THE CANCER LETTER

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INTERFERON INTEREST ZOOMS; NCI AWARDING PRODUCTION CONTRACTS, PROCEEDS WITH PLANS FOR CLINICAL TRIALS

The recent announcement by the American Cancer Society that it is more than doubling its support of interferon clinical trials (*The Cancer Letter*, Feb. 22), impending NCI contract awards for interferon pur-

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In Brief

NIH REVIEWERS, ADVISORS TO GET INCREASE IN HONORARIA; PRICE LEAVING NCI FOR MARYLAND

NIH STUDY Section and other advisory committee members will get a hefty increase in their honoraria effective Oct. 1, if NIH Director Donald Fredrickson signs the order putting the new rate into effect—$153 a day, up from $100. This will apply to all NCI advisory groups, review committees, and boards of scientific counselors. Not affected are members of the President's Cancer Panel, who receive $192 a day. . . . **SAM PRICE**, acting assistant director of the Div. of Cancer Research Resources & Centers and former chief of the Organ Site Programs Branch, will retire soon and take a position with the Univ. of Maryland as coordinator for sponsored research. Price has been at NCI since 1972 and has completed 30 years of government service. . . . **"RADIATION: THE CANCER** Fighter," is a 10 minute sound and color public education film produced by the American Society of Therapeutic Radiologists. It won first place in competition by the American Medical Writers Assn., is available for $100. Contact Chuck Honaker, American College of Radiology, 20 N. Wacker Dr., Chicago 60606. . . . **"DIAGNOSIS AND** Treatment of Neoplastic Disorders: Medical, Surgical and Radiotherapeutic Aspects" is the topic of the Sixth Annual Cancer Symposium sponsored by Johns Hopkins Oncology Center April 10-11. Registration fee is $175; limited scholarships are available for physicians in training, nurses and paramedical personnel. Contact the Hopkins Cancer Information Service, 301-955-3636. . . . **T.C. HSU**, who took the initial step that resulted in development of amniocentesis testing for birth defects and recombinant DNA synthesis of insulin, received the E.W. Bertner Memorial Award last week. The award is given annually by M.D. Anderson, and Hsu is the first Anderson scientist to receive it. **MARC COLLETT** and **PETER LOMEDICO** shared the ninth annual Wilson S. Stone Memorial Award for outstanding achievement in biomedical sciences accomplished by a student. Collett is associated with the Univ. of Colorado, Lomedico is at Harvard. . . . **NCI'S OFFICE** of Cancer Communications is accepting applications for its graduate communications internship. Graduate students in journalism, health education, social marketing, information science and political science are eligible for the six month internships which pay $6,900. Applications are due March 31 for the next term. Contact Joseph Bangiolo, OCC Internship Advisor, NCI, Bethesda, Md. 20205, 301-496-6756.

SEARLE ANNOUNCES PRODUCTION STEP UP IN FIBROBLAST INTERFERON FOR MDA

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chase and task orders for interferon clinical trials have intensified interest in the promising anticancer agent.

Latest developments include:

–NCI wrapped up negotiations with Warner Lambert for the purchase of $895,000 worth of leukocyte interferon.

–Flow Laboratories revealed it was negotiating with NCI for a contract to supply fibroblast interferon and had received preliminary start up funds.

–NCI was proceeding with negotiations with the British owned Wellcome Foundation and its U.S. subsidiary, Burroughs Wellcome, for the purchase of lymphoblastoid interferon.

–NCI let it be known that still other interferon purchase contracts might be awarded, depending on availability of funds, needs of the planned clinical trials, and outcome of negotiations with Flow and Wellcome.

–NCI continues to have the capacity at Frederick Cancer Research Center to produce all the lymphoblastoid interferon it will need for the upcoming clinical trials, if industry cannot meet that need at what NCI considers a competitive price.

–Immune interferon and interferon produced with recombinant DNA techniques are further down the road and need considerably more research before they reach the clinical stage of development.

–Even further down the road is synthetically produced interferon, as efforts to analyze the 180 or more amino acids known to make up interferon are expected to require four or five more years.

–G.D. Searle announced that it will be supplying fibroblast interferon to M.D. Anderson for large scale clinical testing and will increase the production capability of its plant in England where the substance is manufactured.

