THE CANCER LETTER

Vol. 17 No. 8
Feb. 22, 1991

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

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

Illinois Congressman Calls For Full Bypass Budget Appropriation In Cancer Prevention--$180 Million

Illinois Congressman John Porter, a member of the House Labor, HHS, Education Appropriations Subcommittee, has called for approval of NCI's full bypass budget request for prevention and control, double the amount recently recommended in the President's FY1992 budget.

(Continued to page 2)

In Brief

Minna To Leave NCI For Texas Southwestern; Alexander Is Special Populations Branch Chief

JOHN MINNA, chief of the NCI-Navy Medical Oncology Branch, has announced he will leave for a position at the Univ. of Texas Southwestern Medical Center in Dallas. Minna was traveling last week and could not be reached for further details. . . . **NCI STAFF CHANGES: George Alexander** was appointed chief of the Special Populations Studies Branch in the Cancer Control Science Program, Div. of Cancer Prevention & Control. **Ritva Butrum** retired as chief of the Diet & Cancer Branch, DCPC. **Clarence Fortner,** head of Drug Management & Authorization Section, Cancer Therapy Evaluation Program, retired Jan. 1. **Jorge Litvak** was appointed an expert in the Office of International Affairs. **Steve Hazen** has replaced **Mary Cushing** as chief, Extramural Financial Data Branch. Cushing is the new budget officer for NCI. **Jeanette Johnson** was named chief of the Prevention & Control Contracts Section, Research Contracts Branch. **Jan Casadei** was appointed chemist in the Drug Regulatory Affairs Section, Regulatory Affairs Branch. . . . **CUTBERTO GARZA,** director, Div. of Nutritional Sciences at Cornell Univ., is a new member of the DCPC Board of Scientific Counselors. . . . **JAMES HOLLAND,** chairman of the Dept. of Neoplastic Diseases at Mount Sinai Medical Center, received the Claude Jacquillat Award for Achievements in Clinical Oncology and delivered the Jacquillat Memorial Lecture at the 3rd International Congress on Neoadjuvant Chemotherapy in Paris this month. The prize consists of 50,000 francs and a gold medallion. The prize will be awarded again in 1994. Nominations may be sent to David Khayat, Service d'Oncologie Medicale Pitie-Salpetriere, Paris 75013. . . . **WILLIAM BLOOMER,** associate director, Pittsburgh Cancer Institute, was named recipient of the Claude Worthington Benedum Professorship and Chair in Radiation Oncology. . . . **LANCE LIOTTA,** chief of NCI's Laboratory of Pathology, was named to the editorial board of "International Journal of Cell Cloning." He also has received the Lila Gruber Memorial Cancer Research Award from the American Academy of Dermatology for lifetime contributions to cancer research.

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Prevention Budget Should Be Double President's Request, Porter Says

(Continued from page 1)

Porter made his comments at the International Conference on Cancer Prevention, sponsored by the International Coordinating Council for Cancer Research, held at NIH last week.

"Prevention is the ultimate result of research and the best opportunity to capitalize on research," Porter said. "The bad news is that the President's request for prevention is only $4 million higher than the actual spending last year. [Congress] authorized $86 million last year. The president has put $90 million in the budget this year. In [NCI Director] Dr. [Samuel] Broder's bypass budget, the figure is $180.2 million.

"That means that the President has pegged 5 percent of the NCI budget for prevention. I suggest that the proper figure, as Dr. Broder has indicated, is 10 percent.

"We need to work toward that. Let's make it our target. We may not get there; ultimately I think we will. We may not even get close. But if we don't have goals we are never going to achieve anything."

Porter emerged last year as a strong supporter of NCI's bypass budget on the House subcommittee. At an ICCCR conference in January 1990 in Rio De Janeiro, Porter called for the full appropriation of the institute's "professional needs" budget by FY 1992, using funds that would be freed in the so-called "peace dividend."

It was the first time in many years that a member of the appropriations subcommittee expressed support for the bypass budget (**The Cancer Letter,** Jan. 19, 1990). Later, during the appropriations hearing for NCI, Porter specifically asked Broder to list the bypass requests in several areas.

THE CANCER LETTER

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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.

Porter is the second ranking Republican on the subcommittee, after Carl Pursell of Michigan, who most likely will take the late Silvio Conte's position as ranking Republican.

In his speech last week, Porter again said he supports the bypass budget, but that "the world is a far different place" than it was a year ago.

"At that time I expressed my strong support for Dr. Broder's bypass budget for NCI. My hope was not that we would be able to enact it last year, but that we would be able to move very much toward it in this fiscal year."

