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HHS, OMB, OSTP URGE PRESIDENT TO VETO BIOMEDICAL RESEARCH AUTHORIZATION; SENATE PUSHES FTE LEVELS

Legislation vital to the National Cancer Program was in its final stages of congressional approval this week, with both the NIH reauthorization, including renewal of the National Cancer Act, and HHS appropriations bills scheduled for votes by both houses. Both

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In Brief

HOSPICES URGED TO DEVELOP PROGRAMS FOR AIDS VICTIMS; COMPANIES GIVE $25,500 TO NCI FUND

AMERICAN HOSPICES have been urged to develop programs for the care of AIDS patients. Anne Katterhagen, chairman of the Hospice Assn. of America Board of Directors, said, "As caregivers devoted to helping the terminally ill, we have a responsibility to respond to the needs of AIDS patients. We must remind ourselves that this is not a disease which affects only a few people. There are literally thousands of AIDS cases, and more are anticipated".... **CORPORATE CONTRIBUTIONS** to the NCI gift fund in support of the institute's summer training program totaled $25,500. The gift fund kept the program alive; otherwise, the reduction in positions imposed by the White House would have killed it. Firms contributing to the fund were Boehringer Mannheim of Germany, Proctor & Gamble, Monsanto Co., Mobil Oil Corp., Dow Chemical Co., McCormick & Co., Pfizer, Standard Oil Co., Dupont, Coca-Cola, Shell Companies Foundation, Abbott, Bristol-Meyers Co., Hercules Inc., Union Carbide Corp. and Allied Corp..... **PAMELA PETERS**, former American Cancer Society national medical affairs representative to 12 midwestern states, has been named the first education director of the Oncology Nursing Society.... **ROSWELL PARK's** new associate directors are Andrew Gage, associate director for clinical affairs, and Verne Chapman, associate director for scientific affairs. Gage is former chief of staff at the Veterans Administration Medical Center and a surgery professor at the State Univ. of New York at Buffalo School of Medicine. Chapman, who has been at Roswell Park since 1972, is currently the institute's director of molecular biology.... **SHEET METAL** Workers International Assn. has launched a multi-million dollar program to screen and treat asbestos victims and to explore new ways to protect workers against further injury from the substance. The first step in the program is a $707,000 agreement with Irving Selikoff, director of Mt. Sinai Hospital's Environmental Science Laboratory. Selikoff will conduct a detailed medical screening of 1,500 sheet metal workers, including an evaluation of current health status, recommendations for treatment where indicated, and a followup program to monitor the latent effects of asbestos exposure.

VETO WOULD INFURIATE HATCH; WAXMAN FEELS HOUSE WOULD VOTE TO OVERRIDE

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measures, however, are headed for major confrontations with the White House.

The reauthorization bill seemed to be in the most trouble at the moment. The Dept. of Health & Human Services, the Office of Management & Budget and the Office of Science & Technology Policy (the latter two offices within the White House) were all preparing veto messages for President Reagan's consideration. All three reportedly are strongly recommending a veto.

A veto would violate the agreement Sen. Orrin Hatch (R.-Utah) reached with the White House when the bill was in the House-Senate conference. The House version included establishing two new institutes at NIH, for arthritis and nursing research. The President pocket vetoed the bill last year because of Administration objections to those provisions. The Senate bill included the arthritis institute but not nursing. Another difference was that the House bill was for a one year reauthorization only, while Hatch's bill was for three years.

The White House reportedly agreed to go along with a bill which did not include the nursing institute and which had the three year authorization, while accepting the arthritis institute. That, essentially, is the bill which came out of the conference and which sailed through the Senate Oct. 18. It was scheduled for final House action Oct. 22.

If the President vetoes the bill again, it will be a severe blow to Hatch. The conservative chairman of the Labor & Human Resources Committee was extremely dismayed by the veto last year, after he felt he had satisfied every serious objection the Administration had made during four years of work on the bill. The measure this year is even less objectionable, considering previous White House reservations: no nursing institute, far fewer of the so called "micromanagement" features written into earlier versions by Chairman Henry Waxman (D.-Calif.) of the House Health Subcommittee; and relatively modest dollar authorization figures for NCI and the National Heart, Lung & Blood Institute.

