THE CANCER LETTER

Vol. 17 No. 19
May 10, 1991

Price $205 Per Year US, Canada.
$230 Per Year Elsewhere

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

Draft FY 1993 Bypass Budget Seeks $2.7 Billion, Stabilization Of Groups, Centers, And Prevention

NCI's FY 1993 bypass budget calls for $2.745 billion to stabilize those mechanisms that have shown significant declines in constant dollars since 1980--cooperative groups, prevention and control, cancer centers--and fund expanded initiatives in several areas. The National Cancer Advisory Board last week took its first look at the draft FY93 bypass budget, NCI's

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In Brief

Balch, Morton Head SSO; Schantz, Rosen Move To MSK; Old Directs US Branch Of Ludwig Inst.

SOCIETY OF SURGICAL ONCOLOGY elected the following new officers for 1991-92 at its recent annual meeting: president, **Charles Balch**, M.D. Anderson; president-elect, **Donald Morton,** UCLA Medical Center; vice president, **Samuel Wells,** Washington Univ.; secretary, **Bernard Gardner,** Hackensack Medical Center; treasurer, **Kirby Bland,** Univ. of Florida College of Medicine; chairman, executive council, **Alfred Ketcham,** Univ. of Miami Medical School. . . . **MEMORIAL SLOAN-KETTERING** Cancer Center has named **Stimson Schantz** associate attending surgeon, head & neck service, Dept. of Surgery. He was formerly with MD Anderson Cancer Center. **Neal Rosen** was named associate attending physician in the Dept. of Medicine. He was formerly a senior investigator in the Medicine Branch at NCI. . . . **LLOYD OLD** has been named director of the newly established U.S. branch of the Ludwig Institute for Cancer Research, located at Memorial Sloan-Kettering Cancer Center. . . . **MARK WALLACK,** of Mount Sinai Hospital in Miami Beach, was named chief of surgery at St. Vincent Hospital in New York. . . . **ROBERT WOOD JOHNSON** Medical School of the Univ. of Medicine & Dentistry of New Jersey, in collaboration with the New Brunswick Affiliated Hospitals, has begun a search for the director of the newly established Cancer Institute of New Jersey. The school is seeking an outstanding academic physician with demonstrated administrative skills who has made a significant contribution to cancer research or treatment. Interested candidates may forward their CV to Dr. Kenneth Cummings, search committee chairman, Cancer Institute of New Jersey, 100 Albany St. Suite 201, New Brunswick, NJ 08901. . . . **EVE CURIE,** daughter of Marie Curie, was awarded the American Radium Society 75th anniversary bronze medal at the ARS annual meeting last week in Montreal. Curie wrote the 1937 biography of her late mother, titled "Marie Curie." . . . **STEPHEN ROSENBERG,** NCI Surgery Branch chief, received the Lifetime Science Award from the Institute for Advanced Studies in Immunology & Aging.

Draft FY93 Bypass Budget Seeks Stabilization Of Groups, Centers

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professional needs budget that by law must be submitted directly to the President each year.

The bypass budget would fund 50 percent of competing research project grants; approximately 3,925 noncompeting and competing grants would be funded, an increase of about 750 over the President's FY92 budget.

The budget of the clinical cooperative groups would be increased by 60 percent to permit accelerated accrual of patients into high priority trials and the initiation of additional clinical trials.

Funding for intramural research would be increased by 30 percent. (See chart on page 3 for FY93 bypass figures compared to the estimated FY92 "Congressional justification," the amounts in the President's budget which the institute defended in Congressional hearings.)

Following are "tentative program assumptions" for the FY93 bypass budget:

▶**Cancer prevention and control**--New and expanded chemoprevention and cancer vaccine activities; Community Clinical Oncology Program; nutrition and dietary effects including the elderly, poverty issues, including the underserved and rural populations; special programs for avoidable mortality in high risk young people; and participation in the large scale NIH wide study on women's health.

Expansion of nearly $115 million would bring prevention and control to 7.5 percent of the NCI budget.