–NCI was proceeding with its plans to award task orders to as many as seven or eight institutions for clinical trials to test all three forms of interferon as well as thymosin and MVE-2.

NCI has budgeted $2 million for the clinical trial task orders. From 400 to 450 patients will be involved in the studies. They will be both phase 1 and phase 2 studies.

NCI has suggested that institutions collaborate in the competition for the task orders, with perhaps three working together on one order. The upper limit award to an institution will be $250,000, not including the interferon which NCI will supply.

Deadline for submission of task order proposals is April 1. The awards probably will be made in June. Proposals will be reviewed by an ad hoc study section through NCI's Div. of Extramural Activities.

"We hope to confirm the ACS results," said John MacDonald, director of NCI's Cancer Therapy Evaluation Program. Those results, which have not yet been published, include considerable evidence of antitumor activity—enough to convince ACS to put in more than $3 million, in addition to the $2 million it had previously committed.

The NCI studies are also intended to answer the very important question of whether fibroblast and/or lymphoblastoid interferon are as effective as leukocyte interferon. The ACS study is using only leukocyte.

Leukocyte interferon is produced from human white blood cells; it has been said that there are not enough people in the world to supply all the blood needed to produce the quantity of interferon required if it turns out to be a clinically important agent. It has been difficult and expensive just to secure enough for limited clinical trials.

Fibroblast and lymphoblastoid interferon are derived from human cells which are grown in culture, thus permitting mass production. However, the molecular structure of those types differs from leukocyte interferon, raising questions about their activity.

Fibroblast interferon is produced from human connective tissue cells grown in culture. Lymphoblastoid interferon is produced from human lymphoblasts.

There is some concern that the lymphoblast cells contain a potentially oncogenic virus. Searle executives offered that as one of the reasons why their company is concentrating on fibroblast interferon, but admitted that the virus does not pass through to the interferon in the production process.

Wellcome executives likewise are confident there is absolutely no oncogenic threat in lymphoblastoid interferon and contend that its structure makes it more likely to provide clinical benefit than fibroblast interferon.

Pharmaceutical companies thus are lining up for what could be a titanic struggle over a potentially huge market, if one or more of the interferons is clinically successful. That market would not necessarily be limited to treatment of cancer patients: Since it is an antiviral agent, it might be useful against other diseases.

HOWARD SKIPPER TO RECEIVE THIRD BRISTOL-MYERS $25,000 AWARD

Howard Skipper, director of Southern Research Institute whose studies provided the basis for development of anticancer chemotherapy, will receive the third annual Bristol-Myers Award for Distinguished Achievement in Cancer Research.

The $25,000 award will be presented to Skipper April 2 in New York.

Winners of the award are selected from a five-member panel of judges from cancer research centers at Baylor, Univ. of Chicago, Johns Hopkins, Stanford and Yale.

RECISION, 1981 BUDGET CUT THREATS REMAIN; NTP COULD BE ONE TARGET

The threat of a recision in the 1980 fiscal year budget and reduction in the already austere 1981 budget request to Congress was still hanging over the heads of NCI executives this week as the Carter Administration continued consideration of ways to balance the budget.

The prospect of a recision for NCI in the current year seemed remote, despite the mood of Congress to balance the budget whatever the cost in social programs. NCI has already officially obligated about $250 million of its $1 million appropriation. By the time a recision measure winds its way through Congress (where concurrence of both houses is required), at least another $250 million could be obligated, although once the proposal went to Capitol Hill, all but essential spending would be halted or diminished.

In addition, NCI and NIH have the commitments to all noncompeting grants as well as personnel salaries and other overhead which cannot be cut. That would leave a relatively small number of projects against which any reduction could be applied.

Early in the gloomy cutback discussions, a reduction of $120 million in the 1980 NIH budget was tentatively proposed. Spread around to all the institutes, that would translate to a cut of about $30 million for NCI. A reduction of $300 million for NIH in 1981 also was discussed, with a potential impact of $50-60 million on NCI. However, "those figures are no longer operative," an NCI executive said.

Meanwhile, all federal agencies were waiting for further word from the White House, on where the cuts, if any, will be made.