A veto based on the creation of a National Institute for Arthritis Research would ignore political reality. Enormous pressure has developed for that step, which is not much of a "budget buster." For the most part, it would involve only transfer of some staff and programs out of the National Institute of Arthritis, Diabetes & Digestive & Kidney Diseases into the new institute. A few dollars for some sign painting and stationery printing would hardly be felt. Considering that most top level NIH managers are already bumping against the salary cap, the director of the new institute won't cost any more than the director of the present arthritis division in NIADDKD.

Nevertheless, a veto is a strong possibility. This time, Congress will have the chance to override. Last year's veto came after Congress had adjourned, with no chance to take any action.

Waxman is confident that the House, at least, would vote to override. With the Democrats in control there, that would be a more likely possibility than in the Senate. But with a justifiably outraged Hatch pressing for an override in the Senate, don't bet the rent he won't get enough Republicans to go along to get the two thirds he would need.

It would be a shame if all the work Hatch, Waxman and their colleagues and staff put into the bill goes down the drain, especially considering the implications for the National Cancer Program. The measure reaffirms all the special authorities NCI and its director have had since the National Cancer Act of 1971 was adopted. In fact, it improves somewhat on the original and its amendments. The director would be empowered to make grant awards up to $50,000 in direct costs without clearing them with the National Cancer Advisory Board, a provision in the original act (but limited to $35,000) designed to speed up the award of small grants. It specifically permits the award of cancer center core grants for five years, long sought by center executives and NCI staff alike. It specifically authorizes clinical training, permitted but not explicitly provived in previous legislation.

An oversight in last year's bill, leaving out the NCI director's authority to appoint members of peer review committees without going through the NIH director, was corrected.

All the other special authorities are still there: the vital bypass budget, presidential appointment of the NCI (as well as the National Heart, Lung & Blood Institute) director and of the National Cancer Advisory Board, continuation of the President's Cancer Panel, six year terms for the NCAB, cancer control and construction authorities, and continuation of the public education programs of the Office of Cancer Communications.

The bill now includes almost everything sought by the professional societies and cancer related organizations such as the American Cancer Society, Assn. of American Cancer Institutes, National Coalition for Cancer Research, and Assn. of Community Cancer Centers. It includes everything NCI Director Vincent DeVita said was needed, before the Administration's determination to block renewal of the National Cancer Act clamped down on his freedom to speak.

There was no indication this week whether

President Reagan will accept the advice of the department and his two agencies and veto the bill. He has one other advisor who will come down heavily against a veto—Armand Hammer, chairman of the President's Cancer Panel.

The Panel was created to advise the President on needs of the National Cancer Program. Hammer is a Reagan appointee, so there is no reason why the President should ignore his advice.

Expressions of support for the bill from others in the scientific community also might help persuade the President. They should be sent immediately; the bill may be on his desk this week.

Another confrontation between the White House and Congress was set up in the report on the Labor-HHS appropriations bill.

The House approved the bill making appropriations for the 1986 fiscal year last week; the Senate debated its version of the bill this week, with a vote possibly as early as Tuesday (Oct. 22). The Senate's figure for NCI is about $50 million more than the House's, which means that if the traditional split it down the middle prevails in the conference, NCI will get close to $1.250 billion in the current fiscal year, an increase of about $53 million over 1985.

That's better than the $1.131 billion in the President's budget request, but $150 million less than the bypass budget figure. Implications for the Year 2000 goal remain to be seen, but it is not likely much of a start toward such items as funding 40 per cent of approved grants, doubling the number of cancer centers and doubling the amount spent on clinical research can be made this year. The Year 2000 Plan lists all those as requirements to meet the goal of reducing mortality by 50 per cent.

Here's how the White House-Congress confrontation over the appropriations bill is shaping up, as precipitated by the Senate:

*Concerned over the Administration's action in slashing the number of positions at NIH, the Appropriations Committee said in its report that it had written into the bill itself language restoring the number of full time equivalents (FTEs) to 13,507.

