for the courteous and expedient manner demonstrated during the drafting and finalizing of our license agreement to produce the U. S. Bureau of Mines modified sulfur cement and concrete.

The long term viability of a medium size company like ours is greatly dependent on technologies acquired and/or internally generated. Due to inherent limited resources, our internal technological basis expands rather slowly, and we are thus continuously eager to monopolize on readily available technological advancements developed by the various U. S. Government agencies and available to private industry.

Your office has demonstrated an efficient and facile transfer of technology.

Appreciative of the assistance provided to us, I remain

Sincerely,

T. E. Thanos, Ph. D.
Manager, Business and Product Development

CHEMICAL ENTERPRISES, INC.

TET:eos

cw
4/28/

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
National Institutes of Health

Memorandum

Date July 19, 1982

From L. Earl Laurence, Executive Officer,
National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases

Subject Non-exclusive licensing of the DORE/CHAMBERS' Infusion Pump (U.S. Patent Application Serial No. 271,271)

To Dr. Joseph Caponio, Acting Director,
National Technical Information Service

I wish to take a moment to acknowledge the superb performance of Mr. George Kudravetz and his staff in their recent handling of a patent license agreement. At issue was the negotiation of a license concerning an insulin infusion apparatus that was invented by a British corporation under a U.S. Government contract. What started off to be a seemingly routine matter ultimately became quite complex, having international dimensions and political implications. The most critical period relating to this invention began with a meeting on April 27, 1982. Mr. Kudravetz, working under the handicap of being short of staff and having his office moved, devoted all the time necessary to move the issue to closure on June 7, 1982 with the signing of a license agreement. During that time he facilitated both communications and actions by timely written and oral responses to the involved parties, their respective councils, and to us. Such involvement and dedication is truly commendable. His expeditious and skillful handling of this case is seen to be beneficial not only to our bureau but to the Government and the U.S. diabetic population as a whole.

This is not the first time that the Office of Government Inventions and Patents has provided invaluable assistance to us and most probably will not be the last time. Recent and past experiences with the office have clearly pointed out the merit of this program and the need for this specialized staff to serve the NIH and other Government organizations in commercializing inventions that are initiated under Government support mechanisms. There seems to be no question that the Government enjoys a great benefit by providing this vital function.

Speaking on behalf of the NIADDK, we commend the work of this office and support its continued existence.

L. Earl Laurence

L. Earl Laurence

cc: Chief, Patent Branch, Office of General Council, DHHS

Research Corporation

6840 East Broadway Boulevard
Tucson, Arizona 85710-2815
Telephone (602) 296-6400

George M. Stadler
Executive Vice President

March 17, 1983

The Honorable D. Bruce Merrifield
Assistant Secretary for Productivity,
Technology, and Innovation
U.S. Department of Commerce
14th and Constitution Avenue, N.W.
Washington, D.C. 20230

Dear Bruce:

Johh Schaefer, Mitchell Liftig, Don Coyne and I would like to express our thanks to you and your staff for providing us with the opportunity to discuss our plans for using R & D partnerships for university-developed technologies. We also think that some of our approaches can be modified for use with technologies developed by small businesses and/or the federal government.

We were all very impressed by the quality of the program you and your staff have put together on the use of R & D partnerships and would like to applaud your pioneering efforts.

It is our intention to submit a formal proposal to the Department of Commerce which would outline our objectives in this area and which would solicit the Department's help in identifying sources of funding in order to defray some of the costs associated with implementing a first-class program in this area. As you are probably aware, Research Corporation is a not-for-profit foundation which not only helps universities with their technology transfers but also awards grants to young university scientists. As a result of our dual activity, the financing of a new program such as we are discussing could become a burden.

We believe that a first-class effort would require that the Foundation establish a new subsidiary. This subsidiary would handle our activities involving the use of R & D partnerships, venture capital, and equity placements. We would be able to provide a wide range of services and sound advice (consultation) to an expanded group of clients (i.e. university, small business, government laboratory, government contractor, etc.) at the lowest possible rate and risk to the client.

The subsidiary's program which we would hope to develop in conjunction with the Department of Commerce would initially address three problems: the education of the client (source of technology) as to the pros/cons of R & D partnerships and other available modes of technology transfer; consultation on specific projects with prospective users of R & D partnerships and/or the actual structuring and placement of specific partnerships; and the development of a sound network of sellers (broker/dealers, investment bankers, etc.) of R & D partnerships that we have structured.

