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THE CANCER LETTER

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Vol. 2 No. 26

June 25, 1976

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Subscription $100 per year

AACI ASKS NCI FOR BETTER DEFINITIONS OF CENTER TYPES, DEVELOPMENT OF OBJECTIVES, PRIORITIES

Expressing the feeling that centers are not playing as significant a role as they should in developing National Cancer Program policy, the American Assn. of Cancer Institutes approved a resolution at its recent meeting in Washington calling for closer ties with NCI and development of:

* Clear definitions of the types of cancer centers.
* Long range objectives for centers including cancer control, with clearly stated program priorities.
* The matching of objectives with mechanisms for funding and a budget related to program priorities.

The resolution asked that AACI representatives meet four times yearly and more frequently if necessary with the NCI director and

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In Brief

CANCER PROGRAM "GREATEST EXPERIMENT AND IT WORKS," ACS PRESIDENT TELLS CONGRESS

THE NATIONAL Cancer program is the "greatest experiment in medical research administration the world has ever known, and it works," American Cancer Society President Benjamin Byrd said in presenting arguments to Congress for 1977 NCI funds. Byrd listed five he feels support the statement that "it works": 1. Eradication of spontaneous breast tumors in lab animals by surgery plus a vaccine made with neuraminidase. 2. Development of a primate animal model for brain tumors. 3. Development of a purified carcinoembryonic antigen, CEA-S, for use in diagnosing bowel cancer. 4. Development of a machine to screen Pap smears automatically. 5. Ability to grow human lung cells in test tubes, facilitating research in etiology and treatment of lung cancer. Byrd said cancer costs Americans $25-35 billion a year in medical care and related costs and lost work time. . . . BLUE CROSS Assn.'s proposal responding to the sole source RFP on demonstration for reimbursement in cancer control was approved "enthusiastically" by the NCI review committee, according to Grace Monaco, chairman of the Cancer Control & Rehabilitation Advisory Committee's Subcommittee on Reimbursement. The contract will require an examination of literature relating to cost studies on cancer screening, to help NCI plan model screening programs. Costs of screening generally are not covered by health insurance plans, despite their value as proven by Pap tests, the breast cancer detection clinics, and others. . . . SUGGESTIONS FOR changes in the National Cancer Act when it comes up for renewal next year are starting to come in to NCI. They'll be turned over to the National Cancer Advisory Board, which will compile a list for presentation to Congress. Organizations and individuals also may make their own presentations to Congress.

AACI SEEKS CLOSER TIES WITH NCI DECISION MAKING; CRITICISM VOICED

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appropriate staff to "achieve a working liaison."

Approval of the resolution followed two days of meetings in which the members expressed growing concern over what they perceived as dwindling NCI support of centers, based on the final budget allocations for fiscal 1976 and the prospects of future limited appropriations by Congress. They also were disturbed by a variety of other factors dealing with NCI's management of the centers program.

William Shingleton, director of the Duke Univ. Comprehensive Cancer Center, summed up the discussion of problems by listing these as the issues to be resolved:

- The need for another definition of a cancer center, to go with the comprehensive and specialized definitions, and to develop a coordinated plan to recognize and support them.
- Fragmentation of support.
- How the program can obtain stability.
- How comprehensive centers can be evaluated.

Emil Frei, director of the Sidney Farber Comprehensive Cancer Center, said, "Many of our problems may be the result of progress." He said that long term stability, needed to attract good personnel, is lacking.

Timothy Talbot, president of the Fox Chase Cancer Center, said, "There are signs on the horizon that frighten us. . . . We hear [from NCI] how important centers are, yet where are they in the National Cancer Plan? . . . Program projects—I've always regarded them as a way for someone to build a fiefdom . . . Contracts and CREGs are the greatest disaster to hit the nation. I've been distressed at the low quality of some RFPs. I'm dismayed that CREGs are called grants. They're contracts."

John Yarbro, former director of the NCI centers program and now at the Univ. of Missouri, said, "The hardest, biggest, toughest problem is to put across the idea that centers may impinge on a lot of programs but that they'll help those programs." Yarbro suggested that "ultimately, AACI will have to review, certify and accredit cancer centers. If you don't, the federal government will change the priorities."