'It Was A Time Of Great Hope'

"When we met in Rio, Eastern Europe was emerging from 45 years of Communist rule, from terrible problems with their economy, with the hope of a much brighter future.... The world was at peace at that time, and looking forward to the benefits of peace, to the reordering of priorities. We talked greatly at that time about a peace dividend.

"We had budget problems then as we do now, but after getting the initial peace dividend applied to our deficit problem in the United States, the long term outlook was a very, very positive one. I said at the time that if we could cancel 10 B-52 bombers, we could double the NIH budget. Clearly it was a time of great hope that we might be able to reorder priorities.

"Unfortunately, the world is now a far different place that it was a year ago." The war in the Middle East, while costly, is justified to "check naked aggression" and "to prevent future nuclear blackmail," Porter said.

Also a year ago, Porter said, it appeared the Soviet Union, "might, if not sharing our values for self determination and freedom would at least live in cooperation with us, so that our societies could move from the production of implements of war to the benefits of peace. Unfortunately, in the last year, the forces of reaction...have led us in the opposite direction.

"In addition, the U.S. budget is not what we had hoped it might be. A year ago, George Bush was saying, 'Read my lips.' Today, we have passed new taxes that I believe were needed, but the price of those new taxes were restraints on spending that were also needed from a budgetary standpoint."

Congress established spending caps for four areas: defense, entitlement programs, foreign assistance and other domestic discretionary spending. If the caps are exceeded in any of those areas, then the Executive Branch has the right to sequester the additional funds.

"That is a very effective means of controlling

spending," Porter said. "The costs of war, though not directly on budget, obviously need to be factored into our thinking about available spending. The cost of preserving our financial system, the S&L crisis, is also bringing higher costs.

"Finally, the recession we are experiencing is also hurting our budgetary outlook....

"All that we have dreamed about has been set back, no question about it. Together, it seems to me, we have to set ourselves on a new course for the future in the hope that we might release resources for high priorities like cancer research.

"Our commitments cannot change. Our commitments have to be the same. If there's anything that I've learned in working on human rights, and I work on human rights almost every day as cochairman of the Congressional Human Rights Caucus, it is that we have to work day by day, week by week, month by month, continuing to knock on the door, knowing that if we do it will eventually open. Standing constant for the things we believe in, trying to change the future of the world.

Funding 'Far Short' Of Need

"Dr. Broder's bypass budget, his professional judgement budget, is $2.6 billion for NCI. This past fiscal year we provided only $1.7 billion and in the President's budget for fiscal year 1992, it's $1.8 billion, far short of what is needed.

"Still, Congress places research, not only cancer research, but all biomedical research, at a very, very high priority. Our subcommittee in the House of Representatives placed NIH funding at the very top of our priorities. The commitment is there.

"We've just lost in the House of Representatives one of the true leaders, Sil Conte, working for over 30 years as a member of the full committee and subcommittee to try to do his best to get resources where they were needed. Lost to what? To cancer. [Conte died of complications resulting from prostate cancer.]

Porter made a suggestion:

"Dr. Broder, if I can say one thing. I know that priorities have to be set by science, and not by politics, but I also know that there is a very strong feeling out there across America that if we can aim at movement in breast cancer and prostate cancer, the two cancers that I think people fear more than any other, that that will lead us with some imagination forward perhaps to higher funding levels."

Porter is also a member of the Select Committee on Aging, the Foreign Operations Appropriations Subcommittee and Export Financing Appropriations Subcommittee.

ICCCR To Emphasize Prevention, Which DeVita Says Is Poorly Funded

The International Council for Coordinating Cancer Research will henceforth focus its efforts "nearly exclusively" on prevention research, Vincent DeVita, the organization's president, announced at ICCCR's conference on cancer prevention last week.

DeVita, physician in chief of Memorial Sloan-Kettering Cancer Center, noted that ICCCR and its European counterpart, ECCCR, were established because "all too often good research projects were going begging because they didn't fit neatly into the funding policy of a single national organization." The two organizations thus were formed to coordinate and facilitate cancer research on a global basis.

"There are various areas in cancer research that are uniquely international and poorly supported," DeVita said. "Cancer prevention, some areas of AIDS research, and the molecular biology of virus related cancers are of special interest. In fact, most of our data on cancer prevention comes from international population studies. However, a great deal of prevention research lacks support, either because the project has its origin in more than one country or because of the multifaceted nature of the studies, and they cannot be submitted to funding agencies on a project by project basis.

"So, with this conference, we are announcing that ICCCR will focus on cancer prevention research nearly exclusively," DeVita said.

This year marks the 20th anniversary of the National Cancer Program, DeVita pointed out. "The cancer program has lost momentum, due to the short attention span of Congress. At the beginning, it was clear to most scientists that it would take 20 to 30 years for the program to pay off. NCI, which represents 23 percent of NIH, supports 50 percent of the molecular biology research. That is paying off now."