Perhaps as a first step we should organize a forum in order to share the knowledge that both your staff and the Foundation has developed. During the course of this forum or seminar, we would be able to further identify and define objectives that are of mutual interest. I think it would be most appropriate for you to organize a team of two or more staff members to meet with us in our Tucson office for several days so that we can thoroughly address all issues. A good time frame for this kind of activity might be early April. In addition, Don Coyne of our staff would be interested in interning in your program for a few days.

I believe the Foundation has available to it a unique combination of experience, talent and client base to mount a serious effort in this area of technology transfer. However, a key to success will depend upon the creation of a proper interface and working relationship between the Foundation and the Department of Commerce.

I will be looking forward to your thoughts and comments.

Very truly yours,

George M. Stadler

GMS/sk

cc: Dr. John P. Schaefer
Dr. Donald M. Coyne
Mr. A. Mitchell Liftig
Mr. Norman Latker

Dancia
Pl. review
for discussion
N.
cc: T.P

A PROPOSAL TO

THE DEPARTMENT OF COMMERCE

FOR SUPPORT OF A

PROGRAM TO ENHANCE THE COMMERCIALIZATION

OF UNIVERSITY TECHNOLOGY

SUBMITTED BY: Research Corporation
6840 E. Broadway Boulevard
Tucson, Arizona 85710

Requested Starting Date:	June 1, 1983
Funding Requested:	$182,615.00
Duration of Program:	18 Months
Date Submitted:	April 25, 1983

PRINCIPAL INVESTIGATOR:

GEORGE M. STADLER, Executive
Vice President

PROGRAM DIRECTOR:

DR. DONALD M. COYNE, Associate

APPROVED:

DR. JOHN P. SCHAEFER, President

TABLE OF CONTENTS

OBJECTIVES

The primary purpose of this program is to establish a basis for Cooperative Agreement between Research Corporation ("RC") and the Department of Commerce ("DOC"). The underlying goal of the Cooperative Agreement would be to increase U.S. competitiveness and productivity by taking full advantage of the basic research structure in American universities and our national laboratories.

Some specific areas of mutual interest are:

1. Enhanced patent awareness and commercialization alternatives for educational institutions and the national laboratories;

2. Earlier and more widespread identification of inventive concepts resulting from government supported research;

3. Expanding the array of commercialization techniques available to handle basic technology to include "non-traditional" transfer modes like research and development limited partnerships ("RDLP's"), venture capital, joint venture, new company start-ups, etc.;

4. Help in "bridging the gap" and thus facilitating university-industry collaboration; and national laboratory-industry

5. Initiate and coordinate commercialization activities between universities and national laboratories and their local/regional small and medium-sized businesses;

6. Establish a basis for a "facilitator" (RC) in helping universities and the national laboratories implement the above-mentioned activities; technology transfer managers and

7. Help in developing well-trained university and national laboratory patent administrators and provide them with the proper support and back-up needed to run successful technology commercialization programs;

8. Demonstrate the "facilitator" role through an initial Pilot Project with a test group or research universities and national laboratories.

venture, new company start-ups

9. Plan and organize regional and/or national seminars based upon the above-mentioned Pilot Project for universities and national laboratory ~~patent administrators~~ technology management personnel including technology transfer agents and patent administrators;

10. Establish an Institute which would be used for continual training, commercialization skill enhancement, and as a dialog for parties interested in facilitating university-industry research and commercialization relationships; and national laboratory - industry

11. Systemize regional small business and regional economic development networks so as to accelerate the "time to market" of university and national laboratory-developed products, processes and services;

include patent administrators where appropriate to include 9- and where we technology transfer -

12. Arrange a forum so that members of the brokerage/investment community can interact with organizations and/or individuals responsible for structuring RDLP's in order that acceptable sales terms and conditions could be negotiated and structural RDLP formats standardized (this kind of understanding would not only expedite the RDLP process but would also reduce costs to both parties); and

13. Establish an Operational Center(s) where university and national laboratory ~~patent administrators~~ (and also small businesses) could get proper advice (consultation) on the use of RDLP's and other "non-traditional" commercialization options and, in addition, have RDLP completely structured and marketed.

and University national labs / industry

technology management personnel

Do we have these data.
re: Un. non-prof patent will also an implies

BACKGROUND

In December of 1977 RC completed a three-year study for the National Science Foundation ("NSF") and the National Bureau of Standards ("NBS"). The study was aimed at developing and testing procedures to enhance the patent awareness of academic researchers.

