THE CANCER LETTER

Vol. 16 No. 2
Jan. 12, 1990

Price $195 Per Year US, Canada
$220 Per Year Elsewhere

P.O. Box 15189 Washington, D.C. 20003 Telephone 202-543-7665

1991 Bypass Budget Of $2.41 Billion Would Add Five Cancer Centers, Fund 50% Of R01s, P01s

"There is both good and bad news in cancer research. In a sense the good news and the bad are mixed. Currently, there are more opportunities than there are funds, more tasks than there are staff to perform them,more tantalizing research leads than there are resources to pursue them." NCI Director Samuel Broder struck that theme in

(Continued to page 2)

In Brief

Maryann Roper To Leave NCI, Seeking Job In Atlanta; William Roper Named CDC Head

MARYANN ROPER, NCI deputy director, will leave that position in mid to late March. Her husband, William Roper, has been appointed director of the Centers for Disease Control, which is headquartered in Atlanta. "That's too far to commute," Maryann Roper told **The Cancer Letter.** She said she will be looking for a job in Atlanta but had not yet made any enquiries. A medical oncologist with two years experience as NCI's second in command, she will talk with anyone who has appropriate job openings in the Atlanta area. Her phone number is 301/496-1927. William Roper headed the Health Care Financing Administration from 1986 to last February, when he joined the White House staff as a science adviser. He replaces James Mason, who left CDC to become assistant secretary of health. . . . **NORMAN ALTMAN** is the new director of the Sylvester Comprehensive Cancer Center in Miami. He replaces Gordon Zubrod, who retired last year. Nathaniel Berlin, who has been serving as acting director, returns to his previous position as deputy director. Altman had been associate director in charge of planning and facilities. Before that, he was director of the Papanicolaou Cancer Research Institute, which was merged with the Univ. of Miami Comprehensive Cancer Center and eventually renamed the Sylvester Comprehensive Cancer Center. . . . **UNIV. OF TEXAS** M.D. Anderson Cancer Center has received a $24 million bequest from the late C.P. Simpson and Anna Crouchet Simpson, who died earlier this year. The gift will be used for construction of a 463,000 square foot wing for patient care and research. . . . **JOHN SECRIST** has been named executive vice president, a new position at Southern Research Institute. He will also continue to function in his former position, that of director of organic chemistry research. . . . **CORRECTION:** Albert Dessureau is taking early retirement from the Columbia Univ. Comprehensive Cancer Center, where he has been deputy director, not the Dana-Farber Cancer Center as reported in the Dec. 8 issue of **The Cancer Letter.**

1991 Bypass Budget Would Fund More Cancer Centers, RO1s, Trainees

(Continued from page 1)

his message accompanying the FY 1991 NCI bypass budget, his first submission of the Congressionally mandated but often overlooked document.

NCI is the only government agency with the authority to go public with its own budget requests and send them directly to the President, bypassing NIH, HHS and the Office of Management & Budget. That authority was granted by the National Cancer Act of 1971.

The bypass budget provides a figure to Congress of NCI's actual needs as determined professionally, not politically. The document spells out the resources needed to build and maintain the most effective cancer research and control program possible.

The FY 1991 bypass request of $2.41 billion is $764 million more than the FY 1990 President's budget of $1.646 billion, and $746 million greater than the 1990 appropriation of $1.664 billion.

The bypass budget "expresses the best professional judgement of Institute staff, members of the National Cancer Advisory Board and cancer experts in many walks of life," Broder wrote. "It is seriously and thoughtfully conceived and the resources represent the needs of the Institute in precise terms. This document provides a working plan that, given funds, could be put in place in full with good effect, in pursuing the goals of cancer prevention, diagnosis, control and treatment."

Broder noted that, "As I pass my first year as director, it is clear that we are at a surpassingly important phase of this program because of the enormous progress which has been achieved." Because of that progress, Broder said, there are more opportunities than current budget levels will fund.

"The bypass budget represents an attempt to address those opportunities, to state the Institute's priorities and to point out challenges that we should meet to ensure progress in cancer research and the continuing development of new prevention and treatment advances," he wrote.

