THE CANCER NEWSLETTER

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NCI "RESCUES" 31 GRANTS FROM OTHER INSTITUTES, FUNDS THEM AT $1.6 MILLION; SCORES WERE 148-270

Thirty-one grant applications destined for the "approved but unfunded" category were rescued from other NIH institutes and funded by NCI in the 1974 fiscal year. The awards totaled $1.6 million.

All of the applications involved research in basic science which conceivably could have some bearing on cancer. The Div. of Research Grants originally felt they more properly belonged with other institutes, however -- until it was apparent that the less-favored institutes would not have the money to fund them.

The 31 had been assigned priority scores in the inverted NIH scoring system of 148 to 270. This compares with the average score of NCI grants of 265 in 1974. Average scores for other institutes included Neurology, 250; Allergy, 220; General Medical Sciences, 205; Heart & Lung, 260; and Child Health, 286.

NCI was able to fund 61% of its approved competing grant applica-

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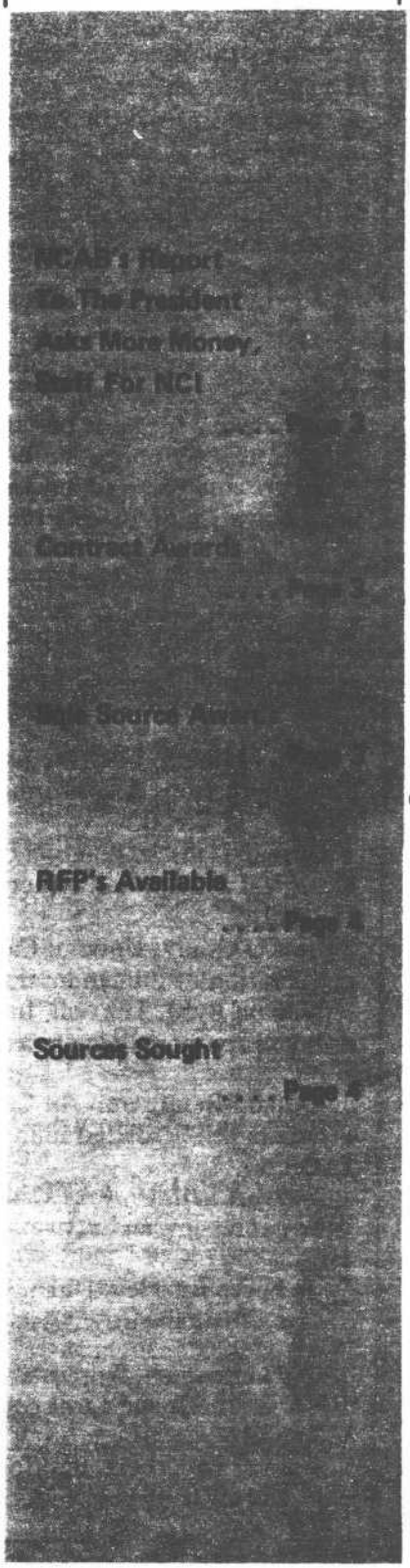
In Brief

NEARLY ONE-THIRD OF CANCER RADIOTHERAPY FACILITIES USE OUTDATED METHODS -- CLARK

EIGHT HUNDRED of the 2,600 cancer treatment facilities in the U.S. which perform radiotherapy are using obsolete x-ray techniques, according to Lee Clark, president of the Univ. of Texas System Cancer Center and member of the President's Cancer Panel. NCI's $1.5 million grant to the American College of Radiology to evaluate existing methods and to establish radiation treatment guidelines (*The Cancer Newsletter*, April 26) is aimed at reducing that number. Simon Kramer of Jefferson Univ. heads the three-year program . . . . **FEARS** that new and uncontrollable microorganisms could result from experiments in genetic manipulation of bacteria prompted NCI to offer its Bethesda and Frederick facilities for studies to determine if such a hazard does exist. Representatives of NIH institutes, meeting after the National Academy of Sciences group headed by Paul Berg called for suspension of these experiments, decided that NCI should proceed with a program to assess the extent of the danger, and to determine what should be done about it. "We (NCI) thought it should be an HEW effort because of the broad implications," NCI Cause & Prevention Director James Peters said. The NIH group felt it would take too long to get anything moving through the HEW bureaucracy and insisted NCI take on the job. NCI Director Frank Rauscher told the Cancer Panel, "The thing about this that is so frightening is that the technique is so simple." Peters added, "It could be done by a high school student." The possible implications on biological warfare, which the U.S. has renounced, are also a problem. Peters said that Russia has elevated research on genetic manipulation and all microbiology to the highest level.