"The committee is again concerned that the level of FTEs at NIH is insufficient," the committee report said. "As part of its deliberations on the fiscal year 1985 appropriations act, Congress provided funds for 13,507 FTE positions for NIH. Nevertheless, the Office of Management & Budget has directed the agency to operate at a level of 13,116 FTEs, a reduction of 391 FTEs below the level intended by Congress. This decrease came in the face of congressional directives to increase research in such areas of national concern as AIDS and the critical scientific base which supports our leadership in biotechnology and our competitive economic position worldwide. The committee is concerned that NIH was not provided the FTE levels specified by Congress in the joint explanatory statement of the managers in the conference report on the 1985 appropriations act. Moreover, the 1986 budget request proposes a further reduction of 150 FTEs, for a total reduction of 541. These reductions will harm NIH's intramural research program and the management of its extramural programs. The committee is also distressed that in the long run, these reductions will result in a decrease in the number of service fellows, including visiting scientists, staff fellows, and medical staff fellows. NIH fellows provide an important resource of young investigators to work in research areas, such as AIDS, pertussis vaccine, Alzheimers' disease, neurobiology, and the many cancer research programs. In addition, the committee is seriously concerned that the NIH Clinical Center may have to close some patient care units and restrict inpatient admissions due to the lack of sufficient staff. At the same time there is inadequate staff to effectively manage the growth Congress has provided for the extramural research program.

"In view of OMB's disregard of Congress' intent, as expressed in the joint statement on the fiscal year 1985 bill, the committee has included language in the fiscal 1986 bill to restore the FTE level for NIH to 13,507."

It is somewhat unusual to write into the legislation itself position levels for agencies. That the Senate felt this was necessary reflects the determination of Chairman Lowell Weicker (R.-Conn.) of the Labor-HHS Appropriations Subcommittee and many of his colleagues to force the White House to provide adequate staff for NIH.

*The committee challenged OMB head on over the latter's attempt to limit funding of grants with FY 1985 money and restrict reprogramming of funds within NIH. OMB's directive prevented NCI from transferring $1 million into cancer center core grants and $1.4 million into clinical cooperative groups.

"The committee understands that the Office of Management & Budget is attempting to use the apportionment process to impose operational restrictions on NIH in 1985. Specifically, it is purporting to require NIH to award 200 grants for one year projects, and has further purported to prohibit the NIH director from reallocating funds among various research award mechanisms within NIH.

"Congress has established the apportionment process to ensure that executive agencies obligate their appropriations at a rate that will avoid the incurring of deficiencies, and the necessity for

deficiency appropriations. The committee is seriously concerned that OMB's increasing use of the process to interfere with, or control, agency policy decisions, particularly within the Dept. of Health & Human Services, goes far beyond the proper scope of the process. This is of particular concern where, as seems consistently the case, the OMB interference is with agency attempts to comply with the law.

"NIH is directed to disregard OMB substantive directions on the use of apportioned funds. Also, the committee reminds the director of NIH and the directors of the various institutes that they retain the responsibility to authorize minor shifts in subaccount budget authority to take advantage of unanticipated research opportunities. The committee expects this authority to be used, as appropriate."

The House Appropriations Committee report was far milder than the Senate's, nor was it as demanding. It did not mention OMB's directives on 1985 funds, nor did the committee go so far as to write NIH staffing levels into the bill itself. The House report did express some of the same concerns relating to staff, however:

"The committee is aware that employment at NIH has been drastically reduced in recent years. . . 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. The committee has been informed that the patient care activities at the Clinical Center are seriously understaffed. The committee requests that the Secretary of Health & Human Services and the director of NIH take immediate steps to correct the situation."

If Weicker can persuade Chairman William Natcher (D.-Ky.) of the House Labor-HHS Appropriations Subcommittee to go along with placing the FTE level into the bill itself when they go to conference, it is far more likely that the Administration will pay attention.

Agency chiefs sometimes will pay attention to directions in committee reports, especially if the House and Senate concur on an issue. Since the House report did not mention OMB's FY 1985 apportionment directives, and since those funds now have been expended, it would not have much impact anyway. It appears that Weicker's intent was to send OMB a message for next year: Don't try to play those same games with the 1986 appropriations.

DCT BOARD APPROVES CONCEPTS; LITTON MAY BE FROZEN OUT OF RECOMPETITION

The Board of Scientific Counselors of NCI's Div. of Cancer Treatment gave concept approval to recompetition of eight contracts with an estimated total cost of $3.2 million a year. Included were two contracts presently held by Litton Bionetics, worth more than a half million dollars a year each, from which the firm may be excluded in the competition.

The status of Litton Bionetics as a government contractor was placed in question when the parent firm, Litton Industries, sold the biotechnology components of Litton Bionetics to a Netherlands company, Organon Technica (**The Cancer Letter**, Sept. 6). The largest Litton contract with NCI is for conduct of the basic research program at Frederick Cancer Research Facility, at $7.6 million a year. That will be up for recompetition next year.

The two contracts approved for recompetition by the DCT Board provide important support for Robert Gallo's Laboratory of Tumor Cell Biology.