Prevention research, however, "has been historically underfunded. One problem is that when I treat a cancer patient and that person gets well, that patient is very appreciative. But when you do something that keeps someone from getting cancer, that person is hardly aware of it.

"Funding at NIH for cancer prevention has been meager. I can say this now," the former NCI director continued. "Congress always seemed to like and appreciate the programs [in cancer prevention and control supported by NCI], but then would put most of the [NCI] money into the RO1 pool."

Jacques Crozemarie, president of the French Assn.

for Cancer Research, is chairman and founder of both ICCCR and ECCCR. Umberto Veronesi, director general of the National Institute for Study & Care of Tumors in Milan, is president of ECCCR.

ICCCR issued a position statement on cancer prevention and control which says, part:

"The long term investment [in cancer research as a result of the National Cancer Act of 1971] paved the way for tremendous progress in the fields of molecular biology, molecular genetics, and immunology which many researchers would not have dreamed possible 20 years ago. Because of these advances and the increasing sophistication of our cancer research efforts, it has become apparent that the application of these research advances to prevention is imperative in continuing our progress in cancer research.

"One of the major benefits of cancer research efforts in the 1970s was an improved understanding of how to approach cancer prevention. We are now at a crucial crossroads in cancer where the application of molecular biology approaches to prevention programs will yield many opportunities, new challenges, and much optimism for the future of cancer research and prevention.

"The success of our National Cancer Program is dependent upon a careful balance of research programs. The research foundation for cancer prevention is drawn from all aspects of cancer research, particularly basic research, epidemiology, and cancer prevention and control. Cancer prevention and control programs should serve as the bridge between knowledge derived from basic and clinical research programs and its application to clinical and public health settings.

"Unfortunately, this balance of research priorities has not been supported as a public policy priority, as cancer prevention and control has not yet received crucial funding support, and significant disparity exists with regard to funding of cancer prevention. Today, cancer prevention and control programs account for less than four percent of the budget of the National Cancer Program. As a result, important components of the cancer research agenda have gone unfunded, compromising progress in many key areas.

"ICCCR urges increased funding for cancer prevention research. In order to continue to progress and apply the knowledge of our past investment in basic research, the prevention initiatives outlined below are crucial and should be provided increased resources.

"* Research evidence indicates that tobacco is linked to 30 percent of all cancer deaths. Therefore, increased emphasis should be placed on different methods to reduce tobacco use and research initiatives such as the interactions of smoking and other cancer risk factors; effects of passive smoking; and further definition of tobacco related cancers.

"* Dietary intervention trials to determine the link between diet and specific cancers, as it is estimated that diet and nutrition are related to 35 percent of cancer deaths.

"* Evaluation of the independent cancer risks associated with alcohol consumption and its effect in combination with other factors such as nutritional status and tobacco use.

"* Development of chemoprevention agents, including efficacy studies in animals and when appropriate chemoprevention trials to determine the potential for methods and regimens for the reduction of cancer incidence.

"* Epidemiological studies and the identification and impact of environmental carcinogens, such as pesticides and organic solvents.

"* Effects of ultraviolet radiation exposure.

"* Programs to evaluate methods of behavior modification, and effective information and education programs to translate prevention research findings to the public.

"In order to impact mortality figures and provide for balance in the National Cancer Program, it is imperative that cancer prevention and control activities receive the support of the highest level of government. Only then can we expect that the public will incorporate cancer prevention as an important tool in its health and well being."

Everett Koop, former U.S. surgeon general and now chairman of the organization, SAFE KIDS, cited a survey of a group of teenagers which demonstrated the difficulty of preventing cancer and other diseases by encouraging lifestyle changes through education.

The group had been heavily exposed to messages on the risks of unprotected sex, drug abuse, and tobacco and alcohol use. They were tested on whether they had understood the messages and they had. But a couple of years later, a survey of those same teenagers found that few if any had changed their lifestyles.

"They got the messages but did not change their behavior," Koop said. "Teens think they are immortal, and they are natural risk takers."

Ernst Wynder, president of the American Health Foundation and a participant in the conference, said that comprehensive health education must begin early with children. "At ages 5, 6, and 7, children can be taught anything. He suggested that states should make the teaching of comprehensive health practices

mandatory for grades kindergarten through 12.

Peter Greenwald, director of NCI's Div. of Cancer Prevention & Control, said that diet and cancer research has been a growing priority for the institute.

"Laboratory studies show that caloric restriction lowers the frequency of mammary tumors in rodents, and that high fat diets increase tumor frequency. Breast cancer is less common in countries with low fat diets, and becomes more common as people migrate and adopt the western, high fat diet. Epidemiologic studies suggest a promoting role for fat and a contributory role for obesity for postmenopausal breast cancer.