NCI RESCUES 31 GRANTS OTHER INSTITUTES COULD NOT FUND, WORTH $1.6 MILLION

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tions in 1974, up from 55% the previous year. This was well above the average for NIH of 50%, although not the highest. The Neurology institute managed to fund 79% of its approved applications, compared with only 30% in 1973.

Funding of grants is sometimes cyclic, since most grants represent three-year commitments. Unless an institute's funds are increased substantially two years in a row, a larger percentage of the grant money will be required to fund the noncompeting renewals. This has not been the case at NCI thanks to the huge budget growth since 1971. NCI expects to fund about 65% of its approved grants in fiscal 1975, based on the amount in the House-approved appropriations bill.

The list of 31 grants switched to NCI for support was reported to the President's Cancer Panel after Panel Chairman Benno Schmidt asked for it in response to criticism that NCI was not doing enough to help make up for basic research cuts at other institutes caused by budget reductions. Schmidt also asked for and received a list of investigators at cancer centers who are receiving traditional grant support. Critics had contended that scientists working at centers were not up to the caliber of other investigators, and Schmidt hoped to show that this is not the case.

The 31 grants picked up by NCI were (original institute assignment in parentheses):

Irvin Isenberg, Institute for Cancer Research, Histone interactions & conformation studies, $68,797 (General Medical).

Corwin Hansch, Pomona College, Correlation of biological activity and structure, $94,546 (General Medical).

Lois O'Grady, Univ. of California at Davis, Cryopreservation of human marrow, $29,729 (Arthritis).

William Byrd, The Salk Inst., T-T cell collaboration and tumor cell destruction, $69,480 (Allergy).

Donald Raidt, Univ. of California, Regulatory events in cell-mediated immune responses, $35,105 (Allergy).

Stewart Sell, Univ. of California, Lymphocytes: gene expression and activation events, $43,386 (Allergy).

Rebecca Buckley, Duke, Induction and characterization of enhancing antibody, $93,942 (Allergy).

Jay Greenberg, Worcester Foundation, Messenger RNA synthesis and turnover in tumor cells, $44,380, (General Medical).

Joshua Lederberg, Stanford, Genetics of bacteria, $86,320 (Allergy).

John Keller, Univ. of Washington, Biochemistry of herpes virus-induced cell fusion, $48,200 (Allergy).

Peter Stang, Univ. of Utah, Vinyl trifluoromethanesulfonate chemistry, $61,456 (Neurology).

David Perlman, Univ. of Wisconsin, Microbial metabolite inhibition of tumor B12 binding, $39,048 (Arthritis).

Ralph Zingaro, Texas A & M, Thio & seleno sugar esters of group V acids, $27,608 (Arthritis).

Catherine Kwan, Univ. of California, The processing of ribonucleic acid in eucaryotic cells, $35,886 (General Medical).

Jack Chirikjian, Georgetown Univ., RNA modifying enzymes in normal and neoplastic cells, $66,173 (General Medical).

Richard Arneson, Univ. of Tennessee, Membrane lipids in neurolastoma differentiation, $57,708 (Neurology).

Avery Sandberg, Roswell Park, Intracellular factors controlling mitotic events, $32,156 (General Medical).

Stanley Friedman, SUNY Downstate, The relationship between TRNA modification and cell growth, $38,621 (General Medical).

Richard O'Brien, Univ. of Southern California, Defective DHA in Fanconi's anemia, $48,846 (Arthritis).

Susumu Ohno, City of Hope, Sex chromosomes of cells, $42,061 (Child Health).

Paul Hollenberg, Northwestern Univ., Hemoprotein-catalyzed oxygen actions of carcinogens, $73,768 (General Medical).

Peter Plagemann, Univ. of Minnesota, Replication of LDH-elevating virus and mengovirus, $74,079 (Allergy).