NCI executives are concerned about the prospect that a foreign firm might gain access to U.S. developed technology and patents through control of contracts with the government. A staff study of the situation has resulted in recommendations which have been submitted to the Dept. of Health & Human Services.

NCI Associate Director Peter Fischinger, whose responsibilities include FCRF, told **The Cancer Letter** that at this point, "None of the possibilities can be discarded," referring to the prospect that Litton may be out of the picture for all of its NCI contracts.

Recompetitions approved by the Board, including concept statements, follow:

Provision of tissues and cells and conduct of routine tests in support of tumor cell biology studies. Present contractor is Litton Bionetics. Estimated annual cost, $664,000, five years.

The primary objective of this contract is to supply tissues, cells and small quantities of fresh type C RNA tumor viruses and to conduct routine tests in support of tumor cell biology studies.

The contractor has carried out analyses of cells for the expression of HTLV related antigens in fresh and cultured cells. They have carried out tests for reverse transcriptase, immunofluorescence analyses for HTLV-1 and HTLV-3 antigens, radioimmunoassays, western blot analyses, Elisa testing and growth factors.

The Laboratory of Tumor Cell Biology plans to obtain services to (1) analyze human tissues and cultured cells for retrovirus (HTLV) information, (2) analyze condition media for growth factors, (3) prepare DNA samples, (4) produce small amounts of concentrated primate retroviruses, and (5) analyze serum samples for the presence of HTLV antibodies by

Elisa testing, RIA and western blot analyses.

Synthesis of radiosensitizing agents. Stanford Research Institute International is the present contractor. Estimated annual cost, $500,000, five years.

One of the major problems in the treatment of cancer is the presence of radioresistant hypoxic cells in the tumors which appear to be the primary cause of the failure of radiation therapy. A number of ways have been investigated to overcome the resistance of hypoxic tumor cells to radiation, e.g., high LET radiation, hyperbaric oxygen and oxygen mimicking radiosensitizers. The least expensive and most promising has been the use of radiosensitizing agents in conjunction with radiation therapy. The radiosensitizers which showed promise and were introduced into the clinic were representatives from the chemical class called nitroimidazoles, which belong to the category of electron affinic, hypoxic cell sensitizers.

The lack of efficacy of the nitroimidazoles tested thus far has been attributed to the dose limiting peripheral neuropathy which develops before effective dose levels of the drug are achieved in patients. The NCI-DCT supported radiosensitizer screening contract represents an effort to search for and/or develop leads (non-nitro target compounds) which represent new or novel potential radiosensitizers. The synthesis of radiosensitizers complements the radiosensitizer screening by optimizing the leads which result from screening and elsewhere. The optimal compound of each new lead (chemical class which shows radiosensitizing activity) will be tested extensively as it progresses toward clinical trials.

The objective of this contract will be to continue to synthesize analogs of lead compounds which are discovered by the screening contract to show in vitro activity and to optimize these lead compounds so that the best possible representative can be tested both in vitro and in vivo and ultimately in the clinic.

Originally, two contractors were involved in the synthesis of radiosensitizers, but budget restrictions forced a reduction in this effort. During the past six years of operation the contractors have synthesized and evaluated approximately 500 analogs of lead compounds (76 in the last contract year). In the process, a better understanding of the relationship between molecular structure, physiochemical parameters, and radiobiological activity was realized. Using this information, SR-2508, the optimal radiosensitizer of the nitroimidazole class, was developed and is being tested in the clinic. A phase 1 study using SR-2508 has shown it to be much less neurotoxic than misonidazole at equivalent doses. The work under this contract was then directed toward non-nitro compounds. New leads that have emerged from this program have shown that quinoxaline-N-oxides, pyridine-N-oxides, pyrazine-N-oxides, nitrones and benzamides can radiosensitize as effectively as misonidazole in vitro. Analogs of these new leads are being developed and tested in order to identify a potential clinical candidate.

The results to date have demonstrated two important facts: (1) that new, non-nitro classes of radiosensitizers can be developed by a systematic medicinal chemistry approach, and (2) that non-nitro compounds can be developed that are effective radiosensitizers not only in vitro but also in vivo.

Using the principles and approaches learned from the systematic study of the nitroimidazoles and the non-nitro compounds investigated thus far, future efforts will be directed toward the optimization of other classes of chemical compounds which show activity in the radiosensitizer screen. Emphasis will be placed on the rational design and development of compounds without the nitro group which have different mechanisms of radiosensitizing action, i.e., hypoxic cell sensitizers, inhibitors of potential lethal damage, glutathione depletors and shoulder modifiers. The leads emerging from the mechanisms based prescreens will be optimized under this contract.

