THE CANCER NEWSLETTER

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Control Finally Gets A Leader--Diane Fink--With An In-House Promotion; NCI Says It Will Spend All The Program's $34 Million

The sputtering Cancer Control program finally got a permanent director this week when NCI Director Rauscher tapped Diane Fink for the job. She has headed Control's treatment branch since moving last July from the Cancer Grants clinical investigations branch where she was program director for chemotherapy.

Cancer Control was created by Congress with enactment of the National Cancer Act. It was a new concept for a research institute, and NCI spent much of the program's organizing efforts trying to decide what it should and should not include. Rauscher first named John Bailar as acting director and then put Guy Newell in charge after Newell signed on as Rauscher's deputy. Rauscher thought he had a permanent director in USC's Brian Henderson, but he backed out at the last moment.

Newell and Bailar got the program planning efforts under way, but it appeared to some that lack of a full time, permanent director could result in the failure of Control to obligate all the $34 million appropriated by Congress for it this fiscal year before the June 30 deadline. Unlike last year, NCI does not have two-year spending authority for its entire appropriation, although it can carry over $25 million to FY 1974

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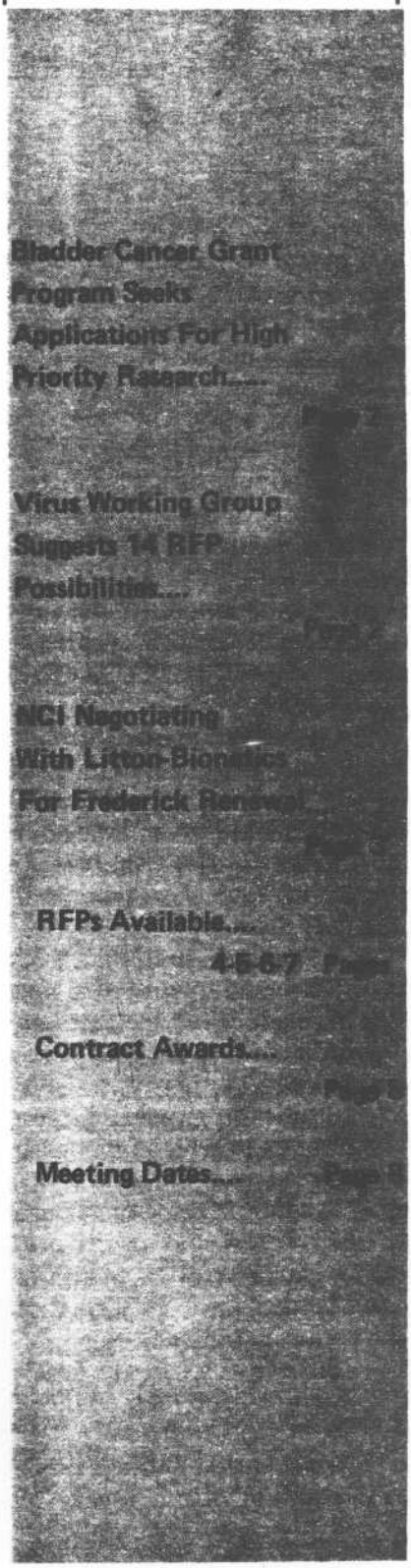
IN BRIEF

Basic Research Chief At Frederick Will Be A Nominal Litton Employee To Avoid NCI Staff, Salary Ceilings

CHIEF of basic research at Frederick Cancer Research Center, currently the object of a talent hunt by NCI Director Rauscher, will be nominally an employee of Litton Bionetics, which operates the center under a contract with NCI (see story on page 3). He will report directly to NCI, however. Two reasons for not carrying him on the NCI payroll: It avoids the limit on positions imposed on NCI; and it gets around the $36,000 salary ceiling on career government executives. . . . **CHAIRMAN DAN FLOOD** (D.-Pa.) of the House HEW Appropriations Subcommittee, has tentatively scheduled hearings on the HEW budget to start March 18. Secretary Weinberger will be one of the first witnesses. Flood's hearings are now open to the public--he had kept them closed until last year's efforts by younger House members forced open most committee meetings. . . . **REVISIONS** in the National Cancer Program Plan that were suggested at the January updating conference will not be published for several months. The previous report that they would be completed by the end of February referred to the summary reports to be submitted by the eight working group chairmen. . . . **GERALD MURPHY**, Roswell Park director and member of the National Cancer Advisory Board, has been appointed to the New York State Journal of Medicine editorial board. . . .