An increase of $132 million over the 1990 President's budget is needed merely to maintain the current level of services, Broder wrote. The figure includes current AIDS research. The bypass budget also includes an increase of $62.8 million to provide for expanded AIDS research.

President Bush is expected to submit his FY 1991 budget to Congress on Jan. 29.

The 1991 bypass budget makes these major assumptions and increase requests:

▸**Research Project Grants (R01s, P01s):** An increase of $178 million would fund 50 percent of competing research project grants and would fund these at full recommended levels.

▸**Cancer Centers:** An increase of $15.5 million would restore funds for the approximate 10 centers phased out in 1989 and 1990 which are expected to resubmit in 1991. Another $9.8 million would pay continuing centers at committed levels and competing centers at recommended levels. An increase of $10.8 million would fund approximately five new centers, and another $3 million would fund one or more minority demonstration centers, plus enhance the number of minority and over age 65 focused supplements. Total bypass request: $39.3 million.

▸**Clinical Cooperative Groups:** An increase of $21.7 million would expand number of studies as well as increase number of patients accrued under clinical trials; studies to focus on trials in suramin, adoptive immunotherapy/combination cytokine trials, etc. Another $11 million would expand minority and over age 65 participation in clinical trials. Total bypass request: $32.7 million.

▸**Cancer Prevention and Control:** An increase of nearly $14 million would expand smoking cessation efforts. Another $13.7 million would expand the planned nutrition laboratory and other chemoprevention/nutrition activities, including the National Supermarket Project. An increase of $8.4 million would augment prevention clinical trials network and patient accrual through CCOP expansion. Total bypass request: $80 million.

▸**Training:** An increase of $7.8 million would support approximately 1,600 National Research Service Awards trainees, which represents 50 percent of approved applications. "This level of training will reverse the downward trend of the last decade and

THE CANCER LETTER

Editor: **Jerry D. Boyd**
Associate Editors:
Kirsten B. Goldberg, Patricia Williams

Editorial/Subscriptions Office
PO Box 15189, Washington, DC 20003
Tel: (202) 543-7665 Fax: (202) 543-6879
ISSN 096-3917. Published 48 times a year by The Cancer Letter Inc., also publisher of The Clinical Cancer Letter and AIDS Update.

provide a more stable base of well trained scientists for future cancer research needs," the bypass document said.

▸**Supercomputer:** An increase of $40 million would provide for upgrading of the NCI supercomputer.

▸**Construction:** An increase of $45 million would provide funds for modernization and upgrading of extramural facilities. Another $15 million would provide funds for routine repair and maintenance as well as expanded facilities at the Frederick Cancer Research Facility. Total bypass request: $60 million.

▸**Other high priority projects:** An increase of $193.5 million.

The bypass document listed the following initiatives which would be supported under the bypass budget using a variety of mechanisms, including research project grants, RFAs, cancer centers, clinical cooperative groups, research and development contracts, manpower training, cancer prevention and control and intramural research:

Minority Initiatives:

<>Increase efforts to determine differences in cancer etiology and survival for minority populations--efforts to include blacks, Hispanics, Hawaiians and Native Americans.

<>Expand the number of historically black colleges and universities involved in prevention awareness efforts.

<>Increase support for NIH MARC program to attract students from minority institutions to pursue careers in the biomedical sciences.

Over 65 Focus:

<>Expand efforts to determine survival/mortality differentials in the over 65 populations compared with those under 65.

<>Provide supplements alone or through cofunding arrangements with the National Institute on Aging, in areas of expertise and opportunities relative to the prevention, early diagnosis and treatment for people over 65.

Diagnosis Program:

<>Increase efforts to expedite the transfer of new diagnostic approaches into clinical application.

Drug Development Activities:

<>Expand natural products chemistry research and screening efforts in preclinical drug development.

Vaccine Research:

<>New emphasis on cancer related vaccine research, viral research, specific antigens and markers for tumors, e.g., tumor infiltrating lymphocytes and the special cell surface epitopes that elicit such host defense cells.

Women's Cancer Detection Program:

<>Expand and enhance efficacy of outreach activities relative to mammography and pap test.

Information Dissemination:

<>Expand the Cancer Information Service to fully support 26 contracts and to provide each with health educators.

<>Augment patient education activities to emphasize projects for the elderly.