Lawrence Piette, executive director of the Univ. of Hawaii Cancer Center, said that his problem has been "not to make treaties with a medical school but reaching agreements with the community. We must depend on the community totally for our patient base."

Gordon Zubrod, director of the Univ. of Miami Comprehensive Cancer Center, said after listening to comments of NCI staff members, "I'm terribly disappointed at some responses from NCI staff. Most of the great improvements in cancer treatment have been made in centers. If we can't get some support for innovative research, we're in deep trouble. I'm disappointed there has been no mention at this meeting of the need for discretionary funds for center directors."

NCI Director Frank Rauscher addressed that issue and many of the others when he took the floor. He agreed that "one thing that sets centers apart is the ability to do innovative therapeutic research," and supported the concept of providing center directors with discretionary funds. The problem is "where do we get that money? What do we cut? Can we get it without it being at the expense of the little guy who has a grant of $70,000 a year for basic research? Some will say it inevitably will be at the expense of basic research.

"I feel there is a priority cut across the top, for the benefit of the sick person. The Cancer Program was not set up by Congress and supported by the public to see that basic researchers get all they want."

Rauscher told AACI members, "I need your candid advice. One of your jobs is to look for the holes. The program is going well in general, but programs and people are flexible and fallible. We may need to make changes, but it takes time to reprogram. . . . The amount of conflicting advice I get is enormous. We talk about more dollars for therapeutic research, but the major input from Congress right now is prevention. We have to assess opportunities. Are there opportunities going unfunded in carcinogenesis and prevention? Are there more opportunities in treatment? The answer has to be yes."

Rauscher said that the National Cancer Advisory Board and the President's Cancer Panel have taken the position that centers ought not be privileged, that they are recognized on the basis of excellence and "therefore should be able to compete on merit. However, because of demands placed by Congress, the Board NCI staff on centers, tremendous pressures are loaded on you. Maybe we ought to bit the bullet and say, yes, centers are privileged, Then what do we do? Simply provide more money for core grants, or discretionary funds for directors?"

Rauscher indicated he would welcome closer AACI participation in NCI decision making, inviting representatives to attend meetings of the NCI executive committee.

The President's Cancer Panel met a few days after the AACI gathering, and Chairman Benno Schmidt commented on some of the criticisms and suggestions offered by center directors.

"I don't see how the centers program can be viewed as a weak spot in the National Cancer Program," Schmidt said. "I do see that there's not going to be enough money to expand the comprehensive cancer center program rapidly. We just have to live with that. That creates a certain amount of unfairness. Some centers who got in early may not be any better than some of those waiting. . . .

"You might get some differences of opinion within the centers over the suggestion to provide discretion-

ary funds to center directors rather than directly to those talented individuals in the centers," Schmidt said.

"That's an excellent point," commented Vincent DeVita, director of the Div. of Cancer Treatment.

Thomas King, director of the Div. of Cancer Research Resources & Centers, reported that the final allocations for centers in the 1976 budget total $129.5 million. That breaks down to $37 million for core grants, $3 million for exploratory grants, $44 million for clinical program project grants and $45.5 million for basic program project grants. Those figures do not include construction and cancer control grants, nor do they include grants and contracts awarded to individual investigators at the centers.

Simeon Cantril will leave at the end of this month as director of the centers program, a position he has held for a year. William Walter, DCRRC deputy director, will serve as acting director for centers while NCI attempts to recruit someone for the position on a permanent basis.

Before Cantril left, he put together a staff progress report on planning and evaluation for the centers program which included recommendations for new classification and distribution of cancer centers. Many of his recommendations were addressed to issues raised by the center directors. A summary of Cantril's report will appear next week in ***The Cancer Letter.***

SHUBIK NAMED TO ANOTHER NCAB TERM IN SURPRISE MOVE; AMOS REAPPOINTED

Philippe Shubik, who has stepped on more than a few toes during his tenure on the National Cancer Advisory Board, has been reappointed for another term despite some opposition from members of Congress who have contended his leadership in environmental carcinogenesis has been influenced by a conflict of interest.