Bladder Cancer "Headquarters" Grant Program Seeks Applications For High Priority Research

NCI is encouraging qualified invesigators to submit grant applications to support research in high priority areas required by the National Bladder Cancer Project (NBCP).

This is one of the "off campus" programs established by NCI to give the scientific community more control and influence over a major project, with the additional benefit of removing much of the workload involved in program management from NCI's overworked staff.

The program is managed through a "headquarters" grant to St. Vincent Hospital, Worcester, Mass. Grant applications are directed to St. Vincent, where they are reviewed for scientific merit by a "working cadre" that performs the function of an NIH study section. They will undergo the usual policy review by the National Cancer Advisory Board, but the study section work will not be duplicated.

High priority research proposed for NBCP in etiology and prevention include:

A. Studies for identifying factors (hazards) and to identify populations with differing risks.

1. International case-control studies on factors suspected of being etiologic for carcinoma of the bladder.

2. Cross sectional studies in metropolitan and semirural areas of the U S seeking further information on factors suspected of being etiologic for carcinoma of the bladder.

3. One or two limited studies to identify more specifically the selected high risk population, e.g. correlation between provincial bladder cancer rates in Canada and human bracken fern consumption.

4. Retrospective cohort studies on special exposure groups such as workers in the rubber, leather, and dye industries.

5. Analytical studies to develop more suitable qualitative and quantitative methods for detecting known bladder carcinogens and for evaluating the environmental levels of carcinogens to which humans are exposed.

6. Studies to measure the level of carcinogenic compounds to which humans are exposed in selected environments.

7. Studies utilizing quantitative analytical methods to determine more definitively the absorption, metabolism, and excretion of known bladder carcinogens.

B. Studies to develop methods for interfering with the formation of tumors.

1. Biological studies to develop more suitable cell and organ culture methods for transitional cell tumors of the bladder.

2. Biochemical and physiological studies in suitable in vivo and in vitro model systems to investigate growth regulation and characteristics of cellular membranes in normal and neoplastic tissue.

3. Studies in model systems of susceptible and nonsusceptible species of known bladder carcinogens following the co-administration of the carcinogen with metabolic stimulating or trapping agents or following modification of other organ systems.

4. Studies in suitable model systems of the effect of known bladder carcinogens administered at various periods during the development of the animal.

5. Biochemical studies of the influence of stimuli applied during various stages of bladder carcinogenesis through the use of (1) initiation-promotion systems or (2) inhibition, summation or synergistic effects of co-administration of a variety of stimuli concurrently or sequentially by systemic routes.

6. Preliminary field trials attempting to prevent primary or recurrent bladder cancer with such compounds as vitamin B6 given orally, or thiotepa instilled at intervals in the bladder, by modifying the carcinogenic process in high risk populations with a known exposure to a carcinogen or a previous history of bladder cancer.

High priority studies in detection, diagnosis, prognosis and treatment include:

1. Immunological studies attempting to identify and isolate specific antigens and antibodies for bladder tumors.

2. Clinical studies to determine the ability of selected patients with small quantities of tumor, but with a known poor prognosis, to develop antibodies to their tumors following the use of non-specific reagents.

3. Studies of new and innovative treatments in appropriate animal models.

Applications should be prepared on the standard NIH Form 398 and mailed to: St. Vincent Hospital, 25 Winthrop St., Worcester, Mass. 01610. Applications will be evaluated for relevance to the program needs and whether or not the proposed work is important to NBCP goals, in addition to the usual assessment of scientific merit, technical adequacy, investigator competence, and adequacy of resources.

