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**NIH REAUTHORIZATION COMPROMISE BETWEEN HOUSE AND
SENATE GIVES NCI THREE YEAR AUTHORIZATION PERIOD**

A compromise between House and Senate NIH reauthorization measures reached by the two chambers late last week authorizes NCI for a three year period and calls for the establishment of an arthritis institute. House leaders apparently agreed to the three year authorization period
(Continued to page 2)

In Brief

**GEORGE VANDE WOUDE TO WISTAR INSTITUTE BOARD;
DONALD PINKEL TO HEAD PEDIATRIC LEUKEMIA PROGRAM**

GEORGE VANDE WOUDE has been elected a member of the Board of Managers of The Wistar Institute. A molecular biologist, Vande Woude is director of Litton's Basic Research Program of NCI's Frederick Cancer Research Facility, a member of the Pennsylvania Cancer Center's Board of Scientific Advisors, an adjunct professor in the department of biology at Johns Hopkins University, and a member of the Board of Scientific Counselors of NCI's Division of Cancer Etiology. . . . **DONALD PINKEL**, former pediatrics chairman at Temple University's School of Medicine, has been appointed to head a new pediatric leukemia research program at the University of Texas M.D. Anderson Hospital and Tumor Institute. The new chair, the Kelcie Margaret Kana Research Chair, was established with a gift from Mr. and Mrs. R.B. Trull of Palacios, Texas, and named in honor of their granddaughter who underwent treatment for leukemia at M.D. Anderson. Pinkel will also serve as chief of Pediatric Leukemia in the hospital's Division of Pediatrics. Pinkel, who served as medical director of St. Jude Children's Research Hospital from 1961 to 1973, will organize and direct an expanded childhood leukemia program at M.D. Anderson, including setting the program design, establishing research priorities and maintaining standards of care. "My main interest is in looking at new ways to treat acute cases of pediatric leukemia," he said. . . . **MONOCLONAL ANTIBODY** immunoconjugates for clinical use in cancer will be the subject of an international conference to be held March 6-8, 1986 in San Diego. Presentations will include the latest results of clinical trials using monoclonal antibodies linked to isotopes, drugs and toxins for cancer therapy and detection. Four half day sessions will focus on radioimmunodetection, radioimmunotherapy, chemimmunotherapy and immunotoxins. For more information, contact Cynthia Saxe, University of California, San Diego Office of Continuing Medical Education, 619/452-3940. . . . **CORRECTION:** Malcolm Bagshaw, Stanford Medical School Radiation chairman, is the 1985 Gold Medalist of the American Society for Therapeutic Radiology and Oncology, not the American College of Radiology, as reported in the Sept. 27 issue.

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Is \$1.57 Bil.**

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NEW ARTHRITIS INSTITUTE APPROVED IN COMPROMISE; HHS PREPARES VETO MESSAGE

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proposed by the Senate in exchange for a compromise that would establish a program for nursing at NIH. The House bill had called for establishment of a separate nursing institute at NIH.

HHS, however, is reportedly preparing a veto message for the bill to send to President Reagan. While details of the veto message are not available, it could include a protest against the establishment of the arthritis institute and nursing program. Last year, Reagan pocket vetoed similar legislation that would have created an arthritis and a nursing institute.

Senate Republicans have asserted that Reagan will sign the reauthorization legislation as long as it contains a three year authorization period and does not create a new institute for nursing research.

The Senate Appropriations Committee approved a bill that will give NCI \$1.271 billion in fiscal 1986, about \$17.1 million more than the \$1.254 billion contained in the HHS appropriations subcommittee markup of the bill (*The Cancer Letter*, Oct. 11). The additional \$17.1 million was added by the full committee for AIDS research by NCI, and includes \$3.5 million to be used for vaccine development. NIH as a whole will receive \$128.057 million more for AIDS research than the administration's request, about \$57.3 million more than the subcommittee markup.

The bill provides \$177.9 million to support "at least 982 new and competing research projects" and \$87.1 million to support 60 research centers.

The Senate bill characterizes cancer centers and clinical cooperative groups as vital national resources.

"While the committee continues its unequivocal support for basic research, it also realizes that other areas are integral to the effort to conquer cancer," it says. "Cancer centers and clinical cooperative groups, for example, are vital national resources and must continue to receive adequate support. In its fiscal 1985 report, the committee noted its concern that cancer center core grants had been treated differently from other grants and have been decreased on the average of 15% below peer reviewed levels, and indicated its desire that these core grants be funded at full peer reviewed levels.