The National Toxicology Program with $45 million this year from NCI, is one possible target of a recision. The White House still has not released the 28 new positions NTP needs to permit it to increase the number of chemicals it will place on test by 75 this year and 100 next year. The Administration seems determined to hold the line on personnel ceilings and even to reduce it where possible. Without more staff, it will be difficult for NTP to effectively spend all $45 million this year and $65 million next year that it would get from NCI as presently budgeted.

One result of the budget balancing talk has been to make the $1 billion, no increase request for NCI in the 1981 fiscal year seem not so bad after all. The situation and congressional mood could change by the time the appropriations subcommittees complete their markups late this spring, but the prospect for any substantial increase appears slim right now.

FRELICK TAKES OVER AS ACCC PRESIDENT, HERBERT KERMAN NAMED PRESIDENT-ELECT

Robert Frelick, who heads the Delaware Cancer Network, assumed duties as president of the Assn. of Community Cancer Centers at the organization's Sixth National Meeting in Washington last weekend.

Herbert Kerman, radiation oncologist from Daytona Beach, affiliated with Halifax Medical Center there, was named president-elect.

Other officers elected were Robert Clarke, Indianapolis, treasurer; Charles Van Allen, Modesto, Calif., secretary; and Gilbert Friedell, Worcester, Mass.; Edward Moorhead, Grand Rapids, Mich.; and John Travis, Topeka, Kan., members of the board of directors.

NCI Acting Director Vincent DeVita told ACCC members that "If you take everything in totality, the Cancer Program has been very successful. I think we can take our chances in competing for national priorities."

Referring to some of those successes, DeVita said that of the 10 leading cancers, significant increases in survival have been achieved in seven among white Americans, five in blacks. "Those successes were not achieved without the help of the community physician," DeVita said.

"We all recognize there is much more to do in preventive medicine. That won't happen without the help of community physicians. The 29 million who have quite smoking didn't quit without the help of community physicians and nurses."

DeVita attributed the decreased incidence of uterine cancer to more careful prescription of hormones by primary care physicians.

Leads in the etiology of colon cancer "are very exciting," DeVita said. "It will require an extraordinary effort to follow up those leads. It won't happen without the help of community physicians."

CCIRC TOLD GROUP RADIATION ONCOLOGY STUDIES COST $20,000 PER 25 PATIENTS

Cooperative Groups incorporating radiation oncology into their protocols require from NCI about $20,000 for every 25 patients plus another $150 per patient for quality control, Washington Univ. radiotherapist Carlos Perez told the Clinical Cancer Investigational Review Committee.

The CCIRC held a minisymposium on the role of radiation oncology in clinical trials at the committee's recent grant review meeting. Perez and Arvin Glicksman, Rhode Island, both former CCIRC members, made the presentations.

"Radiation therapy is used in approximately 50 percent of all cancer patients, either as part of the primary treatment or later on for palliation of recurrent or metastatic disease," Perez said. "In solid tumors, radiation therapy contributes to the control of the primary tumor, alone or combined with surgery in over 75 percent of patients. This is particularly true in cancer of the head and neck, gynecological, genitourinary organs, Hodgkin's disease, soft tissue sarcomas and several pediatric tumors.

"As the emphasis on cooperative clinical trials has switched from hematological disease to solid tumors,

the multimodality Cooperative Groups and some contract groups have incorporated radiation oncologists and surgeons into their organization and research programs.

"Recent analysis by Rubin of the protocols and patient accrual in the major cooperative groups demonstrates that approximately 15-20 percent of patients accrued to protocols involve radiation therapy and that over 20 percent of the studies deal with radiation therapy either as the primary modality of treatment or in one of the experimental arms.

"In order to provide for an adequate development of these so called 'minority specialties' in comparison with the effort and funding devoted to medical oncology the CCIRC must recognize the role of these disciplines in multimodality cancer management and the need for adequate support for radiation oncologists and surgeons if a balanced clinical investigation program is to develop in the forthcoming years."

Perez described the organization of the Radiation Oncology Coordinating Subcommittee in the Div. of Cancer Treatment and one of its working groups, the Council of Radiation Oncology Committee Chairpersons, which includes chairmen of all radiation oncology committees in the cooperative and DCT contract groups involved with clinical trials.