The results of this program were very positive as reflected by the large increase in the number of invention disclosures that were stimulated. A manual was produced based on the RC developed procedures for stimulating invention disclosures with the intent of this manual being used as a guide for university administrators who wish to set up in-house patent programs. (Both the initial proposal and the resulting manual are attached as Appendix 1.)

Unfortunately, the NSF program was neither expanded to other universities nor was a mechanism established which could be used to provide continual training and the enhancement of commercialization skills for the university patent administrator. As a result, procedures for invention stimulation were available but proper training in their use and periodic commercialization skill updating were taken for granted. Further, the necessary knowledge-base for the evaluation of disclosures for their patentability and marketability, the filing of prosecution patent applications and the licensing (commercialization) of issued patents were not treated by the NSF program and, thus, were not generally available to most university patent administrators.

RC's proposed Cooperative Agreement with the DOC has been designed to take advantage of the proven procedures for stimulating invention disclosure established during the NSF program and the lessons learned from the problems that have developed since the completion of the program.

Technological advancement is the key to our nation's sustained economic growth. Our universities and national laboratories represent the basic research establishment from which will come the intellectual seed for new industrial technology which will help stimulate our economic growth. We must implement a program that will help maximize our ability to identify inventions resulting from basic research so that these inventions can be made widely and promptly available for this purpose.

PURPOSE OF THE PROPOSAL

As an initial step, in our proposed Cooperative Agreement with DOC, RC plans to initiate a "Pilot Project" with a selected group of universities and national laboratories. The Pilot Project is designed to demonstrate the effectiveness of a "facilitator" (RC) and to help establish effective management of new technology ~~campus patent administration~~ in order to encourage the early identification of ~~new~~ ideas with commercialization potential and to expand the array of available commercialization mechanisms to include "non-traditional" approaches such as RDLP's.

Further, it is RC's intention that the experiences gained during the Pilot Project would be extended to an expanded group of universities, the national laboratories and interested small businesses. By providing both awareness and the means for early commercialization, it is hoped that the Pilot Project can contribute to increasing U.S. competitiveness and productivity.

APPROACH

RC in cooperation with DOC will select ten major research universities for inclusion in this Pilot Project. The group will be a representative cross section of this nation's university, health science and medical schools and technology institutes so that various awareness, early invention identification techniques, and "traditional and non-traditional" commercialization approaches can be attempted and evaluated. Several institutions meeting these criteria have already been contacted by RC and they have expressed a desire to participate in this initial Pilot Project.

RC will design programs to meet the specific needs of each participating university that will greatly extend any present internal patent management program that the universities may have. RC will work with the selected university administrator who is responsible for patenting and licensing. This individual(s) will play an integral role in tailoring an enhanced program that will include: patent awareness for faculty, early invention identification, on-campus assistance, regular communication with faculty members, help in attracting industrial research support, and technology commercialization through "traditional" and "non-traditional" transfer approaches.

The activities undertaken by RC will include:

1. A Training Seminar for university patent administrators.

2. A specially designed patent-awareness program for faculty.

3. On-campus representation for regular meetings with faculty members to discuss questions concerning technology, commercialization and to help university patent administrators establish the one-to-one contact necessary for early invention identification.

4. Provide written reports for guidance on all submitted disclosures.

5. Use flexible methods to achieve development and commercialization of university inventions.

6. Undertake international commercialization and transfer of university technologies with the intention of positively affecting the U.S. balance of trade.

7. Help in attracting support for those research initiatives which appear to have commercial potential.

8. Create a better interface for the transfer of technology to local and regional businesses which are in close proximity to the participating universities and national laboratories.

A more complete description of these efforts can be found in Appendix 2 which contains the document entitled Complete Patent Management - A New Option Under Research Corporation's Invention Administration program.

A key objective to this overall process will be to establish an effective ~~patent~~ technology management focus ~~(administrator)~~ at each of the participating universities and national laboratories, and to provide the individual with the proper back-up needed to operate an effective technology commercialization program.