"The committee has learned that this instruction was interpreted to mean that only new and competing grants should be funded at peer reviewed levels (these were funded at 95% of such levels), but that noncompeting continuation awards were funded at the 85% level, as they had previously.

"The committee desires that all such core grants, competing and noncompeting, should, within budgetary constraints, be funded at the peer reviewed levels they had been assigned.

"Similarly, clinical cooperative research, which has contributed so much to the treatment advances we have achieved today, have not been funded at the recommended levels for several years," it says. "It is through the clinical cooperative groups that the NCI performs most of its clinical research, with hundreds of protocols each year, both treatment and prevention. The groups, in fact, have actually been receiving level budgets or reductions from prior year levels," it adds. "The committee encourages NCI, to the extent possible, to fund both these programs at levels that are consistent with peer reviewers recommendations."

The Senate bill also notes the importance of clinical research in reaching the year 2000 goal. "In clinical research, testimony indicated that this year a number of clinical trials have turned positive, a movement which in the past has signalled a gain in terms of reducing national mortality due to cancer," it says. "These advances in cancer research continue to enhance NCI's efforts to reach its stated goal of reducing cancer mortality by 50% by the year 2000."

The Senate bill includes \$6.6 million for construction, \$4.5 million of which is directed for first year funding of the Mary Babb Randolph Cancer Center in West Virginia (*The Cancer Letter*, Oct. 11).

The House appropriations bill, which gives NCI \$1.221 billion in FY 1986, defers consideration of appropriations for research training and construction, which are not authorized for FY 1986. It also cites the year 2000 goal of reducing cancer mortality in the U.S. by 50% in its report. "The institute expresses confidence that this ambitious goal is achievable through prevention efforts and applications of the latest treatment methods and techniques. Cancer patients are presently being reached through a network covering the entire country which has been built over the last decade, and which includes cancer centers, outreach programs located throughout the nation, and the cancer control program."

The committee report notes that "a major element in the effort to reduce cancer mortality involves treatment. If recent advances in cancer treatment research and management are to be effective, they must be rapidly applied in the clinic and reach as many patients as possible." The report cites NCI's PDQ system as well as "the current national network of cancer centers...designed to expedite the translation of advances from basic research into improved patient treatment and survival."

The House report also discusses specific achievements and research activities. It notes "considerable publicity about tumor necrosis factor" and asks NCI to submit a report on the status of production and testing of TNF by January. The report "should include information on foreign as well as domestic testing in animals and humans, efforts of the institute to facilitate development and testing, and time schedules for clinical trials."

It also cites achievements such as recombinant DNA techniques and monoclonal antibody technologies.

The report also encourages more research in skin cancers. "Nationwide this year there have been numerous public education programs aimed at prevention of skin cancer and over 400 skin cancer early detection clinics will be held this year," it says. "The committee urges that these efforts be supplemented by special emphasis directed toward research in all types of skin cancer."

Discussing staffing levels NIH wide, the House Appropriations Committee report states that it "is aware that employment at NIH has been drastically reduced in recent years. Since 1984 staffing at NIH has decreased from 13,661 to 13,116, and further reductions are planned in 1986. In the same period, appropriations for NIH will increase from \$4.5 billion to \$5.5 billion.

"Employment ceilings have been imposed in total disregard of Congressional intent. The committee recognizes that the management of federal programs is primarily the responsibility of the executive branch, and that programs should be administered as economically as possible. On the other hand, inadequate staffing may lead to inefficiency and waste in the administration of public funds.

"In cases involving the care of patients, the consequences may be even worse," it warns. "The committee has been informed that the patient care activities at the Warren Magnuson Clinical Center are seriously understaffed. The committee requests that the Secretary of Health and Human Services and the Director, NIH, take immediate steps to correct this situation."

The committee also reports that it "has not approved the budget proposal to freeze every grantee's indirect cost rate at the rate which was in effect on Dec. 31, 1984. the rate which was

"While the growth of indirect costs as a proportion of total costs is a major concern, the problem is not unique to NIH and should be addressed through a government wide plan," it says. It specifically requests a report "from the department prior to next year's hearings which would describe the status of discussions with the OSTP [Office of Science and Technology Policy] and outline possible options for a government wide plan to contain indirect cost growth."