"This has led NCI to consider a dietary intervention trial to determine how much benefit middle aged women may achieve from dietary change, and the number of years needed to achieve the benefit," Greenwald continued. "Colon cancer is another major type of cancer that is linked to diet. Colorectal cancer rates also vary widely in different parts of the world. These rates have risen dramatically in the American black population during the past several decades, and colorectal cancer is much more common among Puerto Rican born people living in New York City than it is in Puerto Rico. Clinical trials to test the effects of dietary modification on precursors to colorectal cancer are under way. . .

"Over 30 human chemoprevention trials now are in progress. . . An important recent highlight has been the study published by Dr. Jerome DeCosse and his group from Cornell Medical Center. This three armed study--a control group, a group receiving vitamins C and E alone, and a group receiving vitamins C and E and a wheat fiber supplement--showed a significant reduction in colon polyps in the fiber/vitamin group.

"A study by Dr. Waun Hong and his colleagues at M.D. Anderson Cancer Center showed that patients with head and neck cancers can be prevented from getting new, second tumors through chemoprevention using 13-cisretinoic acid. A number of other chemical and pharmaceutical agents in preclinical or clinical testing have potential as chemopreventive agents.

"In the future, NCI will continue to emphasize public guidance about smoking prevention, diet, and other aspects of prevention as the research continues. Clinical trials in prevention will receive emphasis, as will the translation of basic research to clinical studies, and the translation of the results of these studies into public applications. In order to accomplish this, greater attention is needed to training in cancer prevention research and to building cancer prevention research into the mainstream of a larger number of our major biomedical research institutions."

DeVita commented that when he was NCI director, he heard from a number of people that "we need separate prevention research centers. That may be true, although unfortunately I didn't feel then that it was."

DCBDC Advisors Ok New Training Grant Program In Clinical Oncology

NCI advisors have given concept approval to a new institutional training grant program in clinical oncology research that proposes to provide grants to 10 institutions to fund up to five trainees each. The program's total cost is estimated at $4 million for the first year.

The Div. of Cancer Biology, Diagnosis & Centers Board of Scientific Counselors gave concept approval to the program at its meeting last week. While most of the clinicians or cancer center directors on the board were enthusiastically in favor of the program, a few of the basic scientists on the board opposed it.

Following is the concept statement:

Institutional Clinical Oncology Research Training Program. Proposed new RFA, 10 awards for five-year grants, total cost $20 million.

The Cancer Training Branch proposes to invite applications for institutional training grants that will prepare medical doctors for careers in clinical oncology research. The objectives of this RFA concept are to increase the number of clinicians who are motivated and properly trained to: 1) interact and coordinate their clinical research with basic research scientists to maximize the translation of basic information into patient-oriented research; 2) perform independent clinical research that develops and tests rational, scientific hypotheses, based on fundamental and clinical research findings, for improving the medical care of cancer patients; 3) design clinical protocols and manage all phases of clinical trials research.

Applicants must propose a training program which is designed to provide clinicians with the research skills that deal directly with cancer detection, diagnosis, prognosis, and treatment of cancer patients. It is expected that these clinical oncology training programs will include both a didactic component (e.g. formal courses, lecture series, seminars, and journal clubs) and a research component that focuses on skills necessary for translating basic cancer research results into clinical experiments, procedures, and trials directly involving cancer patients in a clinical environment. For example, it will not be sufficient within the scope of this training program to only use human cells and other materials in a basic laboratory setting.

The training program should have the flexibility to accommodate clinical candidates with different levels of research competence. While the end goal of this program is specifically to prepare medical doctors for dedicated careers in clinical oncology research, not basic research, trainees must become competent in the fundamentals of the scientific method, particularly hypothesis development, experimental design, and biostatistical methods that are usually gained through a significant hands-on basic research experience. The training environment will be a critical factor. It should be one where there are active

basic/clinical research collaborations that exemplify a dynamic two-way exchange of information and ideas between laboratory and clinical scientists. It should also promote rapid translation of basic research into clinical testing, as well as stimulate new laboratory experiments, based on clinical testing results.

In most cases, trainees would acquire both basic and clinical research skills that will prepare them to become dedicated clinical researchers able to interact and communicate effectively with basic research scientists in the design and implementation of collaborative research involving patients. In this context, it might also be appropriate for the basic scientists to be involved in the clinical seminars, protocol planning sessions, and grand rounds.

The high level of support and intense activity in basic cancer research over the past decades has resulted in the rapid growth and constantly increasing body of knowledge about the molecular biology, immunology, genetics, and cell biology of cancer. However, the clinical application of this knowledge to improve procedures that benefit cancer patients has not kept pace with the accumulation of research results. This RFA should stimulate the recruitment and training of clinicians who will be oriented and skilled in the translation of accumulated research results into new clinical procedures which are of direct benefit to cancer patients.