It is anticipated that the Pilot Project will be implemented over an eighteen-month period and will contain at least the following tasks:

1. Initial meetings involving RC, DOC ~~and~~ university and national laboratory administrative personnel to explain the basis of the Pilot Project, define its goals and objectives, and to implement a preliminary research review of the participating universities and laboratories.

2. Preparation of awareness, early invention identification, and training seminar materials and procedures.

3. Conduct an initial awareness/training seminar for the selected university patent administrators and national laboratory technology managers.

4. Provide continuing on-campus support for the university patent administrators and help them interface better with their faculty inventors.

5. Identification of technologies that lend themselves to development and commercialization through RDLP's.

6. Preparation of a final report/working manual summarizing and evaluating the Pilot Project's procedures.

ADDITIONAL/FUTURE ACTIVITIES

RC is convinced that by helping to build a strong university focus ~~(Patent Administrators)~~ and providing continual means of education and commercialization skill enhancement a sound base will be established so that maximum use of America's basic research structure is realized. Thus, it is our intention to build on the experiences gained during the Pilot Project and to expand the use of these procedures with other universities, our national laboratories and interested small and medium-sized businesses. In addition, RC and DOC would simultaneously evaluate the merits of:

1. Planning and organizing a national workshop/seminar based on the experiences gained during the Pilot Project for other university and national laboratory ~~patent administrators.~~

2. The establishment of an Institute which would provide a continual training base ~~for patent administrators~~ as well as a center for seminars aimed at stimulating dialog between parties interested in facilitating university-industry research and commercialization relationships.

3. Systemizing regional small businesses and regional economic development networks so as to accelerate the "time to market" of university develope products, processes and services for the benefit of these local businesses.

4. The establishment of an Operational Center where university and national laboratory ~~patent administrators~~ (and interested small businesses) could get proper advice and/or help in structuring and marketing RDLP's and other "non-traditional" commercialization approaches.

SIGNIFICANCE

Broadly, it is RC's premise that the enhancement of patent awareness, early invention identification and the use of "traditional" and "non-traditional" commercialization techniques at educational and scientific institutions (and small businesses) will result in the following:

1. The country as a whole will obtain a higher return on this nations research investment. As new products and processes reach the marketplace, new enterprises develop providing increases in employment and tax revenue. Research funding must be analyzed and mined for the inventions that our funding has generated so that a maximum national benefit may be obtained.

2. Help local and regional industry become involved with university and national laboratory technologies and more fully utilize this inherent reservoir of technical talent to help them solve their own problems and meet their future challenges.

3. Retention of foreign patent rights through early identification and evaluation of inventions before publication. All to often these rights are lost by premature public disclosure. Foreign patents can enhance the inflow of dollars both to the U.S. patent holder in the form of royalty income as well as to the U.S. corporate licensee as profits and sales.

4. Improvement in the quality of life as a consequence of an increased number of inventions resulting from government sponsored basic research in the health and medical science field. Such inventions all to frequently lie fallow at present because medical researchers do not have an appreciation for the use of the patent system and feel their responsibility ends with publications of their research findings.

5. Provide feedback information which can be used as criteria in future programs for funding basic research. Those institutions and research workers which are most likely to produce the highest quality results will be more readily identified. In addition, the institutions and researchers will become more aware of the uses to which their work can be put for greater public benefit.

The Pilot Project which is proposed here is designed to accomplish at minimum the following:

1. Develop an awareness that inventions of value to the public may be inherent in academic research projects.

2. Define in general terms the factors that make an invention both patentable and marketable.

3. Develop an understanding that publishing and patenting are compatible and not irreconcilable opposites as is frequently felt to be the case by many academic researchers.

4. Presentation of the role of the patent system in developing new products and processes for the public benefit.

5. Provision for testing various methods ("non-traditional") other than patents for commercializing university technologies.

6. Encouragement of a closer working relationship between university patent administrators and faculty researchers through the development of the knowledge and understanding of the university's patent policy and administrative procedures and responsibilities.

7. Development of a broader understanding of commercialization methods through presentation of actual case histories, including economic and other benefits accruing to the general public, the government, the university and the inventors.

8. Development of appropriate and more effective mechanisms for stimulating and identifying early inventive concepts.

9. Development of appropriate and more effective mechanisms for evaluating inventive concepts resulting from universities

RESOURCES REQUIRED

Support of the Pilot Project is dependent upon obtaining two commitments: direct grant support from the federal government to help RC defer some of the costs associated with the Pilot Project and, secondly, the direct and continued participation of certain DOC employees in the Pilot Project.