"This council has held periodic meetings over the past two years attempting to coordinate some of the activities of the radiation oncology committees in the Cooperative Groups," Perez said. "However, without any support the achievements and productivity have been suboptimal. If funding was available from NCI the CROCC could perform a variety of tasks that would accrue in significant benefit to the clinical trial program."

Perez said information and program cost projects in his report were compiled through analysis of existing data and exchange of information with members of CROCC. His recommendations:

The radiation oncologists must actively integrate in the administrative and scientific activities of the cooperative groups in order to deliver effective and satisfactory performance. The radiation oncologists must be represented in administrative committees of the groups, such as the executive, disease-oriented, quality control, membership, and results reporting and writing committees, etc. The bylaws of the groups should contain appropriate provisions to insure adequate representative and due process to represent the needs and prerogatives not only of radiation oncologists, but also of surgeons as well as the medical oncologists.

It is not expected that the primarily medical oncology oriented groups foster "minority programs", but certainly it will be necessary to safeguard the ability of the radiation oncologist to perform adequately within the groups to effectively contribute to the scientific program in an atmosphere of cooperation and fellowship.

The radiation oncologists must be intimately involved in the formulation of research programmatic objectives of the groups and be represented in the protocol development committees. Also, they should actively participate in the outlining of quality control procedures, in the reporting of results of clinical trials in the groups, in developing funding guidelines and reviewing the allocation of funds requested for clinical trials.

The functions of the radiation oncology committee in any group will range from scientific to administrative and may involve most of the following areas:

1. Coordination of all activities of the radiation therapists within the group.
2. Assistance in the development of general organization and administrative guidelines within the group.
3. Coordination of participation of the radiation oncologists in protocol design in the disease oriented committees and the implementation of these studies.
4. Review and approval of all protocols involving radiation therapy proposed by the disease oriented committees.
5. Development of requirements for membership in radiation oncology and criteria for general quality control in the group.
6. Development and implementation of criteria for technical quality control in radiation oncology studies.
7. Coordination of forms development in radiation therapy related studies.
8. Development of toxicology criteria to be applied by all the disease oriented committees to radiation oncology and combined modality studies.
9. Analysis of radiation oncology studies and publication of results.

Perez outlined additional time demands for radiation oncology patients admitted to protocol studies made on physicians and other personnel. Time required to obtain informed consent, plan treatment, deliver increasingly complex treatment, provide weekly supervision and followup and weekly case review, and complete required forms totals per patient weekly visit, 3.25 physician hours, 2.25 physicist/-dosimetrist hours, 2.5 nurse hours and 2.5 data manager hours.

None of these costs is reimbursable from insurance carriers. The cost of additional drugs, special treatments, tests, etc., is not included but must be taken into consideration in this analysis. Also, it is apparent that most of these additional costs are over and above customary patient care and therefore, not reimbursable from insurance carriers. Also, it would be unfair to add this cost to the radiation therapy expenses borne by the patient.

Glicksman and Perez presented a breakdown of costs involved in quality control. The cost for rapid turnaround verification, in which central review is provided to assure protocol compliance and use of proper doses, field, etc., is $60 per patient, they said. Completed case review adds another $90, for a total of $150 per case.

They explained how quality control more than pays for itself: Assuming a patient protocol cost of $1800 and the normal 80 percent of evaluable patients from the total entered, the cost per evaluable patient would be $2250. Quality control increases evaluability to 98 percent, Glicksman said, thus decreasing the cost per evaluable patient to $2041.

Edwin Jacobs, associate chief of NCI's Clinical Investigations Branch, told ***The Cancer Letter*** he felt the cost estimates by Perez and Glicksman "are not out of line." He agreed that $150 per patient for quality control "is money well spent."