NCI's By Pass Budget for Fiscal 1987 asks for \$1.57 billion, an increase of approximately \$440 million over the administration's FY 1986 budget level of \$1.126 billion. Congressional appropriations for fiscal 1986 will probably be higher than the President's budget, however. The Senate Appropriations Committee has approved \$1.271 billion for NCI in FY 1986, and the House Appropriations Committee has approved \$1.221 billion (See related story).

Submitted to the Office of Management and Budget in early October, the By Pass Budget would provide \$697.4 million to research project grants; \$108 million to cancer centers; \$69.8 million to clinical cooperative groups; \$102.9 million to cancer prevention and control; \$229.3 million for intramural research; \$201 million for R&D contracts; \$28 million for construction; and \$36 million for training.

Objectives of the By Pass Budget include funding 40% of competing research project grants; increasing the number of cancer centers by 50% by 1991; tripling cancer prevention and control efforts by 1991; and doubling the number of patients and doctors involved in clinical cooperative groups between 1987 and 1991. The \$36 million request for training would support 1,500 full time training positions.

The By Pass Budget estimate increases 116.7% to \$2.440 billion in 1991. Estimates for the remaining years are: \$1.762 billion for FY 1988; \$1.994 billion for 1989; and \$2.207 billion for 1990.

While most board members appeared to agree with the budget estimates derived by ratcheting forward last year's By Pass Budget submission, board member Victor Braren asserted that "the numbers are too low" and suggested that the 1987 estimate of \$1.57 billion "is conservative."

Board member William Powers, however, questioned whether budget growth to \$2.44 billion in 1991 was "a reasonable prediction" in light of the budget deficit. Powers also questioned whether the institute would be able to handle such a rapid expansion.

NCI Director Vincent DeVita told the board that some government officials have suggested that Congress consider the By Pass Budget when establishing authorization levels for NCI.

Powers also questioned whether certain components of programs, such as Radiation Research, should be included as program activities in the budget in order to clarify NCI's intent of distribution of funds. Board member Geza Jako suggested a more detailed breakdown of distribution

NEW ORGAN SYSTEMS CONCEPT FLOW SYSTEM WORRIES SOME NCAB MEMBERS

of funds in the By Pass budget and urged inclusion of a reference to surgical oncologists in the document.

Braren suggested that the budget should include an overview of NCI programs, and asserted that board members did not have adequate time to review the budget and submit comments on its content.

Board members will submit suggestions for inclusion in the version that will be submitted to Congress.

DeVita, however, warned board members that a too detailed By Pass Budget estimate could lead to inflexibility in future budgetary matters. "Reformatting of the budget would probably be risky business" at this point, DeVita told the board. DeVita specifically expressed concern about the institute's being "locked in mechanistically" by future budgets.

For example, the Office of Management and Budget's decision this year to apportion NCI's budget has locked the institute in mechanistically as far as the number of grants it can fund in both the competing and noncompeting pools, he said. NCI's budgetary flexibility gained through the National Cancer Act "is now at the moment totally lost" because of the apportionment, he said.

Instead of releasing funds directly to NCI separately from the rest of NIH's appropriation, this year OMB included all the funds in one block to NIH and decreed that NIH could not reduce the amount of money it was given for research projects. NCI had planned to transfer \$1 million from the research project pool to cancer center core grants and another \$1.4 million to clinical cooperative groups, but will be unable to do so under the reprogramming restriction (The Cancer Letter, Sept. 6).

The precedent could create "a very serious problem for us in the future" if NCI lacks the flexibility to respond quickly enough to research needs, DeVita said. He also asserted that NIH's identification of annual numbers of research grants "was a terrible mistake by NIH years ago." A preferable way to handle the question of grants funding would be to allow for a 5% increase per year, he suggested.

Particularly promising areas of scientific opportunity cited in the draft By Pass Budget include nutrition, chemoprevention and biochemical epidemiology research. Other promising research areas described include: invasion and metastasis; adoptive immunotherapy; monoclonal antibodies; biological carcinogenesis; application of improved cytogenetic technology; the application of new understanding of cancer biology in treatment clinical trials; refinement of local control; and NCI's Cancer Prevention and Control Program.