▶**Clinical trials**--Expand patient accrual with a focus on lung, breast, colon, prostate cancer, women's health and underserved populations; initiate novel prevention trials for breast cancer; accelerate new clinical trials involving natural products and biologic response modifiers; expand research in gene therapy; and taxol studies alone and in combination and explore analogues of taxol.

▶**Cancer centers**--Expand outreach initiatives and increase developmental research; award new centers for minorities and geographically underserved populations and establish Specialized Programs of Research Excellence through the P50 mechanism to address certain systems (e.g., breast and prostate) with novel interdisciplinary approaches (**The Cancer Letter,** April 19).

The FY93 draft bypass budget would fund 71 centers, an increase of 16 over the 1992 level that is estimated under the Congressional justification. Centers receiving phase out funds would be restored to recommended funding levels.

▶**Cancer and poverty**--Additional emphasis in smoking and tobacco prevention among black Americans, hispanic and Asian Americans; increased surveillance of cancer among rural populations; improve technology transfer to rural and impoverished populations. Expand the Summer Enrichment Program.

▶**Construction**--Major initiative for renovation, modernization, and construction of extramural cancer research facilities throughout the nation--an increase of $54 million. The bypass also calls for Congress to provide NCI with a two year obligational authority.

▶**Information dissemination**--Expand the Cancer Information Service, and accelerate novel information dissemination in Eastern Europe and developing countries. Greater emphasis on underserved populations, including hispanics, blacks, low literacy, poverty, and the aged populations.

▶**Rehabilitation and pain research**--Expanded activities to improve the quality of survival, including organ and limb sparing. Increased emphasis on the behavioral psychosocial aspects of cancer rehabilitation.

▶**Over 65 population**--Accelerated efforts to determine survival/mortality differentials in the over 65 population compared with those under 65.

▶**Natural products**--An emphasis on new natural products acquisition with a consideration of issues of the ecology and biodiversity.

▶**Gene therapy**--Expansion of new technology for gene insertion and expression in vivo.

▶**Women's health**--Basic research in gender differences for cancer prevention, diagnosis, and

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Editorial/Subscriptions Office
PO Box 15189, Washington, DC 20003
Tel: (202) 543-7665 Fax: (202) 543-6879
Subscription rate $205 per year North America, $230 elsewhere. ISSN 0096-3917. Published 48 times a year by The Cancer Letter Inc., also publisher of The Clinical Cancer Letter and AIDS Update.

NCI By Mechanism (Dollars in Thousands)

Includes AIDS	1992 Congressional Justification	1993 By-Pass Budget	1992/1993 Amount	1992/1993 Percent
Research Project Grants	$846,147	$1,148,860	$302,713	35.8%
Cancer Centers	112,772	179,940	67,168	59.6
Other:				
Research Career Program	8,781	19,451	10,670	121.5
Cancer Education Program	3,115	11,161	8,046	258.3
Clinical Cooperative Groups	66,114	106,730	40,616	61.4
Other Grants	11,282	32,224	20,942	185.6
Subtotal, Grants	1,048,211	1,498,366	450,155	42.9
National Research Service Awards	37,670	54,300	16,630	44.1
R&D Contracts	191,395	333,775	142,380	74.4
Intramural Research	348,873	451,466	102,593	29.4
Research Management & Support	92,295	116,270	23,975	26.0
Cancer Prevention & Control	89,786	204,663	114,877	127.9
Construction	2,000	86,160	84,160	
Total, NCI	1,810,230	2,745,000	934,770	51.6%

treatment. Population based and multicenter case control study focusing on newly diagnosed cases of breast cancer in women less than 45 years of age. Surrogate marker research for clinical trails endpoints. Expansion of breast and cervical cancer activities. Explore refinements and technical innovations for surgery and radiation of primary tumors.

▶**Prostate cancer**--Further identification of those factors that influence onset, detection, and management.

▶**Proton beam and heavy particle therapy**--Support proton beam therapy initiatives as a followup to the award of planning grants in 1990. Expand novel research in neutrons, alpha particles, etc.

▶**International activities**--Expansion of bilateral agreements, conferences, and training exchanges with Eastern Europe and South America.