Here's how Perez came up with a cost estimate of $20,000 per 25 patients in multidisciplinary groups:

	% Effort	Cost
Radiation Oncologist (Clinical)	10	$ 5,000
Radiation Oncologist (Committees)	5	2,500
Physicist/Dosimetrist	10	3,000
Data Manager	25	3,000
Nurse	10	2,000
Technologist	20	3,000
Total		**$18,500**
Travel	2 Per Investigator/Yr	
Supplies	$500.00	
Other Expenses	500.00	
PATIENT COSTS	**VERY CRITICAL**	

I would like to emphasize at this point the critical need for some patient cost funding, particularly to defray expenses for additional tests or experimental therapeutic procedures requested in some clinical trials. Oftentimes, there are no funds in the general institutional budget for these studies and radiation oncology patients cannot comply with protocol requirements. . . .

The participation of radiation oncologists as well as surgeons and other specialists (such as pathologists) in cooperative clinical trials is complex and not voided of cost. However, these requirements must be effectively addressed by the CCIRC and NCI if a truly multidisciplinary cancer program is to be developed in this country and if major advances are to be made in the treatment of cancer patients through cooperative clinical trials.

CCIRC member Clara Bloomfield suggested that blood counts should be covered by third party payers. But Chairman John Bennett pointed out that insurance could not be expected to reimburse for patients in control groups for services considered beyond the standard for patient care, and said that such costs should be paid out of research funds. Committee member William Donegan noted that distinctions would be difficult in double blind studies.

Glicksman discussed the CALGB quality assurance program with its rapid turnaround time. Within three days of the start of treatment, the quality control center starts receiving information. That enables the center "to modify treatment. We are able to interact and improve treatment and protocol compliance."

PATHOLOGY REVIEW CONFIRMS RESERPINE IS CARCINOGENIC, CLEARINGHOUSE TOLD

A review by independent pathologists of the NCI bioassay of the antihypertensive drug reserpine has confirmed the report of Carcinogenesis Testing Program staff and the conclusion of the Clearinghouse on Environmental Carcinogens that the compound is carcinogenic in animals.

"There is no doubt in my mind that reserpine is a carcinogen," Program Director Richard Griesemer said when the independent pathologists' report was presented to the Clearinghouse Data Evaluation/Risk Assessment Subgroup.

The independent review was requested by the manufacturer, CIBA-GEIGY, when the program report was considered last year by the subgroup (*The Cancer Letter*, May 4, 1979). The subgroup at that time had agreed with the report, that reserpine was carcinogenic in male rats and in mice of both sexes, and that it posed a carcinogenic threat to humans. CIBA-GEIGY disagreed with those conclusions.

Clearinghouse Chairman Arnold Brown carefully pointed out then that the carcinogenic threat to humans was far outweighed by the benefits reserpine has brought to thousands of persons with high blood pressure.

Subgroup member Sheldon Samuels argued that the bioassay report should include the following statement: "This report was delayed for 10 months during which time an independent pathologist confirmed the competency of the NCI bioassay."

Griesemer commented that the pathology review did not "really hold things up. Data was given to the regulatory agencies. Publication of the report will be useful to physicians and the public, but it hasn't been kept from the regulatory agencies."

"If publication means anything at all . . . it goes into the literature. . . . That process was delayed 10 months," Samuels said. "I voted for the delay, but the public has the right to know it was delayed 10 months."

Samuels' motion that the statement on the delay be added to the report was defeated 4-3.

In other actions, the subgroup:

* Agreed with the program report on selenium sulfide, used in hair shampoo, that it was not carcinogenic in skin tests with animals. A previous separate, gavage study of the compound found it to be carcinogenic.

Clearinghouse member William Lijinsky said he did not believe the dermal test was valid. "I'm not sure the compound isn't dangerous." He based his objections on the doses administered, contending they were too low.

Subgroup member Michael Shimkin pointed out that the substance is an essential element. "It's a carcinogen at higher doses, an essential element at lower doses, perhaps even an anticarcinogen. What do you do about that?"

"Fortunately, that is not a problem of this committee," Brown said.

* Agreed with the report on the bioassay of selsun, also used in shampoos, that it "does not appear to be carcinogenic under the conditions of the study."

Lijinsky again argued that the dose was too low. "The report is acceptable but the test was not adequate," he said.

"Perhaps this is the approach we should take with other chemicals previously determined to be carcinogenic in man," Shimkin said. "To push the dose far beyond any possible use by man and then call it carcinogenic is not appropriate."