NBCP will not accept applications which are being considered by the Division of Research Grants or any other NIH division. Applications which have been disapproved by NIH will not be considered unless they have been appropriately changed.

Virus Working Group Suggests 14 Projects As Suitable For New Contract Proposals

Fourteen projects have been suggested as prospective RFPs by members of the Tumor Virus Detection Working Group as the result of their demand that they be permitted to inject some non-NCI influence into program development.

The working group, which includes nine non-

government scientists among its 14 members, reviews contract proposals for scientific merit and assigns them priorities. The outside members had asked for an opportunity to suggest projects suitable for contract awards. Group Chairman George Todaro, chief of NCI's viral leukemia & lymphoma branch, scheduled a meeting for that purpose.

The suggestions were:

–Interaction between DNA & RNA tumor virus, activation of endogenous viruses.

–Specific membrane changes induced by mammalian RNA viruses.

–Epithelial cells in culture, normal cells to use for transformation studies.

–Herpes "latency", what is the mechanism?

–Immunosupressed and transplanted primates, with primate or human kidneys.

–In vitro transformation assay for leukemia viruses.

–Generate sarcoma viruses in primates with heterologous helpers.

–Nude mice susceptibility to leukemia and sarcoma viruses.

–Role of tumor viruses in natural history of tumors.

–Molecular mechanisms of transformation.

–Characterize human tumor cells for differentiated function.

–Grow human tumors in nude mice, use it to enrich tumor cells.

–Inoculate marmosets with human leukemia cells to try to activate virus.

–Presence of endogenous type C viruses in avian species.

Todaro said that the suggestions could result in at least three and perhaps as many as six RFPs. Some might appear first as announcements soliciting ideas; RFPs could subsequently be developed.

(The Feb. 22 issue of *The Cancer Newsletter* incorrectly identified Bernard Talbot as executive secretary of the Tumor Virus Detection Working Group. Talbot is vice chairman, and Roy Kinard is executive secretary).

NCI Opens Negotiations With Litton-Bionetics For Renewal of $10 Million Frederick Contract

NCI has asked Litton Bionetics to submit its proposal for operation of the Frederick Cancer Research Center for another year, to start when the second year contract expires next June 25. L-B has been the contractor since the Army's biological warfare facility at Ft. Detrick, Md., was converted to cancer research two years ago.

The contract has totalled more than $10 million in each of its first two years, by far the biggest contract ever awarded by NIH. The third year total depends on the appropriations NCI receives from Congress, but it probably will exceed $10 million again.

Approximately 50% of the first year spending at Frederick went into the conversion effort, for construction and equipment, with the other half required to fulfill its mission of supporting NCI research programs. Total spent the first year was $10.7 million. To date through the second year, slightly more than $10.7 million has been spent or obligated. Additional construction will require about $800,000 more, bringing the total for the year to more than $11.5 million. Of that figure, about $9 million will go into mission fullfillment as the conversion process nears completion.

Under the unique terms of the award plus fee contract, L-B's profit is determined by an NCI group that reviews and evaluates the contractor's efforts twice a year. The contract lists the maximum amount that will be available as the fee for each semiannual period. NCI can award any amount up to that figure; amounts between the award and the maximum amount available may not be carried forward.

During the first year, L-B was awarded $460,300 out of $594,000 that was available. In the first half of the current contract, L-B received $328,000 out of $410,892 available. There will be $468,134 available for the second half award. NCI Director Rauscher has the final say on the award, and there is no appeal.

NCI points to the awards as an indication that it has been generally pleased with L-B's performance (although L-B probably could be happier over the fact that it has received only 80% of its potential profit).

The third year contract will reflect the National Cancer Advisory Board's determination to reserve about 20% of Frederick's effort for basic research, with the intention of making it a "world-renowned center of excellence" in cancer research.

Diane Fink To Head Cancer Control; NCI, Advisors Study Program Plan

(Continued from page 1)
if necessary.

It won't be necessary for Control, apparently. NCI execs told *The Cancer Newsletter* that they expect to obligate every cent of the $34 million by June 30. In fact, Control's planned activities in the process of being funded exceed the $34 million level, and some projects which will be ready to go before the end of June will have to be deferred into fiscal 1975.