A workshop on "Training in Clinical Research in Oncology" was held on September 12, 1990 to identify the concerns and problems facing the clinical oncology community, and to examine the adequacy of NCI training grant mechanisms and institutional training environments for attracting and retaining MDs in clinical oncology research. Participants included 20 clinicians representing oncology programs and cancer centers, as well as NCI staff. There was agreement on the decline in the number of clinical oncologists pursuing careers in innovative clinical research resulting in a shortage of properly trained research clinicians to translate salient research findings to patient populations. Conversely, interesting clinical observations and problems also need to be communicated to the basic research laboratory. It was recommended that NCI initiate 'program' career grants (K12) to be awarded to excellent clinical departments and/or cancer centers which would then have greater flexibility in selecting and sustaining young physicians for the critical three to five year period during which they will learn to prepare their own competitive research grant applications.

The workshop findings were subsequently presented to the DCBDC Board of Scientific Counselors and the NCAB both of which encouraged NCI to prepare a concept appropriate for clinical research training.

Grant applications will be solicited via an RFA to be supported by an institutional type career award (K12) for a five year period. However, trainees would be appointed for two to five year periods depending upon their backgrounds and goals. The grants will be renewable via competitive applications that would be submitted to the usual peer review process.

Applicants will be asked to clearly address the following issues: 1) A detailed outline of the content and scope of the program for training in innovative clinical oncology research and how it will provide the skills and experience necessary for the development and testing of new clinical procedures that will be of direct benefit to cancer patients; 2) A research environment that promotes the interactions and collaborations of clinical researchers and basic researchers which are necessary for the translation of basic research results into the clinical arena; 3) The qualifications of the faculty mentor(s) who would conduct the training, highlighting their clinical and basic research projects which are currently in progress or recently completed; each trainee should have a specific mentor who would have responsibility for the trainee's research program and progress; there should also be a committee equivalent to the graduate student's research committee that would provide an oversight function; 4) The procedures to be used to announce the course and to recruit trainees; and 5) The efforts that will be made to evaluate the results of the training.

The proposed RFA would be a one-time solicitation for five year grants, but the grants would be renewable, based on the results of peer review. Grants would be limited to up to 5 trainees so as to provide institutional and geographic diversity. It is estimated that some 10 applications will be highly meritorious and worthy of funding, and that grants for five peer approved trainees will average approximately $400,000. Total costs would be in the range of $4 million for first year.

Salaries would be for up to $50,000 plus fringe benefits commensurate with the applicant organizations policies. Other allowable costs will include up to $20,000 for research supplies, travel (currently $800 per trainee per year), and indirect costs not to exceed 8 percent. No tuition will be allowed, since these grants are intended to focus on clinical research rather than supporting a didactic program that would result in an additional degree. Based on these allowable charges, the cost will be approximately $80,000 per trainee. After an initial start up period of 3 to 4 years, this program should produce an annual output of approximately 50 clinicians who are trained in and oriented toward development of innovative clinical research and improved clinical procedures which apply the results of cancer research. This is expected to have a significant impact on the detection, diagnosis, prognosis, and treatment of cancer that would make a significant contribution to the reduction of cancer incidence and mortality.

Vincent Cairoli, chief of the Cancer Training Branch, said the idea of the program is to get the trainees schooled in basic research, "and then they will go on to do true-blue clinical research." But the training program should be significant, he said. "We want them to go beyond working with human cell lines. It's critical that the person develop basic research skills."

As for the logistics, an institution could put one or two trainees on the first year and build the program as they go along, he said.

BSC member Albert LoBuglio, director of the Univ. of Alabama (Birmingham) Comprehensive Cancer Center, said the training program would "provide a credibility that this field just doesn't have." Every cancer center director in the country, he said, is looking for someone who would have the skills that this training could provide.

But Harold Moses, chairman of the Dept. of Cell Biology at Vanderbilt Univ., said, "I would be reluctant to take people into my lab for a short period. It takes a year to learn the techniques and another year to be productive. I see problems with that."

Cairoli said the training program could take up to five years, so the trainee could spend as much as two or three years in the laboratory.

"We can tailor awards, but we can't tailor individual careers,'" Cairoli said.

Eugene Bauer, chairman of the Dept. of

Dermatology at Stanford Univ. School of Medicine, agreed with Moses about the brief rotation in the lab. In addition, he said, the existing K11 training grant program funds individuals, who are subjected to peer review, which requires "a commitment up front" from the individual; whereas the institutional program is "a step removed."

Also, Bauer said, "Why would anyone in their right mind sign up for a T32 if their institution has a K12, if they could get $50,000 instead of $18,000?"

