THE CANCER NEWSLETTER

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Kennedy Attempts To Establish Unit For All Biomedical Research

Similar To Successful Cancer Panel; Administration Threatens Veto

The success the President's Cancer Panel has achieved in doing the job for which Congress created it may result in the setting up of a similar body to oversee all biomedical research. Sen. Kennedy's Health Subcommittee wrote into the cancer act extension bill provision establishing such a panel.

Both the Senate Labor & Welfare Committee and House Commerce Committee have cleared the cancer act extension bill as reported to them by their health subcommittees. The House bill does not contain the provision for a new panel. The bill could be voted upon by both houses as early as next week.

The Kennedy bill proposes that a five-member panel be appointed by the President to monitor research at NIH and the National Institute of Mental Health. It would report directly to the President and to congressional committees on delays in research programs. Three members would be "distinguished scientists or physicians," and a fourth member would be the chairman of the President's Cancer Panel.

The 1971 National Cancer Act lists these duties for the Panel:

"The Panel shall monitor the development and execution of the National Cancer Program under this section, and shall report directly to the President. Any delays or blockages in rapid execution of the program shall immediately be brought to the attention of the President. The Panel shall submit to the President periodic progress reports on the program and annually an evaluation of the efficacy of the program and suggestions for improvements, and shall submit such other reports as the President shall direct. At the request of the President, it shall sub-

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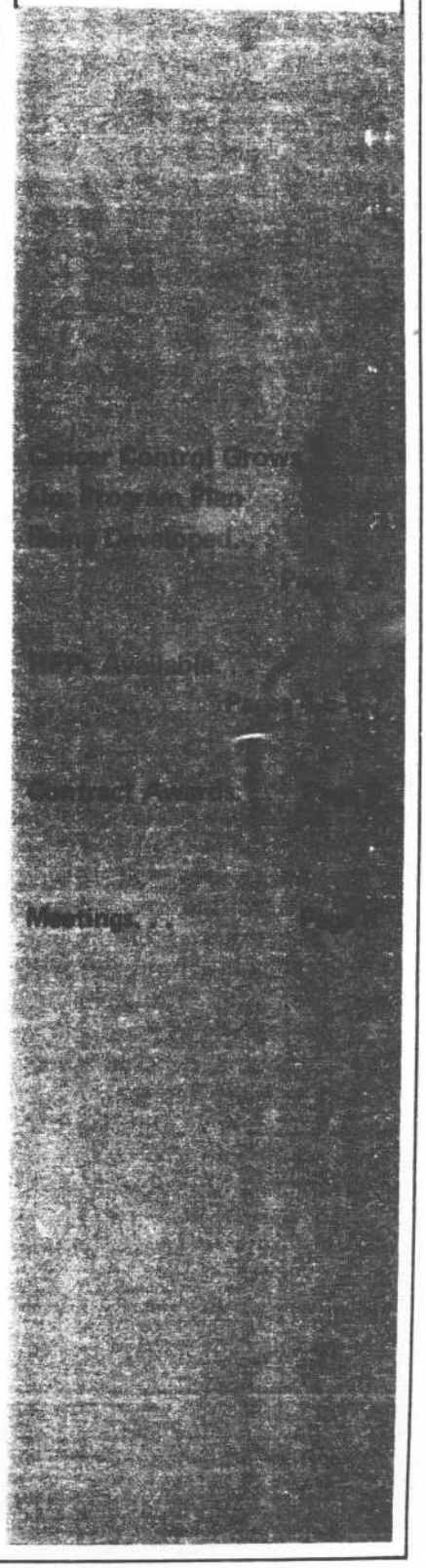
IN BRIEF

Stetten's Deputy, Von Euler, Takes Over At NIGMS;

Sherman's Replacement Probably Will Be In-House

L.H. VON EULER, who has been DeWitt Stetten's deputy at the National Institute of General Medical Sciences, is acting director of NIGMS now that Stetten has moved up to NIH deputy director for science. A committee has been named to look for a permanent chief of NIGMS, whose basic research programs are vital to progress in cancer research. . . . **NIH DIRECTOR** Stone is still searching for another deputy to fill the slot vacated by John Sherman's resignation. The job probably will go to someone already at NIH. Stetten's new job as deputy director for science was held by Robert Berliner, who quit last year. . . . **NATIONAL CANCER** Day is being promoted by the United Cancer Institute, volunteer organization pushing neighborhood cancer detection, education and research centers. A resolution setting the day for Sept. 8 has passed the House, is waiting action by a Senate Judiciary subcommittee.



Success Of Cancer Panel Leads Kennedy To Try For Same Results With Body For All Research

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mit for his consideration a list of names of persons for consideration for appointment as director of the National Cancer Institute."