Fink holds an MD from Stanford, and came to NCI in 1971 from the San Francisco VA hospital. Her specialty is internal medicine and hematology.

A draft of the Cancer Control Program Plan is now under study by NCI and the program's advisory committee. It covers five years, through fiscal 1978,when it is estimated the program will be spending $125 million a year.

RFP'S AVAILABLE

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

RFP NCI-CB-43937-33

Title: *Vaginal-cervical cell sample sources for cytology automation*

Deadline: *March 15, 1974 (extended from Feb. 27)*

The following points are in answer to several inquiries from institutions interested in submitting proposals to the above RFP. The contract proposals will be judged primarily on the contractors' ability to provide NCI with gynecologic cytopathology specimens. In writing the proposal the contractor should handle specific questions according to the best interests of his institution. In view of the simplicity of the contract no meeting of prospective contractors needs to be held and no further communication in the form of inquiries or answers is needed.

Protocols concerning the technique of specimen collection are subject to change as the needs of the laboratory change and new and better techniques of sample collection are developed. In view of this, any supplies that are not routinely used in gynecologic practice will be supplied to the contractor by NCI.

The contractor will be responsible for supplying NCI with a very simple case history and the results of cytology, histology and surgery done at the contracting institution. NCI will correlate the data.

At this time the protocol in use requires that the clinical samples be refrigerated and delivered weekly to NCI. This protocol is subject to change as the need arises.

In view of the totally experimental nature of this program, it is the purpose of this contract to correlate new techniques with routine cytologic findings. Therefore, the discrepancy of two different diagnoses will not arise.

It is estimated that with the time it takes for committee approval, site visiting and final budget and work scope approval and signatures, the contract will not be funded until June, 1974.

Contracting Officer: H.P. Simpson
Biology & Diagnosis

RFP NCI-CP-VO-43330-65

Title: *Cellular immunity studies to Herpes Simplex associated antigens in cancer patients and controls*

Deadline: *April 8, 1974*

Epstein-Barr virus has been implicated as the possible etiologic agent in African Burkitt's lymphoma and Herpes simplex virus type 2 has been suggested as a possible etiological agent of cervical cancer in immunological, epidemiological and biochemical studies. Immunological programs have concentrated on detecting antibodies in the sera of cancer patients and controls directed against a variety of viral antigens. NCI is interested in studies to establish whether cellular immunity develops against cells infected or transformed with EBV or HSV type 2 in patients with Burkitt's lymphoma, cervical cancer, and other herpesvirus associated diseases such as nasopharyngeal carcima and infectious mononucleosis.

If such immunity can be demonstrated, studies will be undertaken to correlate the cellular immune response to the clinical status of the patient and to identify and characterize those antigens in virus-infected or transformed cells responsible for eliciting cellular immunity. Such a program is needed to further determine if there is an etiological association between herpes viruses and cancer, and to provide the basic immunological knowledge needed for developing diagnostic, prognostic and therapeutic techniques for diseases associated with these viruses.

In order to demonstrate specificity of immune response, several study groups (such as normal individuals and patients with acute or chronic herpes virus infections) may be important to include in the study, and other herpes viruses, such as cytomegalovirus, might serve as a useful control.

The contractor shall use current and/or develop new cellular immunity assays to establish whether cellular immunity to herpes antigens can be domonstrated in cancer patients; identify and characterize those antigens responsible for eliciting the cellular immune response; and correlate the results of the cellular immunity assays to serological assays and to the clinical status of the patients and controls. A contract restricted to work on EBV or HSV type 2 alone will be acceptable.

Performance of the above services will entail approximately 3 years of effort; however, offerors should make their independent assessment of the level of effort required, and develop their proposals accordingly.