Cairoli said the K12 "is not something new" and is an existing NIH mechanism, and the recommendation "came straight out of the workshop." Cairoli said the workshop's message was, "If you have difficulty recruiting, you have to offer some incentives."

Moses and Bauer made a motion that the concept be tabled and returned to NCI staff for more work. That motion failed, with only Moses and Bauer voting in favor of it.

Albert Owens, director of the Johns Hopkins Oncology Center, made a motion to approve the concept as presented. That motion passed, with only Moses and Bauer opposed.

RFA Available

RFA CA-91-04

Title: Small grants to stimulate correlative laboratory studies and clinical trials in radiation therapy

Letter of Intent Receipt Date: March 4

Application Receipt Date: May 22

NCI's Div. of Cancer Treatment announces the availability of a Request for Applications for tightly focused, basic science laboratory studies that interface with radiation therapy clinical trials or for radiation therapy clinical trials that attempt to correlate new and/or unique developments in the laboratory.

Using the small grants (RO3) mechanism, NCI hopes to stimulate the communication of promising and potentially relevant new developments between the basic science laboratory and the clinical setting. The RO3 mechanism provides complementary research support for short term, pilot, radiation therapy clinical trials that test and verify basic laboratory findings.

The aims of this RFA are two-fold: 1) to provide a mechanism for accelerated funding of correlative studies relevant to radiation therapy clinical trials and 2) to stimulate pilot clinical studies with or without relevant laboratory correlations so as to foster the development of interactions between basic science laboratories and clinicians performing radiotherapy clinical trials. Laboratory correlates should be designed to ultimately lead to improved radiation therapy.

This small grant RFA is a nonrenewable, one time solicitation. NCI plans to make multiple awards for project periods up to two years. All awards will be limited to a $50,000 direct cost ceiling for a period of up to two years. The total project period for applications should not exceed two years. The earliest feasible start date for the initial awards will be Dec. 2, 1991.

Only domestic, nonprofit and forprofit organizations, institutions, governments and their agencies are eligible to apply. Although NCI funded Cooperative Groups are ineligible to apply, individual institutions or consortia of the Cooperative Groups may apply through their own institutions. Awards will be made only to institutions with either a funded clinical or laboratory component of the proposed study. These awards are to complement a previously existing source of support. These pre-existing resources need not be at a single institution but may exist within a consortium.

Written or telephone inquiries concerning the objectives and scope of this RFA are encouraged and should be directed to Dr. Thomas Strike, Radiation Research Program, Div. of Cancer Treatment, NCI, 6130 Executive Blvd., Suite 800, Rockville, MD 20852, phone 301/496-9360.

NCI Advisory Group, Other Cancer Meetings For March, April, Future

Palliative Care of the Cancer Patient--Feb. 28-March 1--La Jolla, CA. Contact Scripps Clinic, phone 619/554-9592.

Alabama Cancer Congress--Feb. 28-March 2, Birmingham, AL. Contact Alabama Cancer Congress, 800/292-4935 or 205/879-2242.

Monoclonal Antibody Immunoconjugates for Cancer--Feb. 28-March 2, 1991, San Diego, CA. San Diego Marriott Hotel & Marina. Sponsored by the new San Diego Regional Cancer Center. Contact Cass Jones, Professional Conference Management, 7916 Convoy Ct., San Diego, CA 92111, phone 619/565-9921.

Cancer Management Course--Feb. 28-March 2, Orlando, FL, Marriott Orlando World. Contact American College of Surgeons, Cancer Dept., Morton Wilhelm, 55 East Erie St., Chicago, IL 60611, phone 312/664-4050.

Transrectal Ultrasound Seminar--Feb. 28-March 2, Scottsdale, AZ. Contact DCMI, PO Box 2508, Ann Arbor, MI 48106, phone 313/665-2535 or 800/458-2535.

Stereotactic Treatment of Brain Tumors--Feb. 28-March 3, New York, NY. Contact Roberto Fuenmayor, CME Office, Memorial Sloan-Kettering Cancer Center, phone 212/639-6754.

Cancer Research Manpower Review Committee--Feb. 28-March 1, Georgetown Inn, Wisconsin Ave. Open 8:30-9 a.m. on Feb. 28.

Cancer Education Review Committee--March 1, Georgetown Inn, open 8:30-9 a.m.

Major Advances In Oncology: Update on Cancer of the Head & Neck--March 1-2, Cleveland, OH. Contact Education Coordinator, Ireland Cancer Center, Univ. Hospitals of Cleveland/Case Western Reserve Univ., 2074 Abington Rd., Cleveland, OH 44160, phone 216/844-7858.