Robert Kuntz, Soutnwest Foundation, Schistosomiasis: biology SCH haematobium complex, $59,578 (Allergy).

Mariano Tao, Univ. of Illinois, Phosphorylation of adenoviral-associated proteins, $32,496 (Allergy).

Barry Ledford, Medical Univ. of South Carolina, Serum protein synthesis by mouse hepatoma cells, $39,324 (Arthritis).

Tibor Barka, Mount Sinai, Postnatal differentiation of the submandibular gland, $46,801 (Dental).

Yong Choi, Sloan-Kettering, Recognition of tumor cells by lymphocytes, $51,405 (Allergy).

Sidney Harshman, Vanderbilt Univ., Glycoprotein agglutinins of normal and transformed cells, $45,436 (Allergy).

Harvard Reiter, Univ. of Illinois, Membrane-active inhibitors of DNA replication, $22,574 (General Medical).

George Tremblay, Univ. of Rhode Island, Pyrimidine metabolism in tissues of the rat and human, $29,042 (Arthritis).

Bruce Hudson, Stanford, Electronic and buoyant properties of ethidium and DNA, $62,209 (Allergy).

NCAB REPORT TO PRESIDENT MAKES PITCH FOR MONEY, CITES RESEARCH PROGRESS

A record or progress in most NCI program areas and descriptions of problems created for the most part by Administration policies were cited by the National Cancer Advisory Board in its annual report to the President.

The report made a strong pitch for:

– More money. "A level higher than $600 million (proposed in the fiscal 1975 budget by President Nixon for NCI) will be needed in FY 1974; the board's recommendation is $750 million. This is based on the high quality of approved research applications which cannot be funded – only 30 to 35% of those approved can be paid (from the $600 million budget); there is an even greater discrepancy between the need for construction and the funds available. There also have been significant increases in the general costs of all of the programs."

– More staff for NCI. "We direct attention particularly to NCI's need for more manpower and higher salary ceilings. A 25% increase in personnel positions is inconsistent with and damaging to a program which has expanded 250%. The institute must compete for manpower among scientists, physicians and administrators who can command much higher salaries in the private sector of the economu. Because of present salary ceilings 80 individuals at NCI earn approximately the same salary as the director."

– More training. "The board has gone on record repeatedly in favor of funds for the education and training of new investigators in cancer. The predoctoral training programs of the National Institute of General Medical Sciences have been most important for NCI and for the country as a whole. The NCI program is now focused on postdoctoral fellowships which draw many of the best minds at the height of their acuity to concentrate on the problems of cancer. We look upon such awards not primarily as training expenditures but rather as the employment of first-rate scientific talent at very modest rates. We are pleased that the latter program has been largely restored in the FY 1975 budget as proposed by the Administration and we continue to urge full restoration of the training programs at the predoctoral level."

The report called attention to the board's resolution on the hazards of cigarettes. "While there is at present no way to declare any cigarette safe, it should be possible to deny those cigarettes which are obviously high in nicotine and tar access to interstate commerce and thereby discourage their manufacture. At present neither the FDA, nor the Environmental Protection Agency has jurisdiction. FDA and EPA are specifically denied this authority. Appropriate regulatory powers should be enacted by Congress. Likewise, the advertising of cigarettes could be banned.

"While these measures would not eliminate the cigarette habit, they would reduce the dose of noxious materials inspired and provide a medium in which educational programs might have far more impact."

Among research advances cited by the report was the observation that the presence of enzyme aryl hydroxylase in patients who smoke is associated with a much higher occurrence of lung cancer than in the average smoker.

The report noted other new scientific developments reported by NCI investigators and those from labs around the U.S.:

– Discovery of proteolytic enzymes associated with cancer cells.

– Application of high linear energy transfer radiation in radiotherapy.

– Uses of molecular biology and biophysics in cancer detection and treatment.

– Relation of immunosuppression to appearance of cancer.

– Racial differences in cancer incidence and death rates.

– Detection and activation of cancer-causing chemicals.

– Evidence of viral information in human cancer cells.

– Role of polypeptide hormones and fetal proteins in cancer diagnosis.

– Localization of lung cancer by fiberoptic bronchoscopy.