* Agreed with the reports on both gavage and dermal tests of 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin (HCDD), used in insecticides, that it was carcinogenic

in the gavage test, posing a possible carcinogenic threat to man, but was not carcinogenic in the dermal test.

"This produces the same conundrum as with selenium," Shimkin said. "Heavy doses are carcinogenic, but not the lighter doses to the skin."

Subgroup member Henry Pitot noted that doses in the skin test were "a thousand fold lower" than those in the gavage test. Also, mice in the test were kept 10 to a cage. "Mice lick each other's backs. I wonder if there was not a significant amount going in by mouth."

* Disagreed with the report on the test of toluene-2,6-diamine dihydrochloride (TDA), an industrial chemical and dye intermediate. The report concluded that the compound was not carcinogenic.

Samuels argued that "the maximum tolerated dose was not approached. . . . This is a very important commercial compound. Acceptance of the report is a signal that this is a chemical we have taken care of. This isn't a chemical we have taken care of. It has not been demonstrated as safe." He pointed to inconsistencies in the report as further evidence it is not valid.

"Inconsistencies are deliberate," Griesemer said. "Program does not change what pathologists say. We encourage them to say whatever they think. The statistician says what he thinks. Pathologists may not have available all the quantitative information."

The subgroup agreed to a motion that approved the findings from the rat study but asked that the mouse portions of the study be repeated.

* Agreed with the report on benzoin, an ingredient in food flavorings, which concluded that the compound was not carcinogenic in animals. But the subgroup, in a 4-2 vote, added the statement that the test results were "equivocal" and suggested further testing.

Subgroup member Joseph Highland said the incidence of leukemia in female mice made the results equivocal and that he was "unwilling to accept the report as written because of the importance of the compound, since it is used in food."

"We were concerned about leukemia," Griesemer said, "but it was not statistically significant."

"It was significant for female mice," Highland said.

"That is true only if one can account for the lower response in the high dose group," Griesemer said. "We couldn't find any reason. You would expect that the incidence in the high dose group would be at least as great as in the low dose. Since it was less, that led us to conclude that the increased incidence at low dose was strictly by chance. You have to permit program some judgment based on experience. We felt strongly about the conclusion."

* Approved the report on phenol, an industrial chemical used in resins, which found there was no evidence of carcinogenic effect. But the subgroup added a statement requesting consideration for retest "in view of the increased incidence of leukemia and lymphomas in male rats.

* Agreed with the conclusion that the test of 4,4-oxydianiline, a high temperature metal adhesive, and also used in moldings and insulation, demonstrated the compound was carcinogenic.

* Agreed with the report on cinnamyl anthranilate, used in soft drink flavors, that the compound was not carcinogenic in the tests.

* Agreed with the report on the test of fluometuron, a herbicide, which concluded that it was not carcinogenic under the test conditions but because of equivocal findings, additional tests were warranted.

NCI CONTRACT AWARDS

Title: National Cancer Program information clearinghouse and allied services, two-month extension

Contractor: Kappa Systems, $54,084.

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, citing the RFP number. Some listings will show the phone number of the Contract Specialist, who will respond to questions. Listings identify the respective sections of the Research Contracts Branch which are issuing the RFPs. Address requests to the contract officer or specialist named, NCI Research Contracts Branch, the appropriate section, as follows:
Biology & Diagnosis Section and Biological Carcinogenesis & Field Studies Section—Landow Building, Bethesda, Md. 20205; Control & Rehabilitation Section, Chemical & Physical Carcinogenesis Section, Treatment Section, Office of the Director Section—Blair Building, Silver Spring, Md. 20910. Deadline date shown for each listing is the final day for receipt of the completed proposal unless otherwise indicated.

SOURCES SOUGHT

Project No. NCI-CP-FS-01027-67

Title: *Request for statement of capabilities for "A study of morbidity in childhood cancer survivors and their offspring"*

Deadline: *March 24 (for submission of resumes)*

The Biometry & Clinical Epidemiology Branches of NCI intend to conduct a study of morbidity in more than 2,000 childhood cancer survivors and their offspring in California, Connecticut, Iowa, and in other states in accordance with funds available. The study of retrospective cohort design will pay specific attention to effects of heredity and cancer treatment, looking especially at involuntary infertility in cases, and to birth defects and cancer occurrence among their offspring. The study design requires up to two sibling controls for each case included in the cohort.