A new Organ Systems Program concept flow system has members of the National Cancer Advisory Board's Organ Systems subcommittee worried that the time from conceptualization to funding of a project is so lengthy that it may compromise research efforts under the program.

Developed following a meeting between NCI staff and five chairs of the Organ Systems Working Groups this summer, the system involves the submission of proposed RFAs, RFPs and Program Announcements to one of four NCI division's Board of Scientific Counselors for review.

Under the new system, working groups identify research needs and opportunities, and develop program recommendations through group meetings and workshops. Following concept development by NCI staff and the Organ Systems Coordinating Center, the concept is triaged by NCI's Executive Committee, which decides which Board of Scientific Counselors should review the concept. Following approval of the board, the concepts are converted to RFPs, RFAs and PAs, with results reported to the NCAB as part of the OSCC annual report in November.

The Boards of Scientific Counselors may approve, disapprove, or send the concept back to the Organ Systems Working Group for revision.

According to a description of the system, if the Working group develops a concept "that had not been included in the annual report, but is particularly timely or urgent, the concept may be transmitted to the NCI for consideration for expedited activation prior to its presentation in the annual report at the NCAB November Program Review."

Subcommittee members expressed concern about the length of time between conceptualization and funding under the new system. The subcommittee's report notes that the group "expressed rather strongly concerns regarding the time lapse from conceptualization to funding, up to 1 1/4 years." It adds, however, that "the advantage to the Working Group of advice from the BSC was noted, specifically the grasp of the overall perspective of work in a given area."

Subcommittee Chairman Robert Hickey stressed that the length of the review process under the new concept pathway should be studied and reported on at the group's December meeting. While NCI officials stressed that the pathway entails the same amount of time as other programs within the institute, subcommittee member Victor Braren asserted that the board was wary of the concept review system because of its recent vote by mail on a bladder flow cytometry study that "had been badly slowed down" due to staffing problems at the institute.

TWO NEW AWARDS INCLUDED IN FIVE NCI COMMUNICATIONS CONTRACTS APPROVED

At the subcommittee meeting earlier in the week, Braren had contended that because of the "unconscionable delay" in funding for the project after conceptualization, "the field moved on while waiting for" the awards, resulting in the funding of five grants that were technologically on a "downhill slope" by the time the awards were made.

Subcommittee member William Powers also expressed concern about the length of the process. A recommendation that the subcommittee meet with the chairs of the Working Groups at its December meeting was accepted by the group.

Both Powers and NCAB member Rose Kushner asserted that the board's intent to reorganize review for the program did not require the new review system, but was an effort to separate program development from project review.

Powers also expressed concern to the full board that cooperative groups that are already approved may have to go back for concept review under the new system. NCI Director Vincent DeVita, however, emphasized to the board that "adherence to the current peer review system" is inherent in the board's decision to turn the program over to peer review.

DeVita stressed that the new program calls for concepts to compete in the market place of ideas. He noted that four Organ Systems concepts are currently in the review process. One, a concept for interactions among micronutrients in the prevention of experimental mammary cancer, was approved by the Division of Cancer Prevention and Control's Board of Scientific Counselors in September (The Cancer Letter, Sept. 27).

In addition to considering the length of the concept review system, the Organ Systems subcommittee will review recommendations to establish two new Working Groups for upper aerodigestive tumors and Central Nervous System tumors at its December meeting. An article in the Oct. 4 Cancer Letter incorrectly reported that the addition of the two new sites would be considered at the NCAB's October meeting.

Subcommittee members also discussed the recent resignation of Gerald Murphy from his job as director of Roswell Park Memorial Institute, the Organ System Coordinating Center. A formal presentation about the program will be made before the board at its December meeting. Hickey suggested that members consider conducting a site visit to the facility, however the group did not pursue the suggestion.

NCI's Organ Systems Section Chief Andrew Chiarodo told the subcommittee that Organ Systems applications "held their own" in FY 1985. Of 131 applications approved, 41 were funded for an overall funding rate of 31%, he said.

The National Cancer Advisory Board approved five concepts for contract awards in NCI's International Cancer Information Center and the Office of Cancer Communications. Recommended for approval by NCAB's Subcommittee for Review of Contracts and Budgets, the contracts include two new contracts and three recompetitions.