Cost estimates and Budget for the necessary direct grant to RC are outlined below:

Personnel Costs

Overall costs for the Pilot Project are based on the following hourly manpower changes for RC personnel:

Supervisory Personnel	$75.00
Associates	$50.00
Support Staff (secretarial)	$18.00

These hourly rates are inclusive of direct labor, overhead and general and administrative expense. Since RC is a non-taxable, non-profit foundation, there is no allowance for either profit or a management fee in these rates.

Costs for Travel to Institutions and/or the Seminar Site

These costs have been estimated and averaged based on one professional traveling from (or to) Tucson, Arizona on a per diem basis.

Air Fare	$600.00
Motel	65.00
Meals	35.00
Misc. (Ground Transporation)	50.00
TOTAL	$750.00

rates are inclusive of direct labor, overhead

Cost of Pilot Project

The following costs are estimated for the performance of the Pilot Project at ten selected universities and National Laboratories.

1. Initial meetings involving RC, DOC and high level university and National Laboratory administrative personnel in order to explain the basis of the Pilot Project, define goals and objectives and to begin a preliminary University/National Laboratory Research Review:

Average two-day travel	$ 900.00
Institutional Visit (10 hrs. @ $50)	500.00
Study and Analysis of Data (4 hrs. @ $50)	200.00
Support Staff (6 hrs. @ $18)	108.00
TOTAL	1,608.00
Total for Ten University Trips:	$16,080.00

2. Preparation of awareness, early invention identification, and training seminar materials and procedures:

Supervising Personnel (25 hrs. @ $75)	1,875.00
Associate (200 hrs. @ $50)	10,000.00
Support Staff (100 hrs. @ $18)	1,800.00
Preparation of visual aids	1,000.00
Handout material	3,000.00
TOTAL	$17,675.00

3. Initial awareness and training seminar for the selected university/~~patent~~ laboratory administrators (to Tucson Seminar Site):

Average three-day travel	$ 1,050.00
Rental of conference Center	150.00
TOTAL	$ 1,200.00
Sub-total for ten university/laboratory (two representatives per university)	$24,000.00

Supervising associates (20 hrs. @ $75)	$ 1,500.00
Associate (80 hrs. @ $50)	4,000.00
Support staff (40 hrs. @ $18)	720.00
Miscellaneous meeting expenses and professional stipends	7,500.00
Sub-total	14,720.00
TOTAL	$38,720.00

4. Provide continuing on-campus/in-laboratory support for university patent administrators and for interface with university faculty inventors:

(Approximately 20 days will be scheduled for "on-campus" interface at each participating university over the course of the Pilot Project -- assuming an average of four, five-day trips per university.)

Average five-day travel	1,350.00
Institutional visit	
Associate (20 hrs. @ $50)	1,000.00
Support Staff (10 hrs. @ $18)	180.00
Sub-total	$ 2,530.00
Total of four, five-day trips per 10 universities/laboratories	$101,200.00

5. Preparation of a final report/working manual which would summarize the Pilot Project:

Supervising Associate (20 hrs. @ $75)	1,500.00
Associate (80 hrs. @ $50)	4,000.00
Support staff (80 hrs. @ $18)	1,440.00
Miscellaneous	2,000.00
TOTAL	$ 8,940.00

Summary of total Pilot Project costs:

Initial meetings	$ 16,080.00
Preparation of materials	17,675.00
Training seminar	38,720.00
Continuing campus support	101,200.00
Final Report	8,940.00
	$182,615.00

As previously mentioned, in addition to the direct grant support, the involvement of certain DOC personnel would also be necessary to meet all of the objectives of this first step in the envisioned Cooperative Agreement.

Further, RC will be cost sharing expenses for the programs that go beyond those which have been requested. RC will assume all costs involved in technology evaluation, patenting, licensing, license management and foreign filing as per our normal Complete Patent Management Agreement with universities.

TIMING

RC believes that an 18-month Pilot Project would provide sufficient time for the purpose of training and gathering sufficient data for evaluation. Further, because of the various cycles of activity associated with the academic year, an early June 1983 starting date would be most desirable.