The project originators intend to study a cohort of cases which have the following characteristics:

1. Histologic confirmation of malignant disease; 2. diagnosis prior to age 19; 3. survival of at least five years after diagnosis; and 4. attainment of age

18 or more by time of death or last followup. Controls will consist of up to two siblings per case who are of the same sex (preferably) and closest in age to the case, and who have attained at least age 18. Permission to contact patients will be sought from their personal or hospital physicians. Patients (cases) or proxies and controls will be administered detailed questionnaires in person in their homes by experienced interviewers and in accordance with requirements of the Privacy Act.

Duties: The Tumor Registry will perform the following: (1) Identify the childhood cancer survivors under each registry; (2) contact each survivor and control; (3) provide NCI project officers with completed questionnaires with identifiers detailed.

The project originators in these branches believe that the best sources for conducting the proposed study are the California Dept. of Health Services (Tumor Registry), Yale Univ. (Connecticut Tumor Registry), and Univ. of Iowa (Tumor Registry). These institutions have maintained long term annual followup on a cohort of at least 250 cases that meet the protocol requirements, and have the ability to recontact these cases. They have in their own files detailed demographic and medical data on these cases. They also have known experience and capabilities while engaged in related projects for NCI, and have experienced principal investigators to be assigned.

Potential contractors in other states must have at the time of appearance of this announcement the following capabilities:

1. Documented evidence of at least 250 cases meeting the states protocol requirements. 2. Documented capability for contacting those specific cases proposed for study. 3. Demographic and medical data on the identified cohort of at least 250 cases proposed for study. 4. Expertise in case finding and followup. 5. A physician principal investigator to handle confidential medical information. 6. Expertise in matters of informed consent and privacy constraints. 7. Experienced field interviewing supervisors and trained interviewers, none of which should have an educational level above the master's degree.

Any equivalent tumor registry in other states which believes that it has capabilities for doing this study, is invited to submit responses to each of the above mentioned seven requirements by due date, for evaluation of qualifications. Capability statements in accordance with this announcement must also be submitted. Since at this time only one or two other organizations can be funded for the purposes cited, respondents will be selected in order of priority, in relation to their capabilities.

Responses should not include cost or pricing information. Responses must be directed specifically to all the points above. Comparisons will be made to the named organizations. Respondents should describe their qualifications which make them competitive under this announcement: their tumor registry, their facilities, experience and other capabilities for carrying out this project, and description of the availability and qualifications of the principal investigator and other professional and technical personnel including interviewers who are to work on the project. All responses will be carefully evaluated. Do not submit resumes of any person who will not work on this project. Unqualified organizations not considered competitive, because they do not have the required number of cases, will be notified, in order to save them the expense and effort of submitting a proposal, if a formal RFP is issued. It should be noted, however, that this procedure does not preclude any organization from requesting an RFP, if issued, and submitting a proposal. The government reserves the right to withdraw or cancel this announcement as a whole or in part without providing reasons to respondents.

Twelve copies of the resume of experience and capabilities must be submitted and should cite the project number. Contact must not be made with NCI scientists regarding this announcement. Send replies and direct inquiries only to:

Contract Specialist: Dorothy Coleman
Biological Carcinogenesis & Field Studies
301-496-1781

RFP NCI-CM-07257

Title: *In vitro and in vivo screening of radiosensitizers*

Deadline: *Approximately May 5*

The Drug Evaluation Branch, of the Div. of Cancer Treatment is seeking a contractor with the expertise to conduct a screening program for potential radiosensitizers. The project objectives are a) to collect physical-chemical data, such as electron affinities, lipid-to-water partition coefficients, and solubilites in aqueous solution on about 50 compounds per year; b) to evaluate about 20 compounds per year for radiosensitizing properties in a mammalian cell culture system; and c) to examine about 10 compounds per year as radiosensitizers in tumor bearing mice using at least three separate tumor systems and a different endpoint for each system (regrowth delay of tumors, tumor cell survival and modification of the radiation dose required for curing 50 percent of the tumors).