Contract Specialist: Sydney M. Jones
301-496-1781

Contracting Officer: W.L. Caulfield
Cause & Prevention

RFP NO1-CP-43329-56

Title: *Chemical carcinogenesis immunity*
Deadline: *March 29, 1974*

Part of the goal of the carcinogenesis program is to prevent cancer by identifying processes that control the establishment of cancer and to block the spread of existing cancers. These approaches include chemical, biochemical and immunological processes as well as a continuing vigorous program for refinement and innovation of the same technologies.

Interference with the immune response is associated with the action of chemical carcinogens. Limited investigations have revealed that chemical carcinogens exert a depressive effect on humoral antibody response and that they impair the homograft reaction. Because of the importance of the immune system in oncogenesis, NCI is interested in research to elucidate those factors which may alter the host's immune functions. The purpose of this RFP is to initiate an investigation into the effects of chemical carcinogens on the immune system and to devise, if possible, corrective measures that can be used to counteract undesirable effects that may result from this interaction.

The objective of this project is the study of the effects of chemical and physical carcinogens on the immune system. Although there have been several reports in the literature on this topic, there has been no systematic investigation of the "normal" immune functions in animals subjected to chemical carcinogens. By "normal" functions we mean functions of the various components of the immune system in animals that are not challenged with an antigenic stimulus. For example, what happens to basophils during the process of carcinogenesis? Is there a change in their reactivity, ultrastructure, enzyme profile, etc.? A few carcinogens have been studied in a few species of animals but only a limited number of measurements have been made. In the present project it is desired to evaluate the "normal" immune status of animals treated with chemical or physical carcinogens and their non-carcinogenic analogs by determining the levels of the various classes of immunoglobulins, natural antibody, whole complement levels, and its individual components, and also to assess lymphoreticular cell functions.

The proposals written in response to this RFP should consider the following parameters for study. Proposals for one or more systems or combination will be considered. A separate budget should be submitted for each system.

a. Species of research animal—Primary interest is in random bred animal since studies in such a system provides a more adequate model for study of such effects in the human. However, consideration may be given to inbred species of animals if there is a particular rationale for their use.

b. Selection of chemical and physical carcinogens—The chemical carcinogens and the non-carcinogenic analogs used in this study should be from any or all of the following groups of compounds: the polycyclic hydrocarbons, the nitrosamines, the azo dyes, the aromatic amines and metals. Physical carcinogens may include UV of various wave lengths, ionizing radiations such as alpha beta, and gamma emitters and x-rays. The doses used should be at a level required for tumor induction. A summary of the dosage schedules and routes of administration for the compounds to be used shall be given, since it is not the object of this study to overburden the animals with excessive amounts of these chemicals.

c. Methods of evaluation—The major emphasis in this study will be directed to the evaluation of the immunological profile of chemical carcinogen treated animals. The methods to be used for assessing the status of these animals shall be outlined and shall include those tests necessary to determine the effects on: 1) the synthesis, function and structure of serum proteins, immunoglobulins and natural antibody; 2) the functions of macrophages, lymphocytes and other cells of the immune system. Functions include not only such activities as lymphocyte stimulation or macrophage migration inhibition but also the possible interaction with compounds under test; 3) the complement system with particular emphasis on the individual components and their origin; and 4) reactions which may result in the production of autoantibodies.

In addition to the studies outline above, primary and secondary immune responses may be measured in animals antigenically stimulated prior to, during, and after treatment with the chemical carcinogens. The tests shall be described and shall include those inflammatory responses initiated by antigen-antibody reactions.

The award may be a multi-year incrementally funded contract. The proposal must be developed with an awareness of what will be done each year, and this should be reflected in the necessary cost estimates over the anticipated project period.

Contract Specialist: James L. Tidmore
301-496-1781
Contracting Officer: W.L. Caulfield
Cancer Cause & Prevention

RFP NCI-CM-RFP-74-33

Title: *Therapy of patients with gastric carcinoma*
Deadline: *April 5, 1974*

The Cancer Therapy Evaluation Program desires to conduct studies of intensive multidisciplinary therapy of patients with gastric carcinoma and to determine the efficacy of each of a number of therapeutic approaches, any possible relationship to the morphological type and clinical stage of the disease, and the influence of any concomitant pathology.