Detailed drug evaluation and development of treatment strategies for chemotherapeutic agents. Southern Research Institute is the current contractor. Estimated annual cost, $550,000, three years.

The primary objective of this contract is to provide the Drug Development Program with a resource for detailed evaluation of agents designated for development to clinical trial, and for those already in early stages of clinical evaluation. Studies are conducted in vitro or in vivo in a variety of animal and human tumor models. In an effort to ensure that the program develops the best available agents to clinical trial, and to provide pertinent information as an aid in the design of clinical trials, the following types of studies are conducted: schedule dependency, combination chemotherapy, patterns of drug resistance and collateral sensitivity, degree of activity by altering experimental conditions (use of early and late staged tumors, varying tumor implant sites, routes and modes of drug administration, etc.), spectrum of activity in a variety of tumor systems, etc. Data generated from this contract are used to make decisions on the prognosis and priority of agents for development to support investigational new drug applications to FDA, to assist in the design of clinical protocols, and to address questions which may arise during the toxicologic or clinical evaluation of new agents.

This contract has performed detailed studies on a number of agents identified as promising from in vitro or in vivo screens. For example, flavone acetic acid was discovered in routine screening on other government contracts to have promising activity against the murine SC implanted colon 38 tumor, a relatively drug refractory tumor. The incumbent contractor has been able to extend these preliminary observations and demonstrate that the tumor was highly responsive to this agent even when treatment was delayed, and that the therapeutic index was narrow. Based on these and other studies, flavone acetic acid will soon enter clinical trial. In studies of drug resistance profiles in a battery

of tumors with resistance to standard therapeutic agents, merbarone, another new agent being readied for clinical trial based on activity in a number of systems including curative activity against both the IP and SC implanted L1210 leukemia, was shown to be cross resistant in a P388 tumor line with acquired resistance to adriamycin. These results may have bearing on mechanism of action studies on merbarone, and suggest that in future clinical studies it should be noted whether patients have received prior adriamycin therapy. Studies to gain insight into the mechanism of resistance of several tumor lines also were initiated. In addition, in vitro studies were conducted in an attempt to overcome resistance to adriamycin by using drug combinations (e.g., calcium antagonists + adriamycin). Although a few agents have enhanced the in vitro cytotoxicity of adriamycin in adriamycin resistant P388 cells, to date the enhancement has not been confirmed in in vivo studies. In schedule dependency studies the contractor was able to demonstrate that deoxyspergualin produced the best antitumor response against SC implanted L1210 leukemia when the drug was administered frequently (e.g., every three hours). These results led to more extensive studies in tumor bearing mice implanted with Alzet osmotic infusion pumps. Efficacy, as demonstrated by tumor cell kill calculations, was improved when deoxyspergualin was given by continuous infusions for up to 72 hours rather than by eight bolus injections in a 24 hour period. These latter studies were designed in collaboration with staff involved in the pharmacologic and toxicologic evaluation of deoxyspergualin by infusion and led to the recommendation that this agent be evaluated by infusion in future clinical trials. In combination chemotherapy trials, data were generated in a human ovarian carcinoma in nude mice to support a proposed clinical trial of BSO, an inhibitor of glutathione synthesis, and melphalan. BSO enhanced the antitumor properties of melphalan at tolerable toxicities.

This contract will soon be involved in collaborative studies with Dr. J. Folkman to evaluate the potential of heparin fragments in cancer chemotherapy. With the increased program emphasis on in vitro screens, the need for well designed studies to ascertain whether a drug can reach a tumor cell target in a tumor bearing host is becoming increasingly important. Also in keeping with changes in program direction, increased emphasis will be placed on studies with human tumors and an attempt to integrate efficacy data with information on the biochemistry, pharmacology and toxicology of new agents.

Storage and distribution of chemicals and drugs used in preclinical evaluation and development. Flow Laboratories is the present contractor. Estimated annual cost is $492,000, five years.

The principal objectives of this service contract are the receipt, storage, inventory, distribution and documentation of synthetic compounds, crystalline natural products and bulk clinical drugs.