▶**AIDS**--Research into pathogenesis, diagnosis, and treatment of AIDS related cancers. The bypass budget would provide $37 million in AIDS related research project grants, and $5 million would go to cancer centers for AIDS related activities. Clinical cooperative groups would receive $3 million. The total NCI amount allocated for AIDS in the FY92 budget is estimated at $169 million; the FY93 bypass calls for a total of $217.5 million.

The draft FY93 bypass budget also proposes to expand support for physicians and surgeons in basic science and clinical oncology (K08, K011 and K12), and support nearly 2,000 trainees.

Deborah Mayer Appointed To NCAB; Cancer Panel Plans Meeting July 9

The White House has appointed Deborah Mayer a member of the National Cancer Advisory Board. She is the first oncology nurse to hold a position on the board.

Mayer is a lecturer in oncology at the Massachusetts General Hospital Institutes of Health Professions in Boston and a past president of the Oncology Nursing Society (1987-89). She has been in oncology since 1975.

Mayer established the first Biological Response Modifiers Clinical Oncology Research Unit at Frederick Memorial Hospital in Frederick, MD, and directed this unit from 1981-83.

Mayer succeeds Gertrude Elion. The seat of Lou Gerstner, who left the board two years ago, remains to be filled.

President's Cancer Panel, newly reconstituted with Harold Freeman as chairman, Nancy Brinker, and Geza Jako, will discuss cancer and poverty on July 9, at Wilson Hall in NIH Bldg. 1. HHS Secretary Louis Sullivan is scheduled to address the panel. The panel also plans to hold a meeting later this year on breast cancer.

Nancy Brinker will continue to serve on the NCAB until her replacement is appointed by the President.

Research On Metastasis: An Example Of Progress Under 1971 Cancer Act

When the National Cancer Act was signed in 1971, Lance Liotta was choosing the research topic for his PhD as part of an MD/PhD program at Case Western Reserve Univ. Liotta chose the topic of metastasis.

Now, 20 years later and chief of the Laboratory of Pathology in NCI's Div. of Cancer Biology, Diagnosis & Centers, Liotta can look back at the tremendous effect the passage of the act had on providing funding and stimulating research in his chosen field. That is exactly what Liotta did in testimony before the Senate Labor & Human Resources Committee at a hearing April 25 on the 20th anniversary of the National Cancer Act.

His testimony provides a succinct view of the field over the last 20 years and where the research now stands.

"In 1971 the clinical significance of metastasis was appreciated, but very little was known about what caused cancer cells to metastasize," Liotta said. "Progress in this field had been hindered by the sheer complexity of the process. At first there was no way to study mechanisms of metastasis in the test tube. To tackle the problem, investigators have separated invasion and metastasis into a series of defined sequential steps, and focused on one step at a time.

"For each step, new experimental models had to be developed, and over the years, a combined effort using the disciplines of cell biology, molecular genetics, and protein chemistry has now resulted in an explosion of new information. General themes have emerged that are yielding viable new strategies for prognosis and therapy of human cancer.

"Let me step you through some of the actual problem solving and unexpected connections which the scientists in my lab have gone through in our search to understand metastasis. This process is similar to what goes on in any cancer research group and illustrates why it has taken 20 years to get to this point.

"Cracking the metastasis problem into defined steps was the key to progress in our field. It worked as follows. First we identified a particular step, such as invasion of tumor cells through the blood vessel wall. Next we designed an experiment to study this step on the lab bench. In this case, we needed an artificial blood vessel so that we could combine it with cancer cells to analyze how they invaded this barrier. But back then there were no artificial blood vessel systems, so we had to create one.

"We began by choosing the materials. Small blood vessels have a tough sheath around the outside called a basement membrane. Understanding how tumor cells invaded the basement membrane seemed important because these same structures were present throughout the body. Whenever a tumor cell invaded any body tissue it had to get through the local basement membrane. Unfortunately, the composition of this barrier seemed to be unknown.

"Nicholas Kefalides in Philadelphia had just identified a new type of protein in the base membrane barrier called Type IV collagen. Over the phone he told me how to isolate some of this material. We put tumor cells on the isolated basement membrane and found that they rapidly attached to it, then destroyed it, and then migrated into it. It turned out that the tumor cells produce destructive enzymes which break a hole in the basement membrane. If these enzymes caused tumor cells to invade, then blocking the enzymes could potentially block cancer cell invasion.