Molecular Therapeutics: Cancer Therapy Into The 21st Century--March 3-6, Research Triangle Park, NC. Contact Dr. Brian Huber, Wellcome Research Laboratories, 3030 Cornwallis Rd, Research Triangle Park, NC 27709, phone 919/248-3779.

Assn. of Community Cancer Centers Annual Meeting/Symposium on New Technology--March 6-9, Washington, Capital Hilton Hotel. Contact ACCC, 11600 Nebel St., Suite 201, Rockville, MD 20852, phone 301/984-9496.

Cancer Biology & Immunology Contract Review Committee--March 8, NIH Bldg. 31 Conference Rm 9, open 9-10 a.m.

Membrane Transport in Multidrug Resistance, Development & Disease--March 10-14, Banff Centre, Banff, Alberta, Canada. Contact American Assn. for Cancer Research, Public Ledger Bldg. Suite 816, Sixth & Chestnut Sts., Philadelphia, PA 19106, phone 215/440-9313.

European Society of Mastology 1st International Conference--March 12-14, Venice, Italy. Contact EUSOMA Secretariat, Via Venezian 1, 20133 Milan, Italy.

Drug Development, Biological Diversity & Economic Growth--March 13-14, NIH Bldg. 31 Conference Rm 6, beginning at 8:30

a.m.

International Symposium on Angiogenesis--March 13-15, St. Gallen, Switzerland. Contact International Scientific Secretary, Research Dept., Haus 09, Kantonsspital, 9007 St. Gallen, Switzerland.

Differentiating Your Hospital's Cancer Program--March 13-15, San Antonio, TX. Contact Ron Guilden or Joanna Mitchell, CDP Services, 1050 Crown Pointe Parkway, Suite 210, Atlanta, GA 30338, phone 404/391-9872.

Advances in Cancer Treatment Research/Autologous Bone Marrow Transplantation Symposium--March 13-15, Bronx, NY. Contact Office of Continuing Medical Education, Montefiore Medical Center, 3301 Bainbridge Ave., Bronx, NY 10467, phone 212/920-6674.

Developmental Therapeutics Contracts Review Committee--March 14-15, Executive Plaza North. Open March 14, 8:30-9:30 a.m.

Prostate Cancer--March 15, Knoxville, TN. Contact Education Coordinator, Thompson Cancer Survival Center, phone 615/541-1749.

Cancer Management Course--March 15-16, Youngstown, OH. Contact Dr. Richard Memo, American College of Surgeons, Cancer Dept., 55 East Erie St., Chicago, IL 60611, phone 312/664-4050.

American Cancer Society Conference on Colorectal Cancer--March 20-22, New Orleans, LA. Contact ACS, 1599 Clifton Rd. NE, Atlanta, GA 30329, phone 404/329-7606.

Div. of Cancer Etiology Board of Scientific Counselors--March 21-22, NIH Bldg. 31 Conference Rm 10. Open 1 p.m.-recess on March 21; 9 a.m.-adjournment on March 22.

Lineberger Comprehensive Cancer Center Annual Symposium: Molecular Basis of Cancer Therapeutics--March 21-22, Chapel Hill, NC. Contact Lineburger Comprehensive Cancer Center, Univ. of North Carolina, Campus Box 7295, Chapel Hill, NC 27599-7295, phone 919/966-3036.

International Congress on Biological Response Modifiers--March 22-24, Quebec City, Canada. Contact Dr. Michel Bergeron, Congress Coordinator, CH Universite Laval, 2705 boul. Laurier, Quebec City, Quebec, Canada GIV 4G2, phone 418/654-2705.

Cancer Centers Support Grant Review Committee--March 28-29, Hyatt Regency Bethesda, Open march 28, 8-8:30 a.m.

Cytokines and Their Receptors--April 1-7, Keystone, CO. Contact Keystone Symposia, 2032 Armacost Ave., Los Angeles, CA 90025, phone 213/207-5042.

National Council on Radiation Protection & Measurements Annual Meeting--April 3-4, Washington. Contact NCRP, 301/657-2652.

Cancer Management Course--April 5-6, Charleston, SC. Contact Dr. Frederick Greene, ACOS, Cancer Dept., E. Erie St., Chicago, IL 60611, phone 312/664-4050.

Leukemia: Advances in Biology and Therapy--April 6-12, Big Sky, MT. Contact Keystone Symposia, 2032 Armacost Ave., Los Angeles, CA 90025, phone 213/207-5042.

Recent Advances in Cellular Growth & Malignancy--April 8-9, Boston, MA. Contact Corinne Servily, Coordinating Council for Cancer Research, 555 Madison Ave., Ste. 2900, New York, NY 10022, phone 212/319-6920.

Integration of Molecular Genetics Into Cancer Management--April 10-12, Miami, FL. Contact American Cancer Society, 404/329-7712.