<>Increase the number of public service announcements, especially outreach programs aimed at minorities.

<>Increase methods to address information dissemination in the areas of cancer prevention, diagnosis and treatment where illiteracy is a factor.

Personnel resources is another area the bypass budget addresses. The bypass document notes that since the onset of AIDS, a number of key positions within NCI were redirected from cancer to AIDS, causing the staffing directly associated with cancer research to be reduced by nearly 20 percent.

Since 1984, the number of full time personnel or "full time equivalents" authorized for NCI has fallen from 2,416 to 2,154 for 1990.

"Today, the Institute will be operating with an overall 11 percent reduction or 262 fewer FTEs than were available in 1984 in order to achieve the 2,154 level of the 1990 President's budget. Hiring freezes and the use of replacement hiring ratios were put into effect to bring about this contraction. In so doing, NCI's ability to replace departing staff or to hire additional personnel has been severely curtailed," the bypass budget said.

The bypass budget requests funding for a total of 2,600 FTEs in FY 1991. This represents 184 additional FTEs over the 1984 level, "a modest rise when seen in the context of budget levels that have increased nearly 50 percent over the past six years," the bypass document said.

NCI and the National Cancer Program, Broder wrote in his introduction to the bypass budget, "constitute the nation's response to the major challenges of cancer--a million new cases of cancer diagnosed and the devastating loss of half a million lives each year. But these programs need constant maintenance and adjustment to remain in good working order.

"Research demands not only creative and skilled scientists, but also well equipped laboratories. We need to prevent erosion in our cancer centers, each of which is a major resource to the community it serves and to the nation. We must also find ways to support

more accrual to clinical trials. And more abstractly, but equally important, we need to train a new cadre of people to work in the laboratories and institutions that support research and research training.

"A sad truth is, that given only what is already know, we could save a great many, maybe up to half, of the lives now lost to cancer. It has been known for some time that smoking is one of the most serious causes of cancer that we face. The value of many preventive, diagnostic or treatment advances has also been well established. Nevertheless, many people, particularly members of minority groups and the poor, as well as many individuals over age 65, have not had full benefit from these advances.

"One of our primary goals always has been and always will be to ensure that the knowledge that we generate can benefit all Americans irrespective of any other consideration.

"We are proud of major treatment advances that have evolved from the NCI intramural and extramural research programs. Among these are seminal work in the biological response modifiers which have added a fourth modality to the traditional ones of surgery, radiation and chemotherapy. Recently two NCI scientists and one from the National Heart, Lung & Blood Institute made history in furthering an understanding of tumor infiltrating lymphocytes therapy by obtaining permission to make a landmark transfer of a foreign gene to serve as a marker for tracking TILs in the body.

"NCI research on these biological response modifiers has produced some very exciting early clinical results in otherwise untreatable cancers. The gene transfer research lays the ground work for future therapeutic methods.

Progress In Drug Development

"Development of drugs against cancer continues and a number of new drugs have reached clinical use. Suramin, a drug long used for treating parasitic infections, has been found effective in treating prostate cancer. It is the first drug to provide significant responses in prostate cancer that has progressed to a metastatic stage.

"Two drugs have reached Group C status which means they can be made available through physicians. They are deoxycoformycin and levamisole which is used with 5-fluorouracil following surgery for colon cancer. New Drug Approval status has been given to ifosphamide, flutamide and carboplatin. Ifosphamide is used to treat refractory metastatic testis cancer; flutamide has been effective in treating metastatic prostate cancer and carboplatin has produced significance refractory metastatic ovarian cancer.

"Ultimately, real gains in reducing cancer incidence and mortality will come from prevention. Until recently, efforts at prevention were aimed at eliminating exposure to carcinogens and the identification of early lesions. Now an increased understanding of the genetic events, broadly classified as initiation and promotion, that lead to cancer has allowed sophisticated interventions even after the stage for a tumor has been set by an inherited defect or exposure to carcinogenic substances.

"A number of chemopreventive clinical trials are underway that use various substances such as vitamins and micronutrients to attempt to inhibit the development of cancer. Other studies are focused on high risk individuals. One study, for instance, is testing the effect of betacarotene and retinol for asbestos workers. Another trial is evaluating the role of dietary fiber and calcium in individuals who have a high risk of developing colon cancer.