"In 1976, I came to NCI as a resident in pathology. I chose NIH because of its profound reputation for the training of medical scientists, and also because it was the only place I could do research and be a pathology resident at the same time. During my residence, I continued some of my research work in the Dental Institute across the street. Here, George Martin was just beginning to isolate basement membrane proteins. Splitting my time between my clinical duties and research in Martin's lab, we purified the new tumor cell enzyme which degraded basement membrane type IV collagen. After my residency, due to the vision of Alan Rabson, the division director [Div. of Cancer Biology, Diagnosis & Centers], we assembled a group of dedicated scientists at NCI devoted to the study of metastasis. We have made significant headway on this aspect of the cancer problem.

"Let me tell you about three specific discoveries which will bring us to the present. They each illustrate how a new insight can come from an unexpected direction.

"A persistent problem in purifying the tumor cell enzyme which destroyed the basement membrane was an irritating unknown protein which kept sticking to the enzyme. In 1987, a new scientist named Bill Stetler-Stevenson in our group again encountered this same sticky protein getting in the way. This time we decided to find out what it was. Bill isolated the new protein, called TIMP-2, and we found that it was a powerful enzyme inhibitor. We then added TIMP-2 to tumor cells, and it abolished their ability to invade.

"TIMP-2 itself, or a drug that acts like TIMP-2, now constitutes a new therapeutic strategy. The unique

aspect of this strategy is that it is aimed at directly blocking invasion rather than tumor growth. An anti-invasion drug could have a number of uses, including blocking tumors before they invade and spread. We also believe that TIMP-2 can be useful for the treatment of bone metastasis, a source of pain and loss of function for patients with such cancers as breast and prostate carcinoma.

"A second insight into metastasis came from trying to understand what genes regulate metastasis. We thought perhaps this could explain why one patient's tumor is very aggressive and metastatic, which another patient's tumor grows to a large size and never metastasizes. Pat Steeg, in our group, took on this problem and utilized another important tool in metastasis research developed by Isiah Fidler and Garth Nicolson. These were mouse tumor cells which differed in metastatic aggressiveness.

"Pat screened hundreds of thousands of genes to see which ones were different between metastatic and nonmetastatic mouse tumor cells. At the conclusion of her long search she was depressed. 'I found a gene that was different in the two groups, but it went down in the metastatic tumor cells, not up as I had expected.' But our disappointment turned to hope as we heard about the recent work of other scientists who reported 'suppressor genes' which play a role in blocking cancer growth. Perhaps the new gene, which Pat called NM23, normally inhibited metastasis. Perhaps when it was lost, metastasis was unleashed.

"Subsequent studies have supported this exciting idea. In human breast cancer loss of NM23 function is associated with rapid patient death compared to patients with high levels of NM23, who survive much longer. Furthermore, we have put the missing NM23 gene back into metastatic mouse tumor cells--and this blocked metastasis. But how does NM23 work? One important clue has come from the surprising result of a computer search I did comparing NM23 to proteins discovered by other scientists. Human NM23 is virtually identical to a protein called Awd in the fruit fly, studied by Allen Shearn at Johns Hopkins. In the fruit fly, abnormalities in Awd/NM23 are associated with derangements in the shape and structure of tissues and organs. This implies that the normal function of NM23 could be to regulate correct shape and pattern formation in tissues. We think this regulation is lost in metastatic tumors. Understanding how NM23 functions in the cell could potentially lead to new anticancer drugs which mimic the effect of NM23.

"On the immediate horizon we foresee important uses of NM23 as a prognostic marker. One application is node negative breast cancer. We know that 25 percent of these patients still harbor metastasis that are too small to be detected by conventional methods. If left untreated, these metastasis will ultimately manifest themselves and kill the patient. Measurement of NM23 might be an approach to selectively identify these patients so that they can be treated immediately.