The Panel was part of the compromise between those who had sought to divorce the National Cancer Institute completely from NIH and those who felt that cancer research would suffer by being separated from the rest of the biomedical research effort. Purpose of the Panel was to prevent HEW or NIH, or even the President, from subverting the intent of Congress in determining that the "conquest of cancer" was a top national priority. Proponents of an all-out cancer program feared that bureaucratic inertia, conflicting budgetary pressures and opposition from those within the scientific community who opposed the emphasis on cancer could combine to thwart the initiative.

Their fears proved not to be unfounded. The Administration has never asked in its budget requests for as much money as NCI has said it needed; proper management of the mushrooming grants and contracts has not been possible due to staff hiring limits; and destruction of the NIH training and fellowship programs has threatened to choke off the flow of young scientists into cancer research.

It is not reasonable to expect NIH executives to successfully oppose policies laid down by the Office of Management & Budget (which is in effect speaking for the President) or the HEW secretary, especially after NIH Director Robert Marston was fired for publicly criticizing the training cuts. NIH officials are expected to be "members of the team." In appearances before congressional committees, they are permitted to answer truthfully questions about their budgets, and they are expected to say, "Of course, we'd like to have more money, but. . ." and follow with platitudes about "total health needs,""national priorities," and "dollar limits."

To volunteer information aggressively in an effort to wangle congressional increases over budget requests would place their careers in jeopardy.

Members of the President's Cancer Panel suffer no such inhibitions.

The Panel has been effective for several reasons:

–Its monthly meetings provide the opportunity for NCI staff, especially Director Rauscher, to present fully and honestly the problems they are encountering. They can do so without fear of reprisal simply because the Cancer Act requires them to do so.

–The Panel meetings are open to the public. Press coverage and the presence of health lobbyists, particularly American Cancer Society representatives, have prevented the issues from being buried or forgotten.

Panel Chairman Benno Schmidt, backed by the scientific members (Lee Clark, Ray Owen, and before Owen, Robert Good), has not hesitated to apply the pressure to OMB and the President in seeking redress.

The result has been satisfying, although Schmidt hasn't received everything he asked. The success prompted Kennedy to ask, "If it works for the cancer program, why wouldn't it work for all biomedical research?" Kennedy has been critical of the Administration's attempts to hold the line on research programs other than cancer and heart. An oversight panel with powers similar to those of the Cancer Panel may be the answer, he concluded.

Ironically, Schmidt does not agree. He wrote Kennedy a letter expressing his personal opposition to the plan, calling it "unworkable." He made no reference to his willingness to serve on the new panel as called for by the Kennedy amendment. Schmidt was out of the country this week and unavailable for comment.

Frank Carlucci, HEW undersecretary, raised the threat of a veto if the final bill included the provision for the new panel. In a letter to the Senate Labor & Welfare Committee, Carlucci said that if the provision is left in he would "recommend to the President that he veto that bill despite our strong support for an extension of the cancer research authority."

While it isn't inconceivable that Nixon could be persuaded to veto the bill, it doesn't seem likely. One thing Nixon doesn't need is to oppose motherhood, the American flag and cancer research. If he does veto, it will be overridden.

Cancer Control Grows Up Fast As It Moves To Meet Mandate, Take Over Big Part Of NCI Budget

NCI's Cancer Control Program is the first substantial involvement of any NIH research-oriented unit at the "end of the line"–where the results of biomedical research are applied by the practioner. CCP was included in the National Cancer Act of 1971 because Congress was determined that any progress achieved through the massive infusion of dollars it was authorizing should be translated as quickly as possible into improved treatment and better means for prevention of cancer.

After more than two years in the organizational stages, when difficult questions involving the parameters of the program had to be resolved, CCP is gathering momentum under its new director, Diane Fink, and is having a significant impact on how NCI spends its money.

CCP is getting $34 million in the current fiscal year. Much of that is still to be awarded, both in contracts and grants, although most of the RFPs are out and the grant applications are undergoing review. As soon as that money is obligated (by June 30), CCP

will then start working on 1975 spending, when the President's budget figure of $45 million probably will be increased by Congress by at least $10 million.

By 1978, the program will be getting $125 million or more—probably one-eighth of the entire NCI budget.

Fink and her staff are still working with CCP's outside advisors in putting together the final Cancer Control Program Plan, as a part of the overall National Cancer Program Plan. They are working from a draft which spells out objectives of the five program areas that make up CCP: education and training, prevention, screening and detection, diagnosis and treatment, and rehabilitation and continuing care.

EDUCATION AND TRAINING

—