"New approaches are needed to tobacco control, as well as a mustering of the national will in the face of the fact that more than 25 years after the Surgeon General published his landmark report on smoking, 50 million people still smoke. We have 3,000 new smokers in the U.S. each day. We know, for instance, that if people didn't begin to smoke or stopped smoking, that cancer rates would be reduced in 20 years by almost a third. In the end, our ultimate success or failure in reducing morbidity and mortality from cancer will likely rest on one lifestyle change--reduction of smoking.

Importance Of Basic Research

"Fortunately, NCI's support of basic laboratory research, both intramurally and extramurally, has brought a bright prospect for the future. Cancer prevention, diagnosis and treatment in the future will be highly individualized, customized to a genetic and molecular level almost unimaginable today.

"Basic laboratory research has illuminated many of the mechanisms that cause tumor cells to become resistant to chemotherapy, such as the recent identification of a gene, the multi-drug resistant 1 (MDR1) which expresses a particular substance called P-170. Recently research at the NCI funded cancer center at the Univ. of Arizona demonstrated that in patients with refractory melanoma and non-Hodgkin's lymphoma, adding the drug Verapamil to the usual chemotherapy regimen reduced P-170 activity and lessened the drug resistance that had occurred.

"As a result of NCI supported research, surgery, radiation and chemotherapy will be refined and used in increasingly sophisticated ways with new combinations being evolved. Already progress is being

made in combining chemotherapy with new intensive radiation therapy. Two drugs, VP-16 and cisplatinum, together with a twice daily regimen of radiation therapy, has significantly improved the survival of patients with certain lung tumors that are still confined to the chest cavity, but not removable by surgery. The four year overall survival is nearly 60 percent, a very substantial improvement over other available therapies.

"NCI has recently received FDA approval to add the drug combination of levamisole plus 5-fluorouracil for adjuvant treatment of Duke's C colon cancer to its Group C/Treatment Investigational New Drug program. This extends the availability of a drug for treatment to individuals not enrolled in clinical trials while final FDA approval is ending. . . . Research has shown that this combination of drugs can significantly reduce the risk of cancer recurrence in these patients. There are currently more than 110,000 new cases of colon cancer a year in the U.S. and each year about 44,000 deaths from this cancer. These results and other treatment approaches suggest meaningful advances against this very common disease are possible.

"Although not the lead institute for AIDS research at NIH, NCI has an important role in AIDS drug and vaccine development and has continued to play a part in epidemiology and treatment research as well.

'Enlightened Commitment' To Cancer Treatment

"Since becoming NCI Director, it is obvious to me that progress in each area is due to a complex of factors, not the least of which is a strong and effective Institute. NCI is unified and diverse at the same time. The interconnections between divisions, between areas of study, between basic research and clinical application create an organic whole. None would be as productive without the other. In ways that are not always obvious, each needs the other for renewal and vitality.

"Basic laboratory research revitalizes our treatment approach, better drug development encourages early screening for early diagnosis, early screening yields better therapy, better therapy stimulates basic research--and so it goes.

"As a society we have made an enlightened commitment to the care and treatment of cancer patients and since the passage of the National Cancer Act in 1971, we have invested large sums of money in research to reduce the incidence, morbidity and mortality associated with cancer. Progress has been alternately encouraging and frustrating. There is no question that much good has come from this investment.

"Not only has major progress been made in understanding and treating some cancers, but insights into cancer biology have spun off to make advances in other areas of biomedical research.

"Some of the new approaches to using the body's own immune system to fight illness were only recently the stuff of science fiction. Researchers have gained insights into biological processes at the most minute molecular level of the cell. Others have established a network of cancer centers and community oncology groups which stretch across the nation and can quickly bring the latest advances to the public.

"A major communications network then reaches out to the professional and lay public through the Cancer Information Service and the Physician's Data Query system.

"The National Cancer Institute is a collection of scholars and as such can generate knowledge. This in turn stimulates the development of new improved technology. We understand that knowledge and improved technology benefits the people only when it reaches them. And then once it is available, it benefits them only when it is used. Still the primary commitment is to see that these advances reach all Americans, black and white, rich and poor, old and young, regardless of where they live."