RC and DOC personnel would use the time period between June and September of 1983 to prepare the awareness and training seminar materials and, in addition would conduct the initial university visits and planning/review meetings with participating university administrators. The awareness and training seminars would be scheduled for September with the follow-up "on-campus" support effort being scheduled at appropriate intervals over the next 12 months.

If the above schedule could be met, RC would then attempt to have a final report available for distribution to other universities, government laboratories, and interested small businesses by the end of 1984.

Timing the Pilot Project to begin in June of 1983 would also permit RC and DOC to explore the possibility of initiating other projects associated with the Cooperative Agreement in parallel with the Pilot Project.

INFORMATION ABOUT RESEARCH CORPORATION

Research Corporation was founded in 1912 by Frederick Gardner Cottrell, a professor of physical chemistry at the University of California at Berkeley, the inventor of the electrostatic precipitator. Cottrell's goal, in essence, was to make practical use of discoveries resulting from university research and to apply resources thus generated to further the advancement of science. RC is incorporated in New York State under the not-for-profit corporate law, and has offices in New York City and Tucson, Arizona.

RC's first objective is carried out through the Invention Administration Program, which evaluates inventions made at scientific and educational institutions. RC has servicing agreements with over 280 universities and non-profit institutions to handle their inventions and research projects that show commercial potential. These agreements generally provide for the division of income on a basis of sixty percent to the university and inventor and forty percent to RC.

Its patent services to universities include the location and identification of technology concepts, and the evaluation of the economic feasibility of such concepts, the prosecution of applications for patents have not already been obtained, and licensing and administering the patents. RC generally does not engage in research, development, manufacturing or product marketing activities but intends that such activities be undertaken by its licensees. The major product and process areas of RC's technology are medical-pharmaceutical, agricultural, animal health, chemicals, energy and electronics. RC evaluates on average 400 disclosures each year of which it accepts for handling approximately 10 percent. RC currently administers about 500 active inventions and 200 licensed inventions. Royalties generated from these technologies will reach the $10 million per year level in 1983.

The advancement of science, RC's second objective, is carried out through grants-in-aid for basic research in the natural and physical sciences. Through these programs RC assists significant research proposals by faculty members at colleges and universities throughout the U.S. and Canada. These programs aim at young university researchers because they are yet unknown as established researchers, and generally cannot successfully compete for Federal funds. Most of RC's grantees, after completing initial projects under its patronage, are able to win Federal money for further projects. Approximately 300 research grants are awarded each year.

Among members of the science and technology community who have conducted research under grants from RC are 17 Nobel Prize winners. The distinguished scientists, whose first research grants were awarded to them by RC, include the five chemists (Herbert C. Brown, George Wittig, Robert B. Woodward, Manfred Eigen and William N. Lipscomb, Jr.), five physicists (Ernest O. Lawrence, Isdor I. Rabi, Felix Bloch, Edward M. Purcell and Robert Hofstadter) and seven medical researchers (Edward C. Kendall, Edward L. Tatum, Severo Ochoa, Feodor Lynen, George Wald, Robert W. Holley and Max Delbruck).

RC has a professional staff of twenty-five scientists, engineers, technology transfer/marketing specialists, patent attorneys and new venture experts. It also retains several business/scientific consultants and legal firms in the areas of patent, tax, and corporate law.

Research Corporation

6840 East Broadway Boulevard
Tucson, Arizona 85710-2815
Telephone (602) 296-6400

George M. Stadler
Executive Vice President

September 14, 1983

The Honorable D. Bruce Merrifield
Assistant Secretary for Productivity,
Technology and Innovation
U.S. Department of Commerce
14th and Constitution Avenue, N.W.
Washington, D.C. 20230

Dear Bruce:

Both Don and I would like to again thank you for spending the evening of August 29th discussing our pending proposal to DOC and other subjects related to technology and innovation. We appreciate your confidence in our activities and your support for the philosophy which underlies our proposal. I would like to again emphasize the need to work with Norm Latker's office to coordinate our activities and suppose that it will be Norm's responsibility to initiate the appropriate paperwork which will be necessary for the granting of funds.

I have also followed up on your suggestion and have enclosed a brief proposal for the training of SBA regional directors in the use of RDLPs and university interactions. The funding of this proposal would also be quite valuable because the activity would be directly in support of your overall thrust. I already have a hold on the use of the University of Arizona Conference Center for the dates of November 13 through 16 and have the enthusiastic support of the College of Business and Public Administration.