International Conference on Smokeless Tobacco: Tobacco & Health--April 10-13, Columbus, OH. Contact Ohio State Univ. Office of Continuing Education, 614/292-8571.

Ultrasound & Prostate Cancer: New Directions 1991--April 11-13, Mobile, AL. Contact DCMI, PO Box 2508, Ann Arbor, MI 48106, phone 313/665-2535 or 800/458-2535.

Gynecologic Oncology Symposium--April 11-13, Baltimore, MD, Hyatt Regency Inner Harbor. Contact Johns Hopkins Medical Institutions, Office of Continuing Medical Education, Turner Bldg., 720 Rutland Ave., Baltimore, MD 21205, phone 301/955-2959.

Cambridge Conference on Breast Cancer Screening--April 15-17, Cambridge, UK. Contact Marie Curie Memorial Foundation, Education Dept., 11 Lyndhurst Gardens, London NW3 5NS, UK.

Frederick Cancer Research & Development Center Advisory Committee--April 16-17, FCRDC Bldg. 549 Executive Board Rm. Open 8:30-9 a.m. April 16.

Quality of Life Issues--April 17, Cleveland, OH. Contact Ireland Cancer Center, 2074 Abington Rd., Cleveland, OH 44106, phone 216/844-7858.

Photodynamic Therapy--April 18-19, Knoxville, TN. Contact Jean Sylwester, education coordinator, Thompson Cancer Survival Center, phone 615/541-1749.

Cancers of the Skin 4th World Congress--April 18-20, New York City. Contact Roberto Fuenmayor, CME Office, Memorial Sloan-Kettering Cancer Center, 1275 York Ave., New York, NY 10021, phone 212/639-6754.

Minority Conference--April 18-20, Houston, TX. Contact Jeff Rasco, M.D. Anderson Cancer Center, phone 713/792-2222.

Gene Transplant Therapy--April 19, Memphis, TN. Contact Dr. James Hamner, Forum Director, Univ. of Tennessee, 847 Monroe, Suite 235, Memphis, TN 38163, phone 901/528-6354.

Cancer Management Course--April 22-23, Santiago, Chile. Contact Dr. Juan Arrazota, ACOS Cancer Dept., 55 E. Erie St., Chicago, IL 60611, phone 312/664-4050.

Neoplastic Transformation in Human Cell Systems in Vitro: Mechanism of Carcinogenesis--April 25-26, Washington. Contact Mary Smith, Georgetown Univ. Medical Center, phone 202/687-2144.

Heatopoietic Cell Regulation and its Clinical Application in Bone Marrow Transplantation--April 26-27, Detroit, MI. Contact Dr. Lyle Sensenbrenner, Div. of Hematology & Oncology, Dept. of Medicine, Wayne State Univ., PO Box 02188, Detroit, MI 48202, phone 313/745-8853.

National Assn. of Oncology Social Workers Annual Conference--April 28-May 1, Monterey, CA. Contact Christina Blanchard, Div. of Medical Oncology A-52, Albany Medical College, Albany, NY 12208, phone 518/459-0703.

Bethesda System for Reporting Cervical/Vaginal Cytologic Diagnoses--April 29-30, NIH, Lister Hill Center. Contact Dr. Diane Solomon, Chief, Cytopathology Section, NCI, phone 301/496-6355.

Future Meetings

American Roentgen Ray Society Annual Meeting--May 5-10, Boston, MA. Contact ARRS, 1891 Preston White Dr., Reston, VA 22091, phone 703/648-8992.

Interventional Procedures for Breast Cancer Diagnosis--June 17-19, Hilton Head, SC. Contact Siemens Medical Systems Inc., Mammography Group, Conference Planning, 125 North Executive Dr. Suite 302, Brookfield, WI 53005, phone 414/784-1455.

International Consultation on Benign Prostatic Hypertrophy--June 26-27, Paris, France. Contact Dr. S. Khoury, Clinique Urologique, Hopital de la Pitie, 83, Bd de l'Hopital, 75634 Paris Cedex 13, France, phone 33(1)45.70.38.62, fax 33(1)45.70.30.78.

Breast Disease: Diagnostic Imaging & Current Management--July 14-17, Grand Traverse Village, MI. Contact Angela Voeller, Office of Continuing Medical Education, G-1100 Towsley Center Box 0201, Univ. of Michigan Medical School, Ann Arbor, MI 48109, phone 313/743-2288.

Beijing Blood Cell Growth Factors Symposium--Aug. 21-24, Beijing, China, Beijing International Hotel. Contact Dr. Ann Murphy, Hipple Cancer Research Center, 4100 South Kettering Blvd., Dayton, OH 45439-2092, phone 513/293-8508.