NCAB Chairman Jonathan Rhoads, Cancer Panel Chairman Benno Schmidt and NCI Director Frank Rauscher have ignored those charges and have relied heavily on Shubik in developing NCI's efforts in the environmental carcinogenesis field. Shubik chaired the NCAB subcommittee which has just finished writing a document on criteria for assessing the carcinogenicity of chemicals which is destined to be a landmark in regulation of cancer causing substances.

Harold Amos, professor of Microbiology and Molecular Genetics at Harvard, was also named to another term. Amos' reappointment had been expected.

New scientific members are Henry Pitot, director of the McArdle Laboratory at the Univ. of Wisconsin, and Bruce Ames, Univ. of California (Berkeley), who developed the promising in vitro mutagenesis test for carcinogenesis.

New public members are Mrs. Marie Lombardi, widow of the famed football coach who died of cancer in 1970, and Fred Seitz, president of Rockefeller Univ. Morris Schrier, vice president of the Music Corp. of America, is another new public member, filling out the term of former Sen. Norris Cotton.

Rhoads, who has been chairman of the Board since it was established by the National Cancer Act, was reappointed to another two-year term.

RAUSCHER DECISION PUT OFF TO JULY 15; ADMINISTRATION SUPPORTS PAY INCREASE

The days to a decision are dwindling down to a precious few for Frank Rauscher as he waits hopefully for Congress to decide whether or not to give him a raise.

Rauscher first had set June 1 as the date when he would have to decide whether or not to stay as NCI director or accept one of several offers from industry and elsewhere. He then moved that back to June 30 when it seemed as if Paul Rogers, chairman of the House Health Subcommittee would go ahead with some kind of a pay increase measure.

Rogers last week held hearings on four bills relating to HEW and NIH salaries, including one that would increase Rauscher's pay from $37,800 to $52,000. The Administration opposed the others but supported the increase for Rauscher.

That's where it stands now. The bill still will have to clear the full House Commerce Committee, go to the floor and if passed, to the Senate.

Rauscher said he will stay for at least a year if it becomes likely that Congress will approve it. But he says he can't wait any longer than July 15. "If I leave, I'll have to sell my house and get moved before school starts. I don't see how I can wait any longer," he said.

Rauscher made one decision last week. He turned down the offer from Whittaker Corp., passing up a six-figure salary and a tempting list of perquisites primarily because the job, heading up a new Life Sciences Div., would have entailed too much travel.

He is now leaning to an offer from the American Cancer Society to become senior vice president for basic research. "That's the only job in the cancer field I could ethically accept," Rauscher said.

But he would rather remain where he is. It's entirely up to Congress if he will.

NEW GAO REPORT CRITICIZES GOVERNMENT ENVIRONMENTAL CARCINOGENESIS EFFORT

Another report by the General Accounting Office touching on the cancer program has been released, this one criticizing the federal government's efforts in environmental carcinogenesis.

The report criticizes the lack of guidelines and a coordinated federal policy for dealing with the problem. It insists that, HEW's objections to the contrary, NCI should assume the leadership and coordinate efforts of every federal agency involved. It recommends that FDA test all food additives, those now approved for use as well as new ones, for carcinogenic potential. And it asks Congress to consider legislation authorizing control of hazardous ingredients in cigarettes.

The summary of the report's findings and recommendations:

"Although up to 90% of human cancer, according to some scientists, is environmentally caused and controllable, federal efforts to protect the public from cancer causing chemicals have not been very effective.

"Many chemicals cause cancer in animals, but federal agencies have trouble determining which also pose a cancer threat for humans because:

"–There are no generally accepted principles concerning environmental causes of cancer.

"–There are no uniform minimum guidelines for testing.

"–Test data are not always complete or appropriate.

"–Scientists cannot accurately predict human response to chemicals on the bais of animal test results.

"NCI is responsible for directing federal efforts and should, with the cooperation of other involved federal agencies, develop a uniform federal policy for identifying and regulating cancer causing chemicals.

"The policy should at least cover:

"–The information needed to regulate cancer causing chemicals.