The bypass budget document includes progress reports and plans for new research each of 11 research programs--epidemiology, chemical and physical carcinogenesis, biological carcinogenesis, nutrition, tumor biology, immunology, diagnostic research, preclinical treatment, clinical treatment, rehabilitation research and information dissemination.

It also includes reports on progress and needs involving cancer centers, manpower development, construction and cancer prevention and control. A report on "Special Areas of Emphasis" describes plans for research on minorities and persons over age 65.

In addition is a section on AIDS which describes NCI's work in that area and plans for future research.

An appendix includes an NCI organization chart, a description of the NCI supported network of cancer centers, clinical cooperative groups, cooperative group outreach program affiliates, CCOPS and Cancer Information Service offices, and current memberships of the President's Cancer Panel, the National Cancer Advisory Board and the four program division Boards of Scientific Counselors.

Copies of the bypass budget, 294 pages softbound, are available at no charge from the NCI Financial Management Branch, NIH Bldg 31 Rm 11A18, Bethesda, MD 20892. The phone number is 301/496-5803.

Conflict Of Interest Guidelines On Hold Pending Formal Rulemaking

Proposed NIH guidelines on conflict of interest have been put on hold by HHS Secretary Louis Sullivan, with future revisions to be made under formal rulemaking procedures.

Responding to sharp criticism of the proposal by a number of investigators and constituency groups, including top NCI officials, Sullivan issued a Dec. 29 statement explaining that he has asked NIH to rework its proposed guidelines for conflict of interest by grantees.

Sullivan specifically asked NIH to submit "options for addressing potential conflicts of interest that properly treat potential abuse while keeping the research process free of unnecessary burdens and disincentives."

The HHS secretary stated that he believes "any change in this important area should undergo the fullest consideration and comment."

Any future changes in guidelines on conflict of interest will go through a formal regulatory procedure, "involving at the minimum the publication of a Notice of Proposed Rulemaking, a specified comment period, and publication of Final Rules with additional opportunity for comment before the rules become effective," he said.

Originally published in the Sept. 15 issue of the NIH Guide to Grants & Contracts, the proposed guidelines would prohibit grantees from having personal holdings or options in a company "that would be affected by the outcome of the research or that produces a product or equipment being evaluated in the research project."

The prohibition would apply to any "investigator, key employee, consultant, or other persons with primary research, management, advisory, supervisory, or purchase authorization responsibilities, or their spouses, dependent children, or other dependents."

The proposal received widespread criticism from industry and many investigators, some of whom warned it could be disastrous for collaborative research efforts in cancer and other disciplines.

Last October, NCI Director Samuel Broder, Div. of Cancer Treatment Director Bruce Chabner and Div. of Cancer Etiology Director Richard Adamson said they were concerned that the proposed guidelines would hinder cooperation between NCI and industry. That cooperation has been crucial for biotechnology research, they said.

"I have concerns that we could be building a wall between the private sector and public sector funding mechanisms, when in the past eight years we have been dismantling that wall," Broder said (**The Cancer Letter,** Nov. 10, 1989).

Sullivan's statement acknowledged the concerns. "While there is a crucial need to protect against possible abuses in the research system, it is also important that we not unnecessarily jeopardize the international leadership position we have built up through years of cooperative government and private investment," he said.

RFPs Available

Requests for proposals described here pertain to contracts planned for award by the National Cancer Institute unless otherwise noted. NCI listings will show the phone number of the Contracting Officer or Contract Specialist who will respond to questions. Address requests for NCI RFPs, citing the RFP number, to the individual named, the Executive Plaza South room number shown, National Cancer Institute, Bethesda MD 20892. Proposals may be hand delivered to the Executive Plaza South Building, 6130 Executive Blvd., Rockville MD. RFP announcements from other agencies will include the complete mailing address at the end of each.

RFP NCI-CN-05250-20

Title: Organic chemical and biochemical synthesis and pharmacological formulation of chemopreventive agents

Deadline: Approximately Feb. 16

Master agreements will be awarded for contractors capable of operating a laboratory for synthesis and/or formulation of chemopreventive agents according to the four task areas described as follows:

Task 1: Synthesis of bulk quantities of chemopreventive agents under GMP conditions for clinical evaluation.