The contractor shall furnish all necessary personnel, labor, patients, facilities, equipment, materials, and supplies required to conduct studies and to carry out clinically indicated modes of therapy as these involve patients with gastric carcinoma. The therapeutic regimens, as well as the ensuing studies, will be performed on at least 40 patients per year, a) each of whom has a microscopically-confirmed diagnosis of gastric carcinoma, and b) whose primary neoplasm has been staged and further characterized according to histological type. Specifically, the contractor shall assure that these patients:

Are staged initially by way of laparotomy and including chest films and liver scans where indicated; receive initial CBC and platelet count, serum amylase and lipase, BUN, creatinine, bilirubin, SGOT, alkaline phosphatase, prothrombin Ca++, PO4--albumin/total protein analyses, urinalysis, and other tests as indicated; receive follow-up CBC and blood chemistry determinations at two to three week intervals or as specified in each study protocol; receive sequential determinations of immunologic function and "CEA" levels; are treated intensively with one or more of the following: surgery, radiotherapy, chemotherapy, or immunotherapy, in protocols to be agreed upon by the Project Officer and Principal Investigator.

Suggested approaches include:

–Patient with curative resections to be randomized to 5-fluorouracil + BCNU administered for a prolonged period versus no further therapy.

–Patients with locally unresectable carcinoma to be randomized to 4000r plus chemotherapy versus chemotherapy alone with BCNU + 4-FU and 5-FU alone,

–Patients with disseminated disease will be entered into chemotherapy studies to be agreed upon by the investigator and the project officer.

–Subsequent clinical studies will be designed by the membership of the Gastrointestinal Tumor Study Group including the project officer.

All protocols will be instituted pending review by the appropriate review committees of each participatory institution and of NCI; such protocols to be followed at up to twice weekly for treatment and/or laboratory studies.

Further, all findings are to be documented initially and in the course of follow-up activities on standardized data retrieval forms including on-study notification, on-study information (history and staging), microscopical and surgical pathology, flow sheets (clinical follow-up), summary sheets, and autopsy forms.

It is anticipated that plasma samples for marker substances, e.g., alphafetoprotein studies, CEA, and initial diagnostic microscopic slides, as well as selected microscopic slides obtained at autopsy from each participating institution will be forwarded to one of the participating institutions for review and determination. Respondents interested in performing this service should submit a separate proposal and budget for performance of this task.

Contract Specialist: Marjorie S. Belin
301-427-7466
Contracting Officer: George E. Summers
Cancer Treatment

RFP NCI-CP-VO-43325-65

Title: *Immunological studies on the relationship of embryonic antigen to virus-induced tumor antigens*

Deadline: *April 8, 1974*

Tumors induced by oncogenic viruses in animal systems contain new antigens that can be demonstrated by transplantation immunity, lymphocyte cytotoxicity and humoral antibody tests. These antigens are common among tumors induced by the same virus. Immunity to virus induced tumors can also be produced by immunization with fetal cells, indicating that embryonic antigens are also expressed in virus transformed cells. NCI is interested in determining the nature of the relationship of embryonic antigens to virus induced tumor associated antigens in animal systems. Clarification of the specificity of these groups of antigens will provide leads towards understanding the transformation process induced by oncogenic viruses.

The objective of these studies is to employ in vivo transplantation methods and in vitro cellular and humoral immunological assays to determine the relationship of embryonic antigens to virus induced tumor associated antigens in animals systems.

The contractor will develop and initiate experimental approaches for determining the specificity of virus induced tumor antigens in relation to embryonic antigens in animal systems utilizing current or newly developed immunological methods (humoral and cellular).

Standard lab facilities and equipment for virological, immunological and tissue culture investigations should be available. Animal facilities for housing adequate numbers of experimental animals should also be available.

Performance of the above described services will entail approximately 3 man years of effort; however, offerors should make their independent assessment of the level of effort required, and develop their proposals accordingly.