– Research leading toward combined modality therapies for cancers of the breast, head and neck.

– New findings in treatment of cancer with drugs.

– Stimulation of the immune system in the hope of enhancing host resistance to cancer.

CONTRACT AWARDS

Title: Operation and maintenance of DR&D biological data processing system and ancillary support systems
Contractor: Value Engineering Co., Alexandria, Va., $829,980

SOLE SOURCE

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

Title: Investigate viral transformation and chromosome abnormalities
Contractor: The Jewish Hospital & Medical Center, Brooklyn
Title: Immunological and biochemical studies of mammalian viral oncology
Contractor: Meloy Laboratories, Springfield, Va.
Title: Spontaneous and virus induced neoplastic transformation
Contractor: Meloy Laboratories
Title: Procurement of embryonic cell lines with variable growth rates
Contractor: Litton Bionetics Inc.

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 and 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.

RFP NCI-CM-43741

Title: Synthesis of potential central nervous system anticancer agents
Deadline: Oct. 17, 1974

NCI is seeking organizations having capabilities and facilities for the synthesis of unique compounds with potential as central nervous system (CNS) antitumor agents. The objective of the project is to develop, via synthesis, potential new antineoplastic drugs which will cross the blood-brain-barrier and have activity against brain tumors and other cancers of the CNS.

Nitrosoureas should not be proposed. Experience in the proposed chemical area is required.

Fully characterized five to ten gram samples will be prepared and submitted to NCI for antitumor evaluation.

It is anticipated that this contract will involve a two or a three man-year per year effort. The principal investigator must be trained in organic chemistry, or related fields, preferably at the PhD level from an accredited school and must have extensive experience in the synthesis of CNS antitumor agents.

RFP available on or about Sept. 3.

Contract Specialist: S. R. Gane
Cancer Treatment
301-427-7463

RFP NCI-CM-43758

Title: Synthesis of anthracyclene antitumor agents
Deadline: Oct. 15, 1974

NCI is seeking organizations having capabilities and facilities for the synthesis of unique compounds related to the anthracyclene antibiotics (e.g., adriamycin, etc.). The objectives of this project fall into the following three categories.

(1) Design and synthesis of natural and fraudulent aglycones related to adriamycinone.

(2) Design and synthesis of fraudulent sugars related to daunosamine.

(3) Synthetic modifications of adriamycin (proposals in this category must show a source for adriamycin and how dependable the supply is).

Proposed projects concerning the conversion of daunomycin to adriamycin must include a source of supply for daunomycin.

All three categories will require that fully characterized one to two gram samples will be prepared and submitted to NCI for antitumor evaluation.

Organizations may respond in any one or more of the three categories specified above.

The required minimum staffing level for each category will be three technical man years. The principal investigator must be trained in organic chemistry, or related fields, preferably at the PhD level from an accredited school and must have extensive experience in the category or categories in which work is proposed. The principal investigator must be assigned to the contract not less than 20% of his time.

RFP will be available on or about Aug. 29.

Contract Specialist: W. T. Harris
Cancer Treatment
301-427-7463

SOURCES SOUGHT

The following synopsis was released by the Air Force under the sponsorship of the 6470th Aerospace Medical Research Laboratory. Direct responses to Lt. Col. J. Winstead, phone number 513-255-3916. The address is R&D Procurement Div., Attn: 4950/PM-1, Wright-Patterson AFB, Ohio 45433.

EXPLORATORY DEVELOPMENT AREA PMR 75 (123)-630204

Title: In vitro mutagenic and carcinogenic testing
Deadline: Aug. 21, 1974

This area is concerned with screening techniques for assessing carcinogenic potential of Air Force chemicals. The rapid screening technique should be based on the current theory, "that all carcinogenic compounds are mutagenic; however, all mutagenic compounds are not necessarily carcinogenic."

The contractor will be provided chemical compounds for testing. The contractor will test the compounds and report findings to the Air Force. The contractor must have a staff of competent scientists and experience in rapid screening techniques for carcinogenic testing.

Multiple requests for proposals may result from this research and development sources sought synopsis. Each request for proposal will not necessarily involve the entire area.

The Cancer Newsletter—*Editor* JERRY D. BOYD

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