"The third example is a new anticancer drug we identified based on analysis of what makes a cancer cell move. Crawling of tumor cells is necessary for invasion. In 1985 we found that inserting one type of oncogene, called ras, into benign cells made them crawl at a fast rate. Analyzing the new cells, we found that a specific biochemical pathway had been turned up in these cells, like turning up the volume on a radio. This pathway seemed to regulate the response of cancer cells to some signals coming in from the outside. We thought that if we could identify a drug which blocked this pathway we could use it to analyze cancer invasion. We therefore began to screen for drugs using this new approach.

"We heard about a research drug developed to treat parasites in chickens. The drug was never used. Its mechanism of action was unclear, but there was a hint that this drug worked near the pathway in which we were interested. We obtained some of this drug and found that it was an excellent inhibitor in our system. But, more surprisingly, this drug not only blocked tumor cell invasion, it also inhibited tumor cell growth.

"We promptly filed a government patent for the use of this drug to treat cancer. Over the last several years this drug has successfully arrested the growth of more than 20 different types of human cancer cells including breast, colon, prostate and ovarian carcinoma, and melanoma. We have named the drug CAI (NCI No. NSC 609974D). CAI, administered orally to animals, will stop or reverse the growth of transplanted human cancer cells. Growth of both the primary tumor and the metastasis are arrested. In addition, CAI seems to have low toxicity.

"Elise Kohn, a clinical scientist working in our group, is bringing this drug to clinical trials. This process has involved the expertise of a team of NCI pharmacologists, toxicologists, oncologists, as well as basic research scientists. CAI constitutes a completely new approach to cancer treatment. Phase 1 clinical trials should begin this fall.

"We now have in our hands some of the genes and proteins that actually regulate the cancer process. With the help of these tools we will undoubtedly be able to generate a host of new approaches to attack cancer."

Applications Due Sept. 1 For NCI Cancer Prevention Fellowships

NCI's Div. of Cancer Prevention & Control is accepting applications for the Cancer Prevention Fellowship Program. The purpose of the program is to attract individuals from many health science disciplines into the field of cancer prevention and control.

The program provides for:

Master of public health training; participation in the DCPC Cancer Prevention and Control Academic Course; working at NCI directly with individual preceptors on cancer prevention and control programs at other institutions; and field assignments in cancer prevention and control programs at other institutions.

A new feature of the program is the master of public health training at accredited schools of public health. Master of public health training is available during the first year for fellows accepted into the program.

Independent research at NCI will comprise the two pay-back years following the MPH.

Funding permitted, as many as 10 fellows will be accepted for up to three years of training, beginning July 1, 1992 (date may vary for MPH applicants.) Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

Eligibility requirements are:

1. MD or DDS from a US, territorial, or Canadian medical school. Foreign medical graduates must have current ECFMG/FMGEMS certification and appropriate experience, e.g., one year residency in a training program approved by the Accreditation Council for Graduate Medical Education.

2. Or, a PhD, Dr. PH, or other doctoral degree in a related discipline (epidemiology, biostatistics, and the biomedical, nutritional, public health or behavioral sciences). Foreign education must be comparable to that received in accredited US, territorial, or Canadian institutions.

Another requirement is US citizenship or resident alien eligible for citizenship within four years.

Applications are due Sept. 1; fellows begin July 1, 1992.

For applications and information send written request to:

Dr. Douglas Weed, director, Cancer Prevention Fellowship Program, Div. of Cancer Prevention & Control, NCI, Executive Plaza South T-41, Bethesda, MD 20892.

For further inquiries contact Barbara Redding, 301/496-8640 or 496-8641.

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-CM-27715-72

Title: Cultivation of cyanobacteria (blue-green algae)

Deadline: Approximately July 3

The Natural Products Branch of the Developmental Therapeutics Program in NCI's Div. of Cancer Treatment has a requirement to isolate and grow various species of cyanobacteria to provide NCI with a repository of cell extracts for use in new screens for antitumor/anti-AIDS activities. It is anticipated that one cost reimbursement type contract will be awarded for a five year incrementally funded period. A completion form of contract is planned.

To be considered for this contract, offerors must show evidence of capability to isolate and cultivate cyanobacteria as well as possess the expertise to accomplish the following: maintenance and preservation of cultures, optimization and scale up of production, extraction of cells, and concentration of extracts. The project will require that approximately 300 different axenic cultures and 700 culture equivalents be grown to obtain 1.5 to 5G cyanobacteria cell extracts.