"–Which chemicals should be tested in animals.

"–How tests should be conducted.

"–How results should be evaluated.

"–How human risk can be assessed from animal studies.

"–What factors other than public health should agencies consider.

"Although HEW agrees that a federal policy is needed, it does not agree that a formal effort, headed by NCI, is necessary. GAO believes a federal policy can only be developed with the active support of every involved federal agency, and the NCI director, as head of the National Cancer Program, should coordinate these efforts.

"GAO is also recommending that FDA have all approved and proposed food additives tested for their cancer causing potential because it had not been requiring data from such tests when the additives were unintentionally added to the food in amounts less than 1 or 2 parts per million. HEW disagrees, saying the risk of cancer is remote and the costs for testing would be substantial.

"Tobacco and tobacco products are on NCI's list of known human carcinogens. For the last two years, the HEW secretary has recommended that Congress give the Executive Branch authority to control hazardous ingredients in cigarettes, such as tar and nicotine.

"GAO suggests that Congress request HEW to prepare a study showing the available options for regulating tobacco products, and the impact each option would have on the rising U.S. lung cancer rate; and then consider giving HEW or some other appropriate agency the specific authority to regulate tobacco and tobacco products."

HERE'S HOW NCI WOULD SPEND FY 1978 FUNDS AT $955 MILLION, $1.07 BILLION

NCI's budget projections for each program area in 1978 fiscal year were reported in part last week in ***The Cancer Letter.*** The projections listed projects that would be started or expanded if funds were available in two categories–a mid-level figure of $955 million and an upper-level figure of $1.073 billion. The estimates assumed that 1978 spending would start from a base of fiscal 1977 spending of $845 million. Actually, the 1977 appropriation will be closer to $815 million.

The projections reported last week ended with the mid-level estimates for projects in preclinical treatment research. Upper-level projections (if $1.073 billion is the total NCI 1978 appropriation) for preclinical treatment research, and the other budget projections, follow:

Preclinical treatment research

Upper-Level–Increase of 16 positions and $13.2 million over the 1978 mid-level estimate.

Additional resources at the upper-level would permit: 1) the target site specific delivery systems in cancer chemotherapy; 2) the development of analogs of anticancer drugs; 3) the radiation sensitizer analog synthesis program; and 4) the broad spectrum secondary screen and human tumor xenograft screens.

Biologic studies involving virus research as it pertains to cancer treatment would be pursued to include the applicability of an assay for the selective growth of myelogenous leukemia leukocytes in soft agar as a screening, diagnostic procedure for predicting relapse of myelogenous leukemia patients; and the development of a dog model for studying the pathogenesis of virus in humans, specifically to determine if the BaEV virus from human leukemia cells will produce tumors in vivo–this will perhaps lead to the development of antibodies in dogs to BaEV and its components.

Expansion of and facilities for high risk virus experimentation would be made to study the molecular mechanism of viral oncogenesis, nondefective Adeno 2-SV40 hybrid viruses, the Epstein-Barr virus, and the AKR marine leukemia virus. In addition, high risk recombinant DNA experiments as they relate to leukemia are also planned.

Laboratory methods for prediction of effects of multi-modal therapy, e.g., chemotherapy and surgery; chemotherapy and immunotherapy; chemotherapy and radiation would be initiated.

Research would be conducted on enzymatic patterns and requirements of normal and neoplastic cells.

Interferon would be produced in large enough quantities for clinical evaluation and thorough evaluation of interferon-inducers would be carried out.

6. Clinical Treatment Research. Mid-Level–Increase of 29 positions and $21.9 million over the 1977 estimate of 345 positions and $133 million.

A selected group of cancer centers and universities would provide surgery, radiotherapy, chemotherapy, immunotherapy and pathology of highly sophisticated combined modality protocols to improve the cure rate in various cancer diseases including lung cancer, pancreatic cancer, ovarian cancer, prostate, and kidney. Particular emphasis would be in the application of immunotherapy and immunostimulants as adjuvant therapy in combination with drugs in advanced diseases.