Task 2: Synthesis and formulation of chemopreventive agents for in vitro and in vivo screening, efficacy and safety evaluations.

Task 3: Production of experimental and bulk GMP formulations and drug delivery systems for chemopreventive agents.

Task 4: Preparation of radiolabeled chemopreventive agents for preclinical and clinical studies.

Offerors must submit a separate proposal for each task area. Offerors can submit proposals for any or all of the above task areas. All master agreement holders in each pool will be eligible to compete for master agreement orders issued during the period of performance.

The purpose of this acquisition is to qualify additional contractors to an existing pool of master agreement holders. Currently there is only one qualified contractor in the pool. The period of performance of the master agreement pool runs through January 1995, which would be the expiration date for the new master agreement holders, too. It is estimated that up to four task orders per year will be awarded in each task area.

Contracting Officer: Charles Lerner
RCB Executive Plaza South Rm 635
301/496-8603

Program Announcement

NCI Outstanding Investigator Award

Application Receipt Date: April 2

NCI will continue to accept new applications for the Outstanding Investigator Grant, as well as competing continuation applications from currently funded OIG recipients in the fifth year

of the initial award period. The purpose of the OIG is to encourage investigators to continue or embark on projects of unusual potential in cancer research. Emphasis will be placed on evidence of recent substantive contributions (i.e., seminal ideas and innovative approaches to resistent problems) and the potential for continued work of high caliber.

Special features of the OIG include 1) seven year project periods for new and competing continuation awards and 2) alleviation of the need to manage more than one grant instrument through consolidation of the OIG principal investigator's current cancer related peer review support.

Applications may be submitted only by domestic institutions on behalf of investigators who have recently demonstrated outstanding research productivity for at least five years. There are no age restrictions. Only U.S. citizens, nationals or permanent residents are eligible for this grant.

Applications will be accepted by NCI only when they are cancer related as defined by the Div. of Research Grants grant referral guidelines. Investigators whose current research support is derived predominantly from sources other than NCI may not be eligible and are encouraged to discuss their research objectives with appropriate NCI officials before applying.

The OIG PI is required to commit 75 percent of his/her time/effort to the OIG project, and the institution sponsoring the OIG applications is required to commit itself to providing 25 percent of the investigator's salary support.

Applications which do not meet all of the above eligibility criteria or which have not had approval from NCI for exceptions to the above criteria will be returned to the applicant.

How to apply: The receipt date for all OIG applications, including competing continuation applications, will be April 2 instead of June 15 of each year. They will be processed for review at the earliest possible meeting of the National Cancer Advisory Board.

Application for this award should be made on form PHS 398 in accordance with instructions in this announcement. These application forms are available in the business or contracts offices at most academic or research institutions, or from Div. of Research Grants, NIH, Westwood Bldg. Rm 449, 5333 Westbard Ave., Bethesda, MD 20892.

The title, "NCI Outstanding Investigator Grants," should be typed in section 2 on the first page of the application. A letter indicating clear and continuing institutional commitment to the applicant must either accompany the application or be received separately before NCI will begin the initial review process.

For further information or for copies of the full announcement, contact Barbara Bynum, Director, Div. of Extramural Activities, NCI, Bldg 31 Rm 10A03, Bethesda, MD 20892, phone 301/496-5147.

RFAs Available

RFA 90-CA-06
Title: Synthesis of compounds for boron neutron capture therapy
Letter of Intent Receipt Date: March 1
Application Receipt Date: April 4

The Radiation Research Program in NCI's Div. of Cancer Treatment announces the availability of an RFA to synthesize compounds for the clinical application of boron neutron capture therapy.

BNCT is a potential treatment modality for cancerous tumors, based on the nuclear reaction that occurs when a nonradioactive isotope of boron is irradiated and absorbs low energy neutrons. The unstable boron that is formed undergoes instantaneous nuclear fission to yield a lithium nucleus and a highly energetic alpha particle. Theoretically, a single alpha particle can kill a cancer cell if part of its energy is released in the nucleus. The rationale for using BNCT is to exploit the short range of the alpha particle. If boron atoms could be selectively concentrated in the tumor, then the subsequent irradiation of the tumor would minimize the radiation dose to the normal tissue.