The contractor may be required by NCI to scale up cultivation of certain cultures to produce 20G to 40G of cell extracts. This may be subcontracted. The principal investigator should be trained in microbiology or phycology, preferably at the PhD level or equivalent from an accredited school, and have at least three to five years experience in the proposed area. The PI should have broad knowledge of culture cultivation, particularly in those areas related to growing cyanobacteria, cyanobacteria taxonomy, sample preparations, or related fields. The PI should be assigned to the project for a minimum of 50 percent of the time. The level of training of the team members should reflect their assigned duties, and they should have experience in taxonomy, culture isolation and preservation, culturing of cyanobacteria, and chemical extraction.

Contract Specialist: Jacqueline Ballard
RCB Executive Plaza South Rm 603
301/496-8620

RFP NCI-CM-27718-30

Title: Cultivation of marine protista

Deadline: Approximately Aug. 8

NCI's Div. of Cancer Treatment wishes to establish a contract to isolate and grow various species of Protista to provide NCI with a repository of cell extracts for use in new screens for antitumor and anti-AIDS activities.

Offerors must show evidence of capability to isolate and cultivate Protista as well as possess the expertise to accomplish maintenance and preservation of cultures, optimization and scale up production, extraction of cells and concentration of extracts. The project will require that approximately 600 cultures be grown to obtain 1 to 1.5 g of protist cell extract. The contractor may be required by NCI to scale up cultivation of certain cultures to produce 20 to 40 g of cell extract.

The principal investigator should have broad concept of culture cultivation, in particular those related to growing protists, protist taxonomy, sample preparations, or related fields. The principal investigator should be assigned to the project a minimum of 50 percent of the time. The team members should have experience in taxonomy, culture isolations and preservation, culturing of Protista, and chemical extraction.

This is a recompetition of a contract with Martek Corp. The government anticipates the award of one contract funded on an incremental basis for three years beginning March 31, 1992.

Contract Officer: Thomas Lewin
RCB Executive Plaza South Rm 603
301/496-8620

RFP NCI-CM-27705-09

Title: Support services for the Developmental Chemotherapy Section/Biologic Evaluation Section, Investigational Drug Branch
Deadline: Approximately July 27

To help the Investigational Drug Branch fulfill its responsibilities as an Investigational New Drug sponsor, the contractor will provide clinical research support to the Developmental Chemotherapy and Biologic Evaluation Sections of the IDB.

The contractor shall be responsible for the data collection and compilation, technical report preparation, monitoring of clinical activities, administrative coordination, and general logistical support, particularly in the areas of investigational drugs.

Specifically, the contractor shall: 1) gather and assemble clinical data for delivery to the IDB senior investigators for inclusion in IND annual reports for each investigational drug or biologic as required by FDA; organize, index, duplicate, store and distribute annual reports and drug data as necessary, 2) provide indepth investigational drug development planning and toxicity monitoring by analyzing specific drugs and diseases and coordinating letters of intent, 3) attend scientific meetings concerning drug development and summarize the results for delivery to the IDB senior investigator. This acquisition is a 100 percent setaside for small business.

Contract specialist: Bernice Evans
RCB Executive Plaza South Rm 603
301/496-8620

RFA Available

RFA CA-91-15

Title: Planning grants for prospective cancer centers
Letter of Intent Receipt Date: July 15
Application Receipt Date: Aug. 28

The Cancer Centers Branch of NCI's Div. of Cancer Biology, Diagnosis & Centers announces the availability of planning and development grants for the purpose of assisting eligible institutions to develop the organizational capability that will lead to the formation and development of cancer research centers of excellence.

The goal of this RFA is to encouraged the development of clinical and consortium cancer research centers in geographic areas that currently are not served by existing NCI designated clinical or comprehensive cancer centers. In addition to basic cancer research, these new centers should plan to emphasize clinical and prevention and control research that will ultimately impact on the populations in their regions. It is anticipated that after completion of these planning and development grants, recipient institutions will be in a position to compete for Cancer Center Support Grants from NCI.