New awards include a three year contract for technical support for cancer prevention program for minorities in NCI's Office of Cancer Communications. Estimated first year funding for the project is \$279,400. NCI originally requested five year funding for the award. According to materials presented to the subcommittee, "a major thrust of this initiative is to encourage national black organizations to expand interest in the prevention of cancer and help communicate the message of cancer prevention to its members."

Discussing NCI efforts directed to minority populations, board member Richard Bloch questioned whether institute supported interventions in minorities would duplicate those in the private sector, such as public service announcements by the American Cancer Society. NCI Cancer Communications Director Paul Van Nevel, however, stressed that no NCI funds will be used to develop PSAs. NCI staff will meet with ACS representatives on Oct. 28 and will ensure that the two organizations' efforts are not duplicative, he added. One contract will be to help NCI exhibit programs and another to reach minority populations primarily through community projects, he said.

NCI plans to hire a black owned firm that is adept at reaching minority audiences, usually for commercial firms, in order to help the institute package cancer information and deliver it to target populations, he said.

NCAB member Helene Brown, however, questioned whether recent cuts in Cancer Information System contracts would hinder NCI minority education efforts. CIS budget cuts led to the loss of personnel handling Hispanic and Black populations in California, she noted. While Van Nevel acknowledged that the number of CIS personnel dealing with health education was decreased by the funding cuts, he said that not all of the minority representatives were cut from the CIS contracts.

Division of Cancer Prevention and Control Director Peter Greenwald reported that NCI is "sensitive it has trimmed back some very effective areas" because of the institute's limited budget for its Cancer Communications Network. The institute has "talked

extensively with ACS" about "transferring a substantial amount of the effort" of the network to ACS' Cancer Response System, he said.

"One possibility" is that ACS' Cancer Response System can take over the toll free CIS number for cancer information over the next three and a half years remaining in the contract, he suggested.

NCI is "developing a major thrust in applied research" to reach minority populations, he said.

Another contract approved by the board will fund a requirements analysis and specifications for future PDQ support system and other computer support services. NCI currently has a four year contract with the PROMIS Corp. for development and maintenance of software to support the PDQ system, the Cancer Literature and Cancer Projects database at the National Library of Medicine. The contract expires in FY 1988.

The concept states that "both a computer support contract and a computer system are necessary for the continued production of the PDQ and other cancer information databases." The Computer Communications Branch of the International Cancer Information Center currently houses a government owned, refurbished Sperry-Univac V77-800 minicomputer system. The system life of the current hardware and operating system software will expire the last quarter of FY 1988, at which time the system will be about 10 years old and technically obsolete, it says.

The purpose of the new contract will be to perform a requirements analysis and develop specifications for the future computer support contract and computer system necessary to develop and maintain PDQ and new databases which will be linked to PDQ, including a drug file, cancer prevention file and scientific literature file, and to support continued maintenance of the Cancer Literature and Cancer Projects databases.

In addition to the detailed requirements analysis, the contractor must project new database development requirements at least five years in the future, determine whether the commercial market will be able to support these requirements, and develop a reasonable cost estimate and feasible implementation plan to support the recommended approach. The development of detailed technical specifications will be used for the procurement of the future computer system.

NCI estimates that the requirements analysis will take three to four months and that the development of specifications will require about eight months. The services of one senior level computer systems analyst, one mid level computer systems analyst and one clerk typist will be needed to perform the work. The concept estimates that \$150,000 will be provided to fund the contract.

Contracts approved for recompetition include a five year award for OCC exhibits, with estimated first year funding of \$110,200. That contract is currently held by SRA Technologies. The group also approved renewal of a three year contract for cancer information processing for the PDQ Information System currently held by Technical Resources, Inc. That contract will be funded at approximately \$250,000 per year. A three year contract for liaison and implementation of projects supporting NCI's Office of International Affairs was also approved for an annual cost of \$225,000.

The board also approved extension to five years of an existing three year contract for programming and systems maintenance in support of NCI's extramural program.

According to the subcommittee's report, the current estimate for the FY 1986 budget for the Office of the Director reflects a reduction of \$825,000 from \$32.3 million to \$31.5 million. Since 1983, the office has experienced a 19% reduction in employment levels, representing 71 personnel. Funds have been reprogrammed to contracts to maintain support for cancer information databases and to provide contract support services needed because of the personnel reductions.