The overall goal of this solicitation is to synthesize boron containing compounds which have a high probability of preferentially localizing in tumor cells rather than normal tissues and/or are rapidly cleared from normal tissues and blood but retained by tumor tissues. These properties would produce high tumor to normal tissue ratios and high tumor to blood ratios, characteristics that would make these compounds ideal for use in BNCT. Current knowledge of tumor receptors, uptake mechanisms, etc., make it realistic to consider the development and synthesis of site specific compounds for BNCT. Therefore, consideration should be given to coupling boron to compounds which have a know affinity to tumors. Multiple discipline approaches may be needed to achieve the research goals of this solicitation.

Support of these awards resulting from this RFA will be through the NIH grant-in-aid (RO1). This RFA is a one time solicitation. Approximately $475,000 in total costs per year for five years will be committed to specifically fund applications which are submitted in response to this RFA. It is anticipated that three to four awards will be made, depending on the receipt of a sufficient number of applications of high scientific merit. The total project period for applications submitted in response to the present RFA should not exceed five years. The earliest feasible start date for the initial awards will be April 1, 1991. The award of grants pursuant to this RFA is also contingent on the availability of funds for this purpose.

Profit and nonprofit, domestic and foreign organizations are eligible to apply unless specifically excluded by legislation. All applicants need to have the personnel, equipment and facilities to synthesize and characterize the compounds requested. Compounds submitted have to be single chemical entities.

Written or telephone inquiries concerning the objectives and scope of this RFA are encouraged, as are inquiries about whether or not specific proposed research would be responsive. They should be directed to the Program Director, Thomas Strike, Radiation Research Program, NCI, 9000 Rockville Pike, EPN Rm 800, Bethesda, MD 20892, phone 301/496-9360.

RFA 90-CA-04
Title: Prescribe for Health
Letter of Intent Receipt Date: Feb. 9
Application Receipt Date: June 13

NCI's Div. of Cancer Prevention & Control invites applications for intervention studies to accelerate the diffusion of the NCI Working Guidelines for Early Cancer Detection into primary care medical practices through intermediary organizations. An intermediary organization is defined as an organization employing, reimbursing, training, licensing, and/or certifying physicians in primary care practice, or an established professional association of physicians.

The goal of this RFA is to demonstrate that intermediary organizations can effectively diffuse early cancer detection regimens to primary care medical practices. The specific objectives are:

- To test the effectiveness of intermediary organizations in accelerating and increasing the adoption of early cancer detection regimens by primary care practices.
- To test the effectiveness of these interventions in improving the maintenance of early cancer detection regimens by primary care practices.
- To test the effectiveness of these interventions in improving

the quality of implementation of early cancer detection regimens by primary care physicians.

Applicants will propose interventions that build creatively upon the existing research base in physician behavior change, including consideration of barriers to the delivery of preventive services. At least four early detection guidelines are to be addressed. Priority will be given to projects that show potential for being sustainable beyond the period of NCI funding. Evidence of the commitment of the intermediary organization to the research project and the organizations's potential for influencing the practices of affiliated primary care physicians is strongly recommended.

Measuring changes in the performance of physicians in an important challenge in this program. Applicants should provide for a sample size of primary care practices adequate to detect desired behavioral changes over time. Randomization of primary care practices to intervention and control groups is the preferred design, although other well justified designs will be considered. Collaborative arrangements are encouraged. The applicant should document the commitment of primary care practices to participate in this project, including practices serving low income and minority populations.

This RFA will use the NIH RO1 mechanism. Approximately $1.2 million in total costs per year for four years will be committed to specifically fund applications which are submitted in response to this RFA. A total of three or more awards may be made. The project time period should not exceed four years. The earliest feasible start date for the initial awards will be Dec. 1, 1990.

Written or telephone inquiries concerning the objectives and scope of this RFA or inquiries about whether specific proposed research would be responsive are encouraged.

A copy of the complete RFA describing the research goals and scope, the review criteria and the method of applying can be obtained by contacting Suzanne Haynes, Program Director, Chief, Health Promotion Sciences Branch, EPN Bldg., Rm 241, 9000 Rockville Pike, Bethesda, MD 20892, phone 301/496-0273; or Charles Smart, Chief, Early Detection Branch, EPN Bldg., Rm 305, 9000 Rockville Pike, Bethesda, MD 20892, phone 301/496-8544.