Applicant institutions must intend to develop clinical or consortium cancer centers. Eligible institutions must be in states that do not currently have an NCI designated comprehensive, clinical or consortium cancer center, and must be located beyond a reasonable distance from an existing comprehensive, clinical or consortium cancer center. In addition, eligible institutions must have three or more externally funded, peer reviewed, cancer research project grants or contracts (R01, P01, N01, U01) or equivalent types of research projects. At this time, the Cancer Centers Branch defines peer reviewed cancer research projects as NCI research grants and contracts, American Cancer Society research project grants, and other NIH and the National Science Foundation research grants that meet the NCI referral guidelines for cancer related research.

Eligible institutions should require approximately three years of support under and planning and development grant to develop the institutional capability to form and or develop a cancer research center of excellence. Institutions that already have an established organizational capability as a cancer center and a sufficient peer reviewed cancer research base are not eligible under this program. Potential applicants are strongly advised to contact NCI program staff of the Cancer Centers Branch to discuss eligibility prior to preparing an application.

Support of this program will be through the NIH grant in aid, exploratory grant mechanism, P20. Applicants will be responsible for the planning, direction, and execution of the proposed project.

Approximately $750,000 in total costs per year will be committed to fund applications submitted in response to this RFA. It is anticipated that three to five awards will be made. This funding level is dependent upon the receipt of a sufficient number of applications of high merit. The total project period for applications submitted in response to the present RFA should not exceed three years. The earliest feasible start date for the initial awards will be Aug. 1, 1992.

Although a letter of intent is not required, is not binding, and does not enter into the review of a subsequent application, it is requested in order to provide an indication of the number and scope of applications to be reviewed. Prospective applicants are requested to submit, by July 15, a letter of intent that includes a descriptive title of the proposed cancer center, the name, address, and telephone/fax number of the planning director (principal investigator), the names of other key personnel, the participating institutions, and the number and title of this RFA.

Prospective applicants are strongly encouraged to contact the NCI staff listed below before the submission of a letter of intent and/or an application.

The letter of intent is to be sent to Dr. Alan Schreier, program director, Cancer Centers Branch, Div. of Cancer Biology, Diagnosis & Centers, NCI, Executive Plaza North Rm 308, Bethesda, MD 20892, phone 301/496-8531.

The complete text of the RFA, containing the application procedures that must be used and the review criteria, may be obtained from the Cancer Centers Branch at the above address. Questions of a more administrative nature not directly related to the programmatic aspects of this RFA may be directed to Francis Cohen, grants specialist, Grants Administration Branch, NCI, Executive Plaza South Rm 242, Bethesda, MD 20892, phone 301/496-7800, ext. 42.

NCI Program Announcement

PA-91-48

Title: Individual postdoctoral National Resource Service Award fellowships in radiological sciences related to cancer
Application Receipt Dates: Jan. 10, May 10, Sept. 10

There is a growing need for qualified and talented investigators in the radiological sciences who are concerned with problems related to the diagnosis and treatment of cancer, and for individuals who are cross disciplinary in their approaches to the

problems of diagnosis and treatment of the cancer patient.

An area of special interest is in the emerging discipline of medical informatics and its application to the field of cancer diagnosis and treatment. Medical informatics is concerned with the representation of knowledge and experience in a computerized format for reproducing advisory, critiquing, and educational functions; the storage, retrieval, and manipulation of data to support physician problem solving and reasoning; and the development of a new understanding about the cognitive processes that are at work in a medical problem solving environment. Very few individuals in the medical sciences have received sufficiently broad training in information technology, inferential reasoning, quantitative methodology, imaging technology, and database design, coupled with a knowledge of the fundamental decision making issues that exist in the socioeconomic environment in which health care is practiced.

The purpose of this program announcement is to stimulate qualified candidates to apply for postdoctoral fellowships leading to training in the radiological sciences that deal directly with cancer related topics. Whenever possible, the curricula should approach problems related to cancer from an interdisciplinary viewpoint--involving multiple disciplines such as diagnostic radiology, radiation oncology, physics, engineering, interpretation and visualization science, theoretical and biological foundations of anatomic structure, physiology, biochemistry, immunology, cognitive sciences, information sciences, and computer science.