The major tasks were the weighing, distribution and documentation of synthetic compounds and crystalline natural products both for primary and secondary screening in a timely fashion. In addition, the contractor shipped bulk clinical drugs to analytical and formulation contractors as well as compounds to researchers at NCI within the U.S. as well as abroad. Approximately 11,000 compounds were shipped during the past year. Additional tasks completed during this period included (a) weighing and reshelving of a large number of compounds returned by the screening laboratories which could be utilized for the new in vitro screens; (b) the implementation of the inventory module of the new Drug Information System in cooperation with the Information Technology Branch; (c) the transferring of 225,000 bottles containing chemicals from wooden cabinets to steel shelves.

The tasks mentioned above form an essential part of the Drug Development Program and will continue to do so. In fact, the demands of the new in vitro screens are expected to increase the workload on the contract, so we plan to accommodate this additional work through the improved operating efficiency resulting from using automated balances.

Operation of an animal virological diagnostic laboratory. Microbiological Associates is the current contractor. Estimated annual cost is $250,000, five years.

The Developmental Therapeutics Program animal production effort supplies large numbers of rodents to a variety of investigators including intramural NIH users at Bethesda and the Frederick Cancer Research Facility, NCI contractors, NCI grantees and other qualified laboratories. This contract, an important component of the diagnostic support program, monitors the health of these rodents at both supplier and laboratory levels.

This contract has monitored the viral health status of laboratory animals from all the animal production colonies and from the testing laboratories that are involved in the DCT research program. This contract has been utilized to identify those animal production colonies capable of meeting quality standards set by the Animal Genetics & Production Branch, and to eliminate those colonies that were found not to meet these standards.

The contract has also monitored the experimental tumors maintained by the NCI tumor bank at FCRF as well as those used in the DCT cancer research program. Through efforts of this contract, a number of tumors were found to be contaminated with LCM (viral pathogen which can produce severe human illness), MHV (a viral pathogen which can produce severe illness in laboratory mice), and polyma (a viral pathogen which can affect tumor growth). Contaminated tumors were discarded and replaced with noncontaminated tumors from the original source.

DTP is committed to the elimination of pathogenic viruses from contract and intramural testing laboratories. This step is absolutely essential for human tumor studies with athymic mice and most desirable for studies involving conventional rodents. Essential to meeting this commitment are viral testing results supplied within an acceptable

turn around time. This goal must be pursued at essentially a level budget without comprising the quality of performance.

Literature monitoring service. Dynamac Corp. is the present contractor. Estimated annual cost is $117,000, three years.

The DCT linear array begins with compound acquisition, and the chemical, biochemical and biological literatures are important resources from which to acquire novel compounds. We expect this project to be a key resource for the types of biologically based selected compounds needed for the new disease oriented approach that DCT has adopted.

As of August, 1985, a total of 43,040 compounds were selected from the literature in the almost five years of effort. To date, 31,353 of these compounds have been requested, and 3,871 of these have been received at NCI from 1,214 different suppliers. There have been 50 confirmed actives of which 20 were chosen for tumor panel studies.

In addition to compound selection, a total of 2,029 hard copy references have been provided to the project officer and others, covering such topics as drug design, structure activity relationships, novel approaches to cancer chemotherapy/drug delivery systems, lung cancer treatment, radioprotectors/radiosensitizers, immunomodulators of antitumor activity, potential targets for chemotherapy, models or assays for evaluation of anticancer activity, anticancer drug reviews, methotrexate, ARA-C, and antitumor drug resistance.

Computer based searches for chemical structures. Maxima Corp. is the present contractor, having competed for the award as a small business set aside. Estimated annual cost is $83,500, five years.

The contractor performs a variety of full and substructure chemical searches as well as nomenclature searches in response to DCT requests. The contractor also generates systematic names for selected agents, as well as performing parallel searches to assist in the implementation of the drug information system.

During this past year, the contractor processed approximately 800 such queries. The majority of these searches (80%) were against the NCI structural database. About half of the queries involved detailed substructure searching to identify chemical compounds for followup testing or synthesis and in response to requests from grantees. Other searches involved published literature databases such as Darc/Questel, Dialog and those from the National Library of Medicine. Searches of these systems provide DCT staff rapid access to citations relevant to our work areas. The synthesis projects require these searches as do the resynthesis and acquisition projects.