Contract Specialist: Sydney M. Jones
301-496-1781
Contracting Officer: W.L. Caulfield
Cause & Prevention

RFP NCI-CM-74-24

Title: *Synthesis of potential anticancer agents*

Deadline: *March 22, 1974*

The Drug Development Branch of NCI desires to develop, via synthesis, potential new antineoplastic drugs. A synthesis laboratory for the synthesis of unique compounds with potential as antitumor agents is to be maintained and operated. The laboratory is to conduct research in the design and synthesis of nucleosides, and purine antagonist, folic acid analogs, nitrosoureas (related to streptozotocin) hydrazines, and triazines and other areas of chemistry which may be of interest in cancer chemotherapy.

Specifically, the contractor shall perform the following tasks:

Conduct research in the design and synthesis of of chemical compounds in the following areas– Nucleosides (excluding 7-deazapurine nucleosides, C-nucleosides related to formycin). This area should include some effort on adenosyl methionine analogs; folic acid analogs including development of new methods of synthesis; nitrosoureas related to streptozotocin; hydrazines and triazines; other areas of chemistry which may be of significance in cancer chemotherapy.

The contractor shall furnish to the government, as directed by the project officer, samples of all compounds synthesized.

Whenever possible and practicable, schedule the synthesis of four or five grams of each compound and submit these to NCI as required by the project officer. All materials prepared, including intermediates, shall be submitted for testing.

Assay completely all materials as to identity and purity and determine physical and chemical properties as required.

Synthesize and furnish to NCI as directed by the contracting officer or his designated representative, additional quantities of any compound.

Synthesis work on related classes of materials that show promise based on research studies may be carried out as mutually agreed upon by the contractor and the contracting officer or his designated representative.

General synthetic areas will be chosen in consultation with the project officer. The extent of synthetic exploration will be determined by the requirements of NCI. Only areas demonstrating interest to the program will be designated for further work.

All material produced or procured will be accounted for, will remain government property, and will be delivered and distributed only as directed by the government.

It is anticipated that a five year incrementally funded contract will be awarded. Each increment will be for a period of one year.

Contract Specialist: W. T. Harris
301-427-7470

Contracting Officer: George E. Summers
Cancer Treatment

RFP NCI-CM-74-42

Title: *Biochemical and molecular biological characterization of antitumor drugs*

Deadline: *April 5, 1974*

The Drug Evaluation Branch of NCI has a responsibility to develop and use in vivo animal tumor systems to select drugs which have a high probability of effectiveness in the treatment of human cancer. A distinction is made between active drugs which have novel structure and those which are structural analogs of known active drugs. The characterization of both types of active drugs with respect to their biochemical, molecular biological and cell biological properties forms the basis of this request for proposals.

Drugs selected by the project officer and supplied by NCI will be evaluated by the contractor. Proposals on any one or more than one of the objectives will be accepted. If collaborative efforts with other research groups are proposed at no cost to the government, clear evidence that the key person(s) in the collaboration will provide an effective level of effort must be presented.

Objective A–To determine if new antitumor drugs have biochemical mechanisms of action similar to those of clinically established antitumor drugs. Protocols directed to this question must be capable of determining if any of the drugs of novel structure being developed by the DCT program are "biochemical analogs" of clinically evaluated drugs.

Objective B-1–To identify or provide clear leads to the biologically significant biochemical properties of new antitumor drugs.

Objective B-2– To identify and study the molecular mechanisms of action of new antitumor drugs. Respondants must specify the area(s) of biochemistry or molecular biology to be investigated and present valid reasons for their choice.

Objective C–To select from among active structural analogs of clinically evaluated antitumor drugs, those which may have more desirable biochemical properties.

Objective D– To develop and evaluate biochemical rationales for the combined use of clinically established antitumor drugs. High priority will be given to studies of the biochemistry of combinations of drugs which are effective in the treatment of solid tumors.

It is anticipated that an incrementally funded contract will be awarded for a period of three years. Each increment will be for a period of one year.