The postdoctoral fellowships (F32) shall be funded by National Research Service Award on the basis of merit. Before submitting an application, an applicant must arrange for appointment to an appropriate institution and acceptance by a sponsor, who will supervise the training and research experience. The institutional setting must have a strong department in the radiological sciences and indicate its awareness of and commitment to solving problems in the radiological disciplines related to cancer. Applications will be subjected to the same peer review process as all other individual postdoctoral fellowships.

Individuals must be, at time of application, citizens or noncitizen nationals of the U.S. who have been lawfully admitted to the US for permanent residence and have in their possession an Alien Registration Receipt Card. Individuals on temporary or student visas are not eligible. Individuals must have received, as of the beginning date of the appointment, a PhD, MD, DO, DDS, DVM, OD, DPM, ScD, Eng.D, Dr. PH, DNS, DC or equivalent degree from and accredited domestic or foreign institution. Certification by an authorized official of the degree granting institution that all degree requirements have been met is also acceptable. The candidate's sponsor must be a competent active investigator in the area of the proposed research activity and must personally supervise the candidate's research. The sponsor must document, in the application, the research training plan, the availability of staff and facilities to provide a suitable environment for performing high quality work, and the relevance to cancer.

The stipend level for the individual postdoctoral fellowship ranges from $18,600 to $32,300 depending on years of relevant experience subsequent to the award of the doctoral degree. Individual postdoctoral fellowships are made for project periods of up to three years. In addition, the applicant's institution may request an institutional allowance of up to $3,000 per year for supplies, equipment, travel, tuition, fees, medical insurance, and other training related costs.

Application forms (PHS 416-1) are available from Office of Grants Inquiries, Div. of Research Grants, NIH Westwood Bldg. Rm 449, Bethesda, MD 20892.

Written or telephone inquiries about the goals and scope of this announcement may be directed to Dr. Sandra Zink, program director, Radiation Research Program, NCI, EPN/800, 9000 Rockville Pike, Bethesda, MD 20892, phone 301/496-9360.

New Application Receipt Dates For Meeting Support From NCI

NIH has issued a reminder to prospective applicants interested in seeking support of scientific meetings from NCI. All grant applications submissions for support of meetings must adhere to the NIH Div. of Research Grants regular receipt dates of Feb. 1, June 1, and Oct. 1. These dates are published by DRG in the information and instructions form of the PHS 398 application and the booklet "Support of Scientific Meetings."

Applications received late will be returned or held for the next regular review cycle if the proposed meeting date permits. Waiver of the receipt date will be considered only for exceptional circumstances. Requests must be submitted as instructed in the above referenced booklet and may be obtained from the Office of Grants Inquiries, Div. of Research Grants, Westwood Bldg. Rm 449, Bethesda, MD 20892, phone 301/496-7441. Specific questions regarding the NCI conference grant program should be directed to the NCI Conference Grant Coordinator at 301/496-7173.

Cut Tobacco, Sporting Event Links; Consider Boycotts, Sullivan Says

HHS Secretary Louis Sullivan recently called on tobacco companies to stop sponsoring sporting events and asked the public to consider boycotting events supported by the industry.

Sullivan said he was "disgusted" that tobacco companies are allowed to advertise at and promote sporting events. He made the remarks in a speech to the First International Conference on Smokeless Tobacco, held in Columbus, OH.

"The tobacco companies are trading on the prestige and image of the athletes to barter their deadly products," Sullivan said. "They are using the vigor and energy of these athletes as a subtle--but incorrect and dishonest--message that tobacco use is compatible with good health."

Estimates are that tobacco companies spent between $84 million and $100 million in 1988 on sports promotions. The firms sponsor women's tennis, motor sports events, horse racing, and soccer, and advertise on stadium billboards.

"It is immoral for civilized societies to condone the promotion and advertising of products, which, when used as intended, cause disability and death," Sullivan said.

Tobacco industry officials countered that they do not ask the athletes to smoke or endorse their products.

Sullivan said the sporting industry should recognize that accepting tobacco company sponsorship amounts to advocating the sale of a harmful product.