There will be a continuing significant need both for high volume computerized chemical searches such as those mentioned previously, and for systematic nomenclature to support various segments of our program. Searches of the published literature databases, e.g. Darc/Questel, will be used to assemble facts (e.g. physical properties, known biological activities, toxicities) relevant to new candidates for detailed screening, as well as compounds presented to the Drug Evaluation Committee. In addition, the National Cooperative Drug Discovery Groups and grantees require full structure and substructure searches of the NCI database. It should be noted that the Drug Synthesis & Chemistry Branch staff does perform small volume searches. However, it is not possible for inhouse staff to perform all the chemical searches because of limited positions and the recent assumption of additional responsibilities by the branch staff.

Provision of hematopoietic cell cultures, growth factors and type C virus protein. Present contractor is Litton Bionetics. Estimated annual cost, $580,500, five years.

The major objectives of this contract are to provide materials and other resources to the Laboratory of Tumor Cell Biology for use in its study of the cause of malignant transformation and pathogenesis of type-C retroviruses of human origin.

Past accomplishments include purification and provision of T-cell growth factor; establishment of cell lines and culture products for the study of growth factors, regulation, human T-cell lymphotropic retroviruses (HTLV) related to ATL and AIDS; and purification and provision of viral structural proteins and antibodies.

Future plans include (1) establishment of hematopoietic cell lines from human retrovirus related diseases or in vitro infected cell lines and normal donors, and provision of cell lines and cell culture products; and (2) purification and provision of viral structure proteins and growth regulatory factors from virus infected and normal cell lines, and preparation of antibodies that work against them.

NCI ADVISORY GROUP, OTHER CANCER MEETINGS FOR NOVEMBER, DECEMBER

Cincinnati Cancer Conference—Nov. 1-2, Cincinnati. Contact Thomas O'Connor, Medical Staff Education, Bethesda Hospitals Inc., 619 Oak St., Cincinnati 45206.

Northern California Oncology Group—Nov. 1-3, Napa Holiday Inn. Fall meeting. Contact Laura Lee, 415-497-7512 or 497-7431.

Immunobiology of Cancer and Allied Immune Dysfunctions--Nov. 4-7, Copenhagen. Contact Scandinavia Hotel, Amager Blvd., 70, DK 2300 Copenhagen S, Denmark.

American Society of Cytology—Nov. 4-9, New York. Annual scientific meeting. Contact Lenore Strigari, American Society of Cytology, 130 S. 9th St., Suite 810, Philadelphia 19107.

Labeled Antibodies--Nov. 5-7, Tokyo. 8th international conference. Contact Dr. K. Kano, Dept. of Immunology, Institute of Medical Science, Univ. of Tokyo, 4-6-1 Shirokanedai, Minatoku, Tokyo 108, Japan.

Detection and Treatment of Minimal Residual Disease in Acute Leukemia—Nov. 6-8, Rotterdam. 2nd international symposium. Contact J.W. van der

Velden, MD, c/o Organizing Committee, Leukemia Symposium, Dr. Daniel den Hoed Cancer Center, PO Box 5201, 3008 AE Rotterdam, The Netherlands.

8th Annual Breast Cancer Symposium—Nov. 7-9, San Antonio. Contact Terri Coltman, 4450 Medical Dr., San Antonio TX 78229, phone 512-690-0655.

1st International Congress on Neoadjuvant Chemotherapy—Nov. 7-9, Paris. Contact SOMPS--(Title of Congress), Pavillon Jacquart, Hopital de la Salpetriere, 47 boulevard de l'Hopital, 75651 Paris Cedex 13, France.

Cancer Education Review Committee--Nov. 8, Holiday Inn Crown Plaza, Rockville, Md., open 8:30-10 a.m.

American Assn. for Cancer Education--Nov. 12-15, Hyatt Regency Hotel, San Francisco. Annual meeting. Contact AACE, Stephen Stowe M.D., Secretary, CRTC Bldg Rm A-1020, New Jersey Medical School, 100 Bergen St., Newark 07103, phone 201-456-5365.

Diagnosis and Treatment Strategies for Gynecologic Cancer—Nov. 13-16, Houston. 29th annual clinical conference. Contact Office of Conference Services, Box 131, M.D. Anderson Hospital & Tumor Institute, 6723 Bertner Ave., Houston 77030, phone 713-792-2222.

Management of Cancer Pain—Nov. 14-16, Memorial Sloan-Kettering Cancer Center, New York. Contact CME Planning Office, C180, MSKCC, 1275 York Ave., New York 10021, phone 212-794-6754.

Symposium on Hematological Disorders—Nov. 14, Roswell Park continuing education in oncology. Contact Gayle Bersani.