In radiotherapy, research would be conducted to computerize radiotherapy treatment planning, computer dose calculations, and operate treatment equipment. With an increase in the curative potential of chemotherapy and adjuvant therapy, especially in breast cancer and osteosarcoma, there is an increased risk of development of secondary neoplasia. For example, intensive radiotherapy plus combination chemotherapy in the treatment of Hodgkin's disease has led to an increased incidence of secondary neoplasms over that expected. However, the assessment of these effects in man has been difficult since many reports of secondary tumors in man after treatment of primary tumors are anecdotal and make no reference to total population treated or to a matched population of historical controls before the advent of therapy. It thus becomes of increasing importance to establish a monitoring system for patients undergoing such therapy to assess the potential for secondary malignancies.

Studies would be initiated in the application of ...t therapy as an adjunct to chemotherapy.

Further coordination and data analysis of clinical trials would be established to include: (a) computerization of Phase II/III studies for quick update of clinical trials results with analysis of drug activity, disease responsiveness, and survival in various combined modality treatments; (b) development of an archive of information pertinent to clinical cooperative groups, specifically information such as data from abolished groups, registries of long-term survivors, complications of combined modality, and therapy; (c) center for coordination, monitoring, and data analysis of studies done where ample patient resources exist, but where there is not adequate support for the analysis.

Preliminary clinical studies of neutron therapy and preclinical studies related to proton, pion and neutron therapy would proceed.

Studies to improve life support systems of patients undergoing vigorous treatment would be initiated.

The use and supply of new investigational drugs developed by NCI and other institutions are necessary to complement the increase of clinical studies.

Upper-Level—Increase of 27 positions and $17.5 million over the 1978 mid-level estimate.

Greater emphasis would be placed on advanced disease using immunotherapy and immunostimulants as an adjuvant therapy in combination with drugs. Exploratory studies of immunostimulation to enhance patients' immunosurveillance mechanisms with the aim of preventing or reducing dissemination of tumor would be initiated.

Trials with chemotherapeutic agents in patients diagnosed early rather than late, to see if the drugs are effective with fewer deleterious effects in less debilitated patients would be pursued. Studies in the application of heat therapy as an adjuvant to chemotherapy would be expanded. Comparative clinical studies would be done to improve present surgical approaches.

There is a strong requirement for fluoroscopic capability in the operating rooms for angiographic perfusion studies in humans. Fluoroscopy and endoscopy capabilities would be developed in the NIH Clinical Center.

The psychological and sociological evaluation studies of pediatric cancer patients would be expanded to include video equipment to record interviews for teaching purposes.

Video disc has already been shown capable of storing with high resolution pictorial information (x-rays, scans, etc.). The development of improved technology, rapid retrieval, multiple accessing, and detailed analysis would allow rapid evaluation of sequential testing. The acoustic microscope is a feasible instrument in the field of hematology for further definitions of malignant cells. Appropriate resolution can be obtained and further evaluation and development of this approach should be pursued.

7. Rehabilitation Research. Mid-Level—Increase of $437,000 over the 1977 estimate of one position and $1.9 million.

Expand research in developing and implementing protocols to improve multitherapeutic approaches to pain management including the foundation of cooperative groups of neurosurgeons to study the pain problems of cancer patients.

Upper-Level—Increase of $261,000 over the 1978 mid-level estimate.

Initiate additional investigations into the character of psychological stress experienced by cancer patients with particular emphasis on children, adolescents and their families.

Cancer Biology

1. Epidemiology. Mid-Level—Increase of $197,000 over the 1977 estimate of $823,000.

The abnormalities in cellular immunologic and metabolic parameters in population at increased risk would be analyzed.

Upper-Level—Increase of one position and $310,000 over the 1978 mid-level estimate.

2. Carcinogenesis (Physical and Chemical). Mid-Level—Increase of one position and $1.5 million over the 1977 estimate of seven positions and $12.4 million.

New and expanded studies on the characteristic biochemistry of the cancer cell and on the biochem-

ical comparisons between normal and tumor tissues would include endocrine related biochemistry and enzyme changes associated with cancer and comparisons of normal and tumor tissues with respect to protein synthesis, RNA processing and steroid metabolism.