A three year period of performance is projected with the following level of effort required: Year 1—4.00 staff years; year 2—3.75 staff years; year 3—3.50 staff years.

Contract Specialist: Sandra Antony
Cancer Treatment
301-427-8737

RFP NCI-CM-07330

Title: *Screening of radioprotectors*

Deadline: *Approximately May 5*

The Drug Evaluation Branch of the Developmental

Therapeutics Program, Div. of Cancer Treatment, NCI, is seeking a contractor with expertise to conduct a screening program for potential radioprotectors in both normal and tumor bearing mice.

The objective of this project is to increase the therapeutic ratio of radiation therapy by testing for compounds which protect normal tissues, but offer little or no protection of tumor tissue against ionizing radiation. Compounds which are superior to or which protect tissues not protected by the current reference compound, WR-2721 (aminopropyl-aminoethyl phosphorothioic acid), are being sought.

Three general screens will be conducted: (1) protection against hematopoietic death (about 50 compounds per year); (2) protection of other normal tissues (skin, gut, central nervous system, etc.) and determination of selectivity using mice bearing EMT6 tumors (about five compounds during the contract period); and (3) further determination of selectivity using three additional murine transplanted solid tumor systems from the following panel: C3H mammary carcinoma, Lewis lung carcinoma, B16 melanoma, and the KHT sarcoma (about five compounds during the contract period).

A three year period of performance is projected with the following level of effort required: Year 1—2.00 staff years; year 2—1.80 staff years; year 3—1.60 staff years.

Contract Specialist: Maria Decker
Cancer Treatment
301-427-8737

RFP NCI-CM-07365-29

Title: *Prime contractor for performance of toxicology studies*
Deadline: *June 2*

The NCI Toxicology Branch is soliciting proposals from organizations with the capability to assume the technical and management responsibility for preclinical toxicology studies of antineoplastic agents, biological response modifiers, radiosensitizers, radioprotectors, and other potential treatment modalities in animal systems. These studies are part of the Investigational New Drug Application which must be filed with FDA prior to the introduction of a new agent into clinical trial.

NCI is seeking in the prime contractor's organization a unique working relationship between scientists and systems management personnel whose joint purpose will be to optimize the quality, reliability and timeliness of delivery of completed toxicity studies.

This solicitation represents a recompetition of an ongoing project presently conducted by Battelle Memorial Institute.

The prime contractor will be expected to:

a) Implement protocol toxicology studies at approved subcontractor facilities and begin accumulation of data.

b) Demonstrate a capacity to mobilize for performance of organ-specific toxicity studies in animal systems where such studies have been suggested from unexpected toxicity observed in man and where such studies will be used to screen 'second generation' agents to select one with an improved therapeutic index.

d) Computerize selected toxicity data that will permit NCI to analyze for the qualitative and quantitative predictability of animal systems for clinical toxicities, shorten lead times for new protocol starts and improve the responsiveness to INDA-FDA inquiries.

Clyde Williams
Cancer Treatment
301-427-8737

RFP NIH-NIAID-MIDP-80-23

Title: *Antisera to immune interferons*
Deadline: *Approximately May 12*

Develop antisera to mouse immune (type I) interferons and human immune (type II) interferons. One thousand vials of each antisera shall be produced in addition to the same number of control globulins for each reagent.

RFP NIH-NIAID-MIDP-81-2

Title: *Animal models for antiviral evaluation*
Deadline: *Approximately May 13*

Maintain model systems for viral infectious diseases for the evaluation of antiviral compounds. The contractor shall be required to evaluate antiviral compounds for efficacy and toxicity and to develop the optimal schedule and route of administration.

Chief, Contract Management Branch
National Institute of Allergy & Infectious Diseases
National Institutes of Health
Westwood Bldg, Rm 707, 5333 Westbard Ave.
Bethesda, Md. 20205
Attn: Sara Spencer

RFP DELAYED

Iso-antigenic typing of mouse strains, RFP NCI-CM-07363, the availability of which was announced in January, has been delayed until April. All other aspects of the synopsis remain unchanged. Those who have already requested copies of the RFP will automatically be included in the mailing when the RFP is released.

The Cancer Letter _Editor Jerry D. Boyd
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