RFPs AVAILABLE

Requests for proposal described here pertain to contracts planned for award by the National Cancer Institute unless otherwise noted. NCI listings will show the phone number of the Contracting Officer or Contract Specialist who will respond to questions. Address requests for NCI RFPs, citing the RFP number, to the individual named, the Blair building room number shown, National Cancer Institute, NIH, Bethesda, MD, 20205. Proposals may be hand delivered to the Blair building, 8300 Colesville Rd., Silver Spring, Md., but the U.S. Postal Service will not deliver there. RFP announcements from other agencies will include the complete mailing address at the end of each.

RFP NCI-CN-55439-50

Title: Information resource and management system for chemopreventive agents

Deadline: Dec. 26

NCI's Division of Cancer Prevention and Control seeks to award a contract in order to establish an information resource and management system for chemopreventive agents. The system will include the compilation and assimilation of existing scientific literature so that the most promising candidate agents can be prioritized for experimental studies with animals and clinical trials with humans.

Offerors must have doctorate level personnel with degrees in the following fields: carcinogenesis, epidemiology, cell biology, biochemistry toxicology, nutrition and pharmacology. These doctorate level personnel must be established employees of the

company and not consultants.
Contract Specialist: Vernon Rainey
RCB Blair Bldg Rm 2A07
301-427-8745

RFP NIH-ES-85-22

Title: Reproductive toxicity testing system

Deadline: Approximately Nov. 4

The National Institute of Environmental Health Sciences is soliciting proposals from offerors with the capability to test environmental chemicals in laboratory animals (particularly, mice or rats) and develop data on the general toxicity and reproductive effects of these chemicals.

The project consists of five related tasks, not all of which are performed for a given compound. These tasks include: 1. dose finding; 2. cohabitation phase; 3. identification of the affected sex; 4. offspring assessment. The test protocol is designed to provide both time and cost effective alternatives to multigeneration studies that produce similar comprehensive reproductive data. Task 5 includes the analytical chemistry requirements of the contract including bulk chemical reanalysis and dose level validation. The level of effort for the project is estimated on the basis of a projected testing of six chemicals per year for five years, a total of 30 tests.

Requests for copies of the solicitation should be forwarded to Dorothy Williams, Contract Specialist, Contracts Management Office, OAM, NIEHS, P.O. Box 12874, Research Triangle Park, N.C. 27709.

NCI Contract Awards:

Title: Neutron Therapy Clinical Trials
Contractors: Cleveland Clinic Foundation, \$5,766,307; and University of Texas System Cancer Center, M.D. Anderson Hospital, \$6,698,699

Title: Evaluation of dosimetry, calculations, and afterloading techniques for interstitial radiotherapy
Contractors: University of California, San Francisco, \$333,397; Memorial Hospital for Cancer & Allied Diseases, NYC, \$415,870; and Yale University, \$398,112

Title: Tracing through other sources to confirm addresses of x-ray technologists
Contractor: Johns Holding Company, Decatur, Ill., \$201,000

Title: Investigations of tumors that occur excessively among blacks
Contractor: New Jersey State Department of Health, Trenton, \$1,265,172

Title: Investigations of tumors that occur excessively among blacks
Contractor: Michigan Cancer Foundation, Detroit, \$870,989

Title: Investigations of tumors that occur excessively among blacks

Contractor: Atlanta Cancer Surveillance Center, Emory University School of Medicine, \$862,004

Title: Investigations of tumors that occur excessively among blacks
Contractor: Westat, Inc., Rockville, Md., \$749,366

Title: Etiologic investigations of rare reproductive cancers
Contractor: Health Research, Inc. and the New York State Department of Health, Albany, \$534,383

Title: Etiologic investigations of rare reproductive cancers
Contractor: Illinois Cancer Council, Chicago, \$298,386

Title: Fungal fermentation
Contractor: University of Connecticut, \$866,024

Title: Chemoprevention of lung tumors
Contractor: IIT Research Institute, Chicago, \$221,922

Title: Chemoprevention of lung tumors by sodium selenite and selenomethinine
Contractor: Microbiological Associates, Inc., \$240,608

Title: Isotretinoin basal cell carcinoma prevention study
Contractor: Health Research, Inc., Buffalo, \$512,681

Title: Isotretinoin basal cell carcinoma prevention study
Contractor: Northwestern University, \$930,741