Development of highly sensitive biochemical approaches that may lead to early detection of cancer would begin.

Upper-Level—Increase of $838,000 over the 1978 mid-level estimate.

Additional emphasis would be placed on the effects of carcinogens and cocarcinogens in cell membranes and energy metabolism in normal and tumor cells. Studies of pathogenesis in relation to carcinogenesis and the use of carcinogenic agents to produce better animal tissue culture and organ culture models would be further enhanced.

3. Viral Oncology. Mid-Level—Increase of $895,000 over the 1977 estimate of two positions and $8.1 million.

Research would be supported to develop a knowledge of the mechanism and regulation of genetic information.

Upper-Level—Increase of one position and $531,000 over the 1978 mid-level estimate.

4. Nutrition. Mid-Level—Increase of $226,000 over the 1977 estimate of $284,000.

New studies would be initiated to determine the effect of dietary fat type and level on spontaneous and chemically induced cancers.

Upper-Level—Increase of $277,000 over the 1978 mid-level estimate.

Additional studies would explore the effect of dietary protein type and level on spontaneous and chemically induced cancers.

5. Tumor Biology. Mid-Level—Increase of 12 positions and $8.2 million over the 1977 estimate of 286 positions and $66.4 million.

A number of specific but underdeveloped areas would receive greater emphasis including the investigations and comparison of the hormonal regulations of gene expression, expanded research on the molecular basis of the loss of "contact inhibition" in cancer cells, and studies exploring time-dose-volume relationships of radiation and normal tissue tolerance and damage by radiation. New approaches to understanding cell surface membranes and more effective model systems would be developed.

Upper-Level—Increase of nine positions and $5.2 million over the 1978 mid-level estimate.

Research at the cellular level on tumor spread and metastasis formation in breast cancer would be provided. Studies involving radiation sensitizers, hyperthermia and nutritional control of tumorigenesis and metastasis would be performed. New economical procedures for diagnosis and therapy of cancers would be developed by the determination of the basic phenotypic properties and molecular composition of preneoplastic and neoplastic tissues and sera.

Other areas of emphasis would include the description, characterization and sites of actions of serum factors responsible for the maintenance and loss of cell growth control; identification of those specific chromosomes and their gene products that are responsible for cancer through the use of somatic cell genetics and on the designs of specific chemotherapeutic agents through the purification and structural characterization of enzymes essential for cell proliferation.

6. Immunology—Mid-Level—Increase of three positions and $3.7 million over the 1977 estimate of 135 positions and $36 million.

Immunogenetics, an area of high program priority, would receive emphasis because of recent evidence suggesting that tumor antigens may represent modified histocompatibility antigens and other evidence supporting the idea that immunologic responsiveness to tumor-specific antigens is genetically controlled; as well as analytical cellular immunology since increased understanding of the nature of the cellular response to antigens is critical in developing effective immunotherapeutic responses.

Other areas of continuing efforts would be the determination of the basis for spontaneous ranking of human target cells by lymphocytes in culture, the exploration of the mechanisms responsible for modulation of the immune response by antibody, and the determination of the basis for the low immunogenicity of most spontaneous tumors.

Upper-Level—Increase of two positions and $2.6 million over the 1978 mid-level estimate.

Additional areas of emphasis would include the development of simplified in vitro systems to explore complex problems in immunobiology and the development of more appropriate animal tumor models using tumors of low immunogenicity.

7. Clinical Treatment Research—Mid-Level—Increase of $214,000 over the 1977 estimate of two positions and $2.4 million.

Upper Level—Increase of $198,000 over the 1978 mid-level estimate.

Cancer Centers Support

Mid-Level—Increase of two positions and $4.8 million over the 1977 estimate of 26 positions and $47.1 million.

There would be sufficient funds to allow for continuation of on-going core grants. No new core grants would be awarded. One new exploratory project could be awarded at this level.

Upper-Level—Increase of two positions and $7 million over the 1978 mid-level estimate.

This level would allow funding of seven new core grants and provide a better geographic distribution of multidisciplinary coordinated cancer centers and permit the initiation of a data management system in three or four comprehensive centers.