Contract Specialist: Daniel M. Abbott
301-427-7470

Contracting Officer: George E. Summers
Cancer Treatment

SOLE SOURCE

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

Title: Experimental large bowel carcinogenesis
Contractor: American Health Foundation, NYC (continuation)

Title: Laboratory service for support in carcinogenesis bioassay and related activities
Contractor: Microbiological Associates, Bethesda, Md. (continuation)

Title: Studies of type C viruses and herpes viruses in relation to oncogenic potential
Contractor: Flow Laboratories, Rockville, Md. (continuation)

Title: Biomedical engineering research services
Contractor: Arthur D. Little, Cambridge, Mass. (continuation)

Title: Metabolism of antineoplastic agents by hepatic drug-metabolizing enzymes
Contractor: Stanford Research Institute, Menlo Park, Calif. (continuation)

Title: Study to evaluate new chemotherapeutic agents for the treatment of advanced breast cancer
Contractor: New York State Dept. of Health, Albany (continuation)

Title: Induction of adenocarcinoma of the canine prostate
Contractor: Hazleton Laboratories, Vienna, Va. (continuation)

Title: Development of new approaches to cancer chemotherapy
Contractor: Litton Bionetics (continuation)

CONTRACT AWARDS

Title: Demonstration project on the earlier detection of breast cancer
Contractor: Georgetown University, $135,318

Title: Develop, test, and produce a human granulocyte conditioning factor
Contractor: Abbott Laboratories, North Chicago, Ill., $414,979

Title: Alteration and renovation of a building at Frederick Cancer Research Center
Contractor: Litton Bionetics, $113,214

Title: Breast cancer demonstration project
Contractor: Univ. of Pittsburgh, $133,762

Title: Coordinated research and development program in cancer chemotherapy
Contractor: Arthur D. Little, Inc. $1,924,037 (supplemental)

MEETINGS

NCI advisory group meetings frequently are closed, usually for review of contract and grant applications. Time scheduled as open will be shown with each listing, but these sometimes are changed.

Cancer Control Education Review Committee, NIH Bldg 31, conference room 8, March 4, open 8:30 a.m.-10:30.

Conference on Cancer Control, sponsored by Nevada Tumor Registry, Nevada Cancer Control Institute, Las Vegas, March 8.

Ad Hoc Advisory Group on Epidemiology, NIH March 11, closed.

Cancer Control Treatment & Rehabilitation Review Committee, NIH Bldg. 31, conference room 3, March 11 open 8:30 a.m.-9:30, closed March 12.

Breast Cancer Epidemiology Committee, March 12, closed.

Breast Cancer Treatment Committee, NIH Landow Bldg room C418, March 12, open 9 a.m.-11.

Diagnostic Radiology Committee, NIH Bldg. 31 conference room 7, March 13, 9 a.m., open.

Committee on Cancer Immunology, March 13, closed.

Subcommittee on Diagnosis & Treatment, NIH Bldg 31, conference room 8, March 17, open 3 p.m.-3:30.

Subcommittee on Carcinogenesis & Prevention, NIH Bldg 31 conference room 7, March 17, open 3 p.m.-3:30.

National Cancer Advisory Board, NIH Bldg 31, conference room 6, March 18-20, closed March 19, 9 a.m.-12, open rest of the time.

Tumor Virus Detection Working Group, NIH Bldg. 31, conference room 2, March 20, open 9 a.m.-9:30.

Committee on Cancer Immunotherapy, March 21-22, closed.

Cancer Treatment Advisory Committee, NIH Bldg 31, conference room 2, March 22, 9 a.m., open.

Breast Cancer Experimental Biology Committee, NIH Bldg 31, conference room 3, March 22, open from 2:30 p.m.

Cancer Control Education Review Committee, NIH Bldg 31, conference room 3, March 25, open 8:30 a.m.-10:30.

Breast Cancer Diagnosis Committee, NIH Bldg 31, conference room 2, March 27, open 1 p.m.-3.

American Assn. for Cancer Research annual meeting, Houston, Rice Hotel, March 28-30.

Colon Rectum Cancer Advisory Committee, Houston, Shamrock-Hilton Venetian Room, March 30-31, open March 31, 9 a.m.-12.

The Cancer Newsletter—*Editor* JERRY D. BOYD

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