Title: Isotretinoin basal cell carcinoma prevention study
Contractor: University of Arkansas for Medical Sciences, Little Rock, \$1,136,190

Title: Chemoprevention of mouse skin cancer
Contractor: Eppley Institute, Omaha, Nebraska, \$132,799

Title: Chemoprevention of mouse colon cancer
Contractor: Eppley Institute, \$251,116

Title: Chemoprevention of colon cancer by piroxicam
Contractor: American Health Foundation, Valhalla, N.Y., \$376,927

Title: Chemoprevention by sodium selenate and selenomethinine on colon cancer
Contractor: Litton Bionetics, \$345,134

Title: Chemoprevention of bladder cancer
Contractor: IIT Research Institute, Chicago, \$61,487

Title: Chemoprevention of DH-BBN induced bladder cancer
Contractor: IIT Research Institute, \$291,641

Title: Chemoprevention of bladder cancer by B-carotene
Contractor: IIT Research Institute, \$58,205

Title: Chemoprevention of bladder cancer by 4-HPR and QNIF
Contractor: IIT Research Institute, \$296,633

Title: Chemoprevention of DMBA induced mammary tumors
Contractor: IIT Research Institute, \$77,651

Title: Chemoprevention of DMBA induced mammary tumors
Contractor: IIT Research Institute, \$161,829

Title: Chemoprevention of MNU induced mammary cancer
Contractor: IIT Research Institute, \$113,651

Title: Chemoprevention combination of 4-HPR and tamoxifen in mammary cancer
Contractor: IIT Research Institute, \$80,581

Title: Chemoprevention of bronchial carcinoma using B-carotene
Contractor: IIT Research Institute, \$71,765

Title: Preclinical pharmacology studies with clomesone (NSC339847)
Contractor: University of Southern California, \$85,955

Title: Assay development and preclinical pharmacology studies with cyclodisone (NSC-34948)
Contractor: Ohio State University Research Foundation, \$85,744

Title: Assay development and preclinical pharmacology studies with choroquinoxaline sulphamide (NSC-339004D)
Contractor: University of Vermont and State Agricultural College, \$69,016

Title: Support services for epidemiologic studies of cancer
Contractor: Westat, Inc., Bethesda, Md., \$12,131,990

Title: ADP services for NCI's Division of Extramural Affairs
Contractor: General Software Corp., Landover, Md., \$349,071

Title: Operation of a registry of tumors in lower animals
Contractor: Smithsonian Institute, \$179,733

Title: Technical and logistical support services for

the Division of Cancer Etiology
Contractor: SBA/Birch & Davis Associates, Inc., \$1,078,701

Title: Support services for biochemical epidemiology
Contractor: Microbial Associates, Bethesda, Md., \$3,841,622

Title: Facility for housing and preparing virus infected and chimeric mice
Contractor: Bioqual, Inc., Rockville, Md., \$978,533

Title: Evaluation of the PDQ system
Contractor: University of Illinois, \$525,000

Small Business Innovative Research Awards:

Title: Development of immunologic reagents and enzyme immunoassays
Contractor: IMBIC, Inc., Columbia, Mo., \$49,935

Title: Development of immunologic reagents and enzyme immunoassays
Contractor: Biological Research Faculty and Facility, Inc., Walkersville, Md., \$47,547

Title: Development of user friendly software for the implementation of the personal computer
Contractor: Statistics & Epidemiology Research Corp., \$42,588

Title: Library of chromosome LP restriction fragment length polymorphisms
Contractor: Integrated Genetics, \$49,124

Title: Development of user friendly software for the implementation of the personal computer
Contractor: Applied Logic Systems, Inc., \$45,000

Title: Development of user friendly software for the implementation of the personal computer
Contractor: General Software, \$47,966

Title: Development of user friendly software for the implementation of the personal computer
Contractor: Creare, Inc., \$42,000

Title: Development of user friendly software for the implementation of the personal computer
Contractor: Capital Systems Group, Inc., \$43,236

Title: Development of methods for biochemical monitoring in epidemiologic studies
Contractor: Lee Scientific, \$49,991

Title: Compilation and evaluation of retrospective mortality data for record linkage
Contractor: DMS Systems, Inc., \$45,665

The Cancer Letter — Editor Jerry D. Boyd

Associate Editor Patricia Williams

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