RFA 90-CA-07

Title: Planning and development for proton therapy research and treatment facilities

Letter of Intent Receipt Date: Feb. 22

Application Receipt Date: March 22

The Radiation Research Program of NCI's Div. of Cancer Treatment invites grant applications from interested investigators for planning and development for proton therapy research and treatment facilities.

The potential advantage of proton therapy over x-ray therapy was hypothesized in 1947. Since then, approximately 7,500 patients have been treated worldwide. The entire world experience with protons has confirmed the expectation that for appropriately selected tumor sites, higher doses to a target volume and smaller treatment volumes can be achieved with protons than with x-rays. Available data indicate that this has resulted in a higher tumor control frequency, comparable or less morbidity and no increase in marginal failures. There are many years of worthwhile research yet to be done to determine the full role of proton radiation therapy. This translates into a need for a small number (two to three) of state of the art, hospital optimized, dedicated proton research and treatment facilities in the U.S. In recognition of this fact, Congress has provided in the 1990 NCI budget, $1.5 million for planning and development of such facilities.

The ultimate goal of this solicitation is to stimulate a process of planning and development which, on the scale of approximately five years, will result in the establishment of a small number of proton beam research and treatment centers, funded primarily from private sources. The immediate goal of this solicitation is to support one to three Exploratory/Developmental grants (R21's) to conduct planning and development activities for proton therapy research and treatment centers.

This RFA will be a one time solicitation. However, should NCI determine that there is a sufficient continuing program need, a request for renewal applications will be announced. Only recipients of awards under this RFA will be eligible to apply.

Approximately $1.5 million in total costs for one year will be committed to specifically fund applications which are submitted in response to this RFA. It is anticipated that one to three awards will be made. In order to preserve the intent of Congress, no individual award will exceed $750,000 total cost. The total project period for applications should not exceed one year. The earliest feasible start date for the awards will be Sept. 15, 1990.

Prospective applicants are asked to submit by Feb. 22 a letter of intent that includes a descriptive title of proposed planning and development effort, the name and address of the principal investigator, the names of other key personnel, the participating institutions and the number and title of the RFA in response to which the application is being submitted. Although the letter of intent is important to NCI staff for planning purposes, it is not required, is not binding and does not enter into the review of the subsequent application. The letter of intent should be sent to the address below.

Written or telephone inquiries concerning the objective or scope of this RFA are encouraged. A copy of the complete RFA describing research goals and scope, the review criteria and method of applying can be obtained from Francis Mahoney, Radiation Research Program, Div. of Cancer Treatment, NCI EPN 800, Bethesda, MD 20892, phone 301/496-9360.

Frozen Serum Panels Available

NCI is interested in assisting researchers to evaluate serum assays that are potentially useful in cancer diagnosis, prognosis and the monitoring of therapy and tumor recurrence.

Coded panels of pretreatment frozen sera from patients with a variety of neoplasms or benign diseases and from healthy controls can be provided to investigators who have promising assays. The panels are prepared from a Diagnosis Serum Bank established by the Diagnosis Research Program, Div. of Cancer Biology & Diagnosis.

The bank contains over 500,000 specimens in 1 ml aliquots stored at minus 70 degrees Celsius. Requests for panels should include preliminary data documenting a useful test. Investigators must agree to accept specimens with only a code number and to report the results of their analyses to NCI; the panel code will be provided once the results have been received by NCI. The panels are provided free of charge to investigators in the U.S. Foreign investigators are required to pay shipping charges.

Requests for coded serum panels should be sent to Project Officer, Diagnosis Serum Bank, Diagnosis Research Program/DCBD, NCI, Executive Plaza South Rm 638, 6120 Executive Blvd., Rockville, MD 20892. Facsimile number 301/496-8656.

NCI Contract Awards

Title: Office of Cancer Communications program support
Contractor: Prospect Associates Inc., Rockville, MD; $13,717,648

Title: Support of biostatistical and analytical studies
Contractor: Westat Inc., Rockville, MD; $5,201,530