An additional six high priority exploratory proj-

cts would be funded.

Research Manpower Development

Clinical Education Grants. Mid-Level—Increase of one position and $2 million over the 1977 estimate of [illegible] positions and $9.5 million. Funding of 10 new applications would be permitted.

Upper-Level—Increase of $2.8 million over the 1978 mid-level estimate. This level would allow for the funding of 23 additional applications.

Institutional Fellowship Awards. Mid-Level—Increase of one position and $2.7 million over the 1977 estimate of eight positions and $14.3 million. Support of 18 more institutional research programs would be provided.

Upper-Level—Increase of one position and $3 million over the 1978 mid-level estimate. An additional 31 awards would be made.

Individual Fellowship Awards. Mid-Level—Increase of $898,000 over the 1977 estimate of three positions and $4.8 million. Sixty-one of the expected 500 approved applications would be funded.

Upper-Level—Increase of $1 million over the 1978 mid-level estimate. An additional 72 individual fellowships would be awarded.

Research Career Development. Mid-Level—Increase of $360,000 over the 1977 estimate of two positions and $3.4 million. Seventeen additional applications would be awarded.

Upper-Level—Increase of $375,000 over the 1978 mid-level estimate. An additional 17 awards would be made.

Construction

Mid-Level—Increase of $5 million over the 1977 estimate of 14 positions and $25.8 million.

Construction grants and contracts would be used for biohazard space relevant to recombinant DNA research, containment of chemical carcinogens, and for the mandatory containment of viral oncogens. Alteration projects for existing laboratory facilities for new and existing research programs in environmental and chemical carcinogenesis would be possible. Because of new and rapidly expanding emphasis in the environmental and chemical carcinogenesis areas, the available university facilities need remodeling to meet OSHA safety standards so that NCI-sponsored research can be safely accomplished.

New construction and renovation projects for cancer research centers would be supported as well as the modernization and renovation of facilities on the NIH campus and other federal facilities including the Frederick Cancer Research Center.

Upper-Level—Increase of one position and $15 million over the 1978 mid-level estimate.

Within the High LET Radiation Therapy Program, NCI anticipates supporting the installation of several large therapy machines including specially shielded buildings.

Cancer Control

1. Prevention. Mid-Level—Increase of four positions and $3 million over the 1977 estimate of seven positions and $6.1 million.

Develop programs toward preventive health care and psychological problems. Develop radiologic education programs to improve radiologic techniques in screening at community hospitals.

Upper-Level—Increase of three positions and $2.4 million over the 1978 mid-level estimate.

Expand the environmental prevention activities in comprehensive cancer centers and community based programs.

2. Detection, Diagnosis, and Pretreatment Evaluation. Mid-Level—Increase of two positions and $1.6 million over the 1977 estimate of 39 positions and $28.3 million.

Develop programs to demonstrate methods for obtaining reimbursement from third party payers for cancer detection. Determine validity of screening programs based on risk assessment using known epidemiologic data for specific cancers combined with personal attributes, hereditary factors and possible high risk exposures to known carcinogens.

Upper-Level—Increase of three positions and $1.9 million over the 1978 mid-level estimate.

Develop screening activities in selected community based programs and center programs to include an emphasis in colo-rectal screening that is commensurate with the expected state-of-the-art procedures and methodologies. Initiate the programs providing pathology reference for diagnosis and staging to obtain more uniform, high quality diagnostic routines at the community hospital level.

3. Treatment, Rehabilitation, and Continuing Care. Mid-Level—Increase of four positions and $3.7 million over the 1977 estimate of 31 positions and $28.6 million.

Expand programs to incorporate interdisciplinary care at the community level through the community-based program and cancer centers. Expand the field tests of the hospice concept for at-home and in-family supportive care for terminal patients. Increase cancer control in Clinical Cooperative Groups which are being initiated in FY 1977 to provide for improving treatment in the community hospital through patient management protocols, educational programs, and consultation provided by these leaders in the regions.

Upper-Level—Increase of six positions and $4.1 million over the 1978 mid-level estimate.