Ethics in Cancer Care--Nov. 15-16, Cleveland. Contact Center for CME, The Cleveland Clinic Educational Foundation, 9500 Euclid Ave., Rm TT3-301, Cleveland 44106, phone 216-444-5696.

Asbestos Abatement in the Federal Government—Nov. 19-21, Hilton Plaza Hotel, Kansas City, Mo. Contact Hall-Kimbrell Environmental Services, 946 Tennessee, Lawrence KS 66044.

Ella T. Grasso Memorial Conference--Nov. 20, Yale Univ. Latest information on diagnosis and treatment of women's cancer. Contact Peter Schwartz M.D., Dept. of Obstetrics & Gynecology, PO Box 3333, New Haven, CN 06510.

Preclinical Cancer Program Project Review Committee—Nov. 20, Linden Hill Hotel, Bethesda, open 8:30-9:30 a.m.

Clinical Cancer Program Project Review Committee--Nov. 21-22, Linden Hill Hotel, Bethesda, - open 8:30-10 a.m.

Frederick Cancer Research Facility Advisory Committee—Nov. 25-26, NIH Bldg 31 Rm 9, open Nov. 25 8:30-11 a.m.

National Cancer Advisory Board—Dec. 2-4, NIH Bldg 31 Rm 6. Annual program review.

Idiotype Networks and Immune Regulation: Potential Uses in Vaccines and Understanding Human Diseases—Dec. 4-6, La Mansion Del Rio Hotel, San Antonio. Contact Dr. Daniel Watanabe, Interface, International Conferences, 1212 Cedar Post, Suite D, Houston 77055, phone 713-973-2870.

American Society of Hematology—Dec. 7-10, Hilton Hotel, New Orleans. Contact 609-848-1000.

Ovarian Cancer: Therapeutic Results and Exciting New Leads—Dec. 13-14, NYU Medical Center, New York. Contact Registration Office, NYU Postgraduate Medical School, 550 First Ave., New York 10016.

FUTURE MEETINGS

20th Annual Vail Midwinter Seminar—Jan 29-31, Mark Hotel, Vail, CO. Topics will be GU and GYN cancers. Contact Chris Heminway, American Cancer Society, Colorado Div. Inc., 2255 S. Oneida, Denver 80224, phone 303-758-2030.

Univ. of California (Irvine) First International Cancer Conference--Feb. 13-15, Marriott Hotel, Newport Beach. Includes presentations on new advances in understanding and treating cancer. Contact Assistant Director, Center for Health Education, 2801 Atlantic Ave., Long Beach, CA 90801, phone 213-595-3823.

Gastrointestinal Oncology 1986—April 3-4, Memorial Sloan-Kettering Cancer Center. Contact CME Conference Planning Office, C-180, MSKCC, 1275 York Ave., New York 10021, phone 212-794-6754.

In Vitro Toxicology: Approaches to Validation—April 15-15, Johns Hopkins School of Hygiene & Public Health. Contact Jeanne Ryan, Program Coordinator, Office of Continuing Education, 720 Rutland Ave., Turner 22, Baltimore 21205, phone 301-955-6046.

Oncology Nursing Society--April 30-May 3, Los Angeles. 11th annual congress. Contact Nancy Berkowitz, ONS, 3111 Banksville Rd, Suite 200, Pittsburgh, PA 15216, phone 412-344-3899.

GI Tract Cancer: Update on Combined Modality Therapy—May 29-30, Heidelberg, West Germany. EORTC symposium. Deadline for abstracts is Feb. 15. Send abstracts to, and contact for further information, Prof. Dr. P. Schlag, Chirurgische Klinik, Universitat Heidelberg, Im Neuenheimer Feld 110, 6900 Heidelberg, West Germany.

NCI CONTRACT AWARDS

TITLE: Clinical development of anticancer drugs, approximately five year contractsnticancer drugs,

CONTRACTORS: Memorial Hospital for Cancer & Allied Diseases, $3,129,648; Mayo Foundation, $2,593,720; Univ. of Maryland, $2,799,465; Univ. of Wisconsin, $1,492,528; Ohio State Univ., $1,466,417; Univ. of Texas Health Science Center, San Antonio, $2,096,738; Johns Hopkins Univ. School of Medicine, $1,486,148; and Univ. of Texas-M.D. Anderson Hospital & Tumor Institute, $2,947,534.

The Cancer Letter _Editor Jerry D. Boyd Associate Editor Patricia Williams

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