Don Coyne will also be coordinating Washington University's interactive video development with your efforts with regard to CDC/Plata and NSF.

Finally, I would like to personally offer my assistance in spearheading or capitalizing on the use of RDLPs around your efforts in the area of the 4,000,000-Byte chip and/or the new generation jetliner. I think we can get these projects off your desk and moving towards completion. Again, the use of the Tucson Conference Center can provide just the right environment to bring the necessary parties together and start the ball rolling.

Please let me know how I can help to move things forward.

Very truly yours,

George M. Stadler

GMS/sk
Enclosures
cc: Mr. Norman Latker
Dr. John P. Schaefer
Dr. Kenneth Smith

A PROPOSAL TO

THE DEPARTMENT OF COMMERCE

AND

THE SMALL BUSINESS ADMINISTRATION

FOR THE SUPPORT OF

TRAINING FOR SMALL BUSINESS ADMINISTRATION PERSONNEL IN THE AREA OF RESEARCH AND DEVELOPMENT LIMITED PARTNERSHIPS AND THE DEVELOPMENT OF UNIVERSITY INTERFACE TECHNIQUES

SUBMITTED BY: Research Corporation
6840 E. Broadway Boulevard
Tucson, Arizona 85710

Requested Starting Date: October 3, 1983
Funding Requested: $60,950.00

PRINCIPAL INVESTIGATORS:

George M. Stadler,
Executive Vice President
Research Corporation

Kenneth Smith, Dean
College of Business and
Public Administration
University of Arizona

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OBJECTIVES

The primary purpose of this proposal is to provide training in the use of Research and Development Limited Partnerships ("RDLP's") for small business administration (SBA), regional directors and their professional support staff. A second objective would involve developing techniques for the coordination of local university talent (both scientific and managerial) in joint venture relationships involving small businesses and RDLP's.

A longer range objective that also might result from this proposal is the establishment of a training center in Tucson, Arizona for the continual education of SBA employees and small/medium size business personnel, their further commercialization and business skill enhancement, and as a forum for parties interested in facilitating industry/government research and commercialization relationships.

BACKGROUND

Research Corporation ("RC") has a long history of successfully working with the federal government on projects for its various agencies (National Science Foundation, National Bureau of Standards, Department of Energy, etc.) over the last several years. At the center of each of these past activities was one common theme--how to maximize the technological advancements resulting from basic research so that they can be made widely and promptly available to the public.

RC is once again attempting to establish a program which can have far reaching results. The framework for a cooperative agreement between RC and the Department of Commerce (DOC) was submitted to DOC on April 25, 1983. While this proposed DOC working relationship anticipates activities in several areas, two of its primary objectives have significance to this subject proposal. These are:

> "5. Initiate and coordinate commercialization activities between universities and national laboratories and their local/regional small and medium size businesses.
>
> 10. Establish an institute which would be used for continual training, commercialization skill enhancement, and as a center for dialog between parties interested in facilitating university/industry government research and commercialization relationships."

The underlying philosophy behind the aforementioned DOC proposal is to create an operational network for the commercialization of our nations basic and applied research which results from U.S. universities and our national laboratories. The network would be a hybrid of both centralized and decentralized efforts. The success of the resulting network would depend upon identifying and interfacing with local/regional existing small and medium size businesses and the creation of new small businesses. Of key importance will be the individual administrators which are knowledgeable in university interfaces and which have training in new venture situations. One of the areas which could be of great importance in this endeavor is the use of the RDLP. Thus, it seems appropriate to embark on a program of training in these areas for the SBA's regional directors.

APPROACH

RC and the University of Arizona College of Business and Public Administration ("UA") in cooperation with DOC and SBA will organize and conduct a two and one-half day training seminar for 20-25 SBA regional directors and/or their professional support staff. RC and UA will design the seminar program to meet the professional needs of the SBA regional staff in the area of RDLPs and university/government laboratory interfacing. After reviewing and critiquing this initial training seminar, the program will be refined (if necessary) and offered to an additional group of SBA employees.

RC and UA in designing the training seminar program will take into consideration some of the following topics: initial considerations in funding and designing joint R&D projects between small business and universities; alternative financing methods; limited partnerships; operational aspects of limited partnerships; the R&D contract of a limited partnership; flow of funds in R&D limited partnerships; after the R&D project is completed; advantages and disadvantages of RDLPs; new types of RDLPs (non-traditional) arrangements; tax aspects of RDLPs; accounting aspects of RDLPs; interfacing with university administrators; interfacing with university scientific and business faculty; designing R&D projects involving small business and their local universities; financing small business/university R&D projects; and practical information about developing and negotiating a university R&D contract on behalf of a small business.