Implement programs in the treatment of cancers of children and adolescents to provide demonstrations of patient management protocols and outreach to community-level physicians for the cancer treatment of neuro blastoma, osteosarcoma and soft tissue sarcoma. Expand rehabilitation in the host-maintenance areas through evaluations of the use of interdisciplinary approaches of pain management, hyperalimentation, and adjuvant therapies in rehabilitation.

RFPs AVAILABLE

Requests for proposal described here pertain to contracts planned for award by the National Cancer Institute, unless otherwise noted. Write to the Contracting Officer or Contract Specialist for copies of the RFP. Some listings will show the phone number of the Contract Specialist, who will respond to questions about the RFP. Contract Sections for the Cause & Prevention and Biology & Diagnosis Divisions are located at: NCI, Landow Bldg. NIH, Bethesda, Md. 20014; for the Treatment and Control Divisions at NCI, Blair Bldg., 8300 Colesville Rd., Silver Spring, Md. 20910. All requests for copies of RFPs should cite the RFP number. The deadline date shown for each listing is the final day for receipt of the completed proposal unless otherwise indicated.

RFP NCI-CM-67092

Title: *Prepare the cancer therapy abstracts*
Deadline: *Late July*

Volumes Nos. 18, 19 and 20, covering pertinent literature appearing from 1 Dec. 76 through 31 Dec. 79. Each volume will consist of 12 issues (11 issues will be acceptable), and shall contain approximately the following: a. 4,700 concise and informative abstracts, b. 650 brief annotations, c. 650 citations (not less than, but no more than 715), and d. Subject and author indexes to be contained in each monthly issue. The final cumulative index for each volume shall be provided in the last monthly issue. The proposed contract will be awarded on a fixed price basis.

Contract Officer: George Summers
Cancer Treatment
301-427-7463

CONTRACT AWARDS

Title: Purification of human tumor associated antigens
Contractors: Eastern Virginia Medical School, Norfolk, $84,000; Scripps Clinic & Research Foundation, $138,058; and Medical Research Foundation of Oregon, $71,600.

Title: Cells involved in the immune response to tumors
Contractors: Karolinska Institutet, Stockholm, $39,500, and Sloan-Kettering, $68,940.

Title: Antibodies to human organ or tissue associated antigens
Contractor: Vanderbilt Univ., $93,535.

Title: Animal models for circulating antigens
Contractor: Univ. of Iowa, $96,113.

Title: Isolation and characterization of human peripheral
Contractor: Univ. of Colorado (Denver), $45,653.

Title: Detection of circulating antigen-antibody complexes in cancer
Contractor: Scripps Clinic & Research Foundation, $106,391.

Title: Preparation of reagent antisera and antigens
Contractor: National Jewish Hospital & Research Center, Denver, $72,595.

Title: Tumor associated antigens of the G.I. tract
Contractor: Massachusetts General Hospital, $64,[illegible]

Title: Search for new antigens in carcinoma of the lung
Contractor: West Virginia Univ., $123,400.

Title: Cells involved in the immune response to tumors
Contractor: Brandeis Univ., $31,161.

Title: Identification, separation, quantification, and characterization of lymphocytes and macrophages
Contractor: MIT, $108,933.

Title: Immunogenicity of "spontaneous" animal tumors
Contractor: Pennsylvania State Univ., $57,608.

Title: Study of human tumor associated antigens and corresponding antibodies
Contractor: Sloan-Kettering Institute, $84,973.

Title: Macrophage assay for malignant disease
Contractor: New York State Dept. of Health, $26,368.

Title: Study of epidemiology and geographic pathology of cancer
Contractor: Louisiana State Univ., $201,820.

SOLE SOURCE NEGOTIATIONS

Proposals are listed here for information purposes only. RFPs are not available.

Title: Support for a cancer surveillance system
Contractor: Fred Hutchinson Cancer Center.

Title: Large scale tissue culture production of tumor viruses
Contractor: Pfizer Inc.

Title: Collection of large quantities of human milk
Contractor: Michigan Cancer Foundation.

Title: Studies on immunology of murine leukemia virus infection
Contractor: New England Medical Center Hospital.

The Cancer Letter—*Editor* JERRY D. BOYD

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