RESOURCES REQUIRED

Cost estimates and budget projections for a two and one-half day training seminar for 25 SBA professionals is outlined below:

1. Planning and development of training seminar:

a.	Professional personnel (150 hours at $75 per hour)	$11,250.00
b.	Support staff (100 hours at $18 per hour)	1,800.00
c.	Preparation of visual aids	1,000.00
d.	Handout material	3,000.00
	Total	$17,050.00

2. Cost associated with conducting training seminar:

a.	Professional personnel (200 hours at $75 per hour)	$15,000.00
b.	Professional staff seminar expenses	2,000.00
c.	Speakers and consultants on honorarium	5,000.00
d.	Speaker and consultants travel and lodgings	5,000.00
e.	Miscellaneous	1,500.00
	Total	$28,500.00

3. Cost associated with use of UA Oracle Conference Center (including local transportation, lodgings, meals, use of conference facilities, etc.):

a.	First-night reception	$ 25.00
b.	Two and one-half day seminar	250.00
c.	Final-day activities	40.00
d.	Transportation	35.00
	Total	$ 350.00 (per participant)

Total for 25 participants: $8,750.00.

d. Professional staff ...

4. Seminar analysis and preparation of final report:

a.	Professional personnel (50 hours at $75 per hour)	$ 3,750.00
b.	Support staff (50 hours at $18 per hour)	900.00
c.	Miscellaneous/printing	2,000.00
	Total	$ 6,650.00

5. Summary of total program costs:

a.	Planning and development	$17,050.00
b.	Conducting training and seminar	28,500.00
c.	Use of conference center, lodging and meals, transportation of participants	8,750.00
d.	Seminar analysis and final report	6,650.00
	Total	$60,950.00

Note: Participant travel cost to and from Tucson seminar site are not included in this budget projection and are assumed to be provided in another funding arrangement.

Total $60,950.00

TIMING

In order to plan and develop a high-quality program for the training seminar, authorization to initiate this project is desired before the end of September 1983. It is also necessary to coordinate the seminar activity with the availability of the UA Oracle Conference Center. Based on an early October starting date RC and UA will be able to offer the initial training seminar contemplated by this proposal on November 13, 14, 15 and 16. The program would begin with an evening reception and introductory remarks on Sunday, November 13th followed by full working sessions on Monday and Tuesday (November 14 and 15). The program would conclude with a wrap-up session on Wednesday morning with certain other non-compulsory activities scheduled on the University of Arizona campus during the early afternoon of November 16th.

While scheduling of the initial conference may present some minor problems because of availability, further use of the center can be assured by SBA/DOC if a broader commitment to the seminar site is made.

UNIVERSITY OF ARIZONA
ORACLE CONFERENCE CENTER

Oracle Conference Center, a gift to the U of A Foundation from Motorola, Inc., is a unique and luxurious Executive Conference Center located 45 minutes from downtown Tucson. It is an ideal setting for groups of 5-50 persons wishing to meet in a spectacular and stimulating desert environment away from the stress and distractions of everyday life. It combines the finest in resort facilities with the luxury of a private estate producing the ultimate educational and recreational experience.

Location: 300 acres at the base of the Santa Catalina Mountains at a cool elevation of 3900'.

Accommodations: 24 spacious sleeping and living rooms, and executive suites, patios or balconies, individually controlled heating and cooling.

Food & Beverage: Facilities for 100 people. Individually tailored continental cuisine. Full service.

Meeting Rooms: 50-seat tiered amphitheatre, equipped with complete, fully integrated A/V equipment. 7 smaller adjacent professional conference rooms. Office for meeting planner's use.

Recreation: Beautiful 20'x40' pool, 2 lighted laykold-surface tennis courts, volleyball, card rooms, ping-pong, pool, music, jogging, hiking and bicycling. Horseback riding and golf privileges available with advance notice.

See attached Appendix A which further describes the Conference Center.

conference rooms. Office for meeting planner's use

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See Appendix B for biographical data on Research Corporation personnel who will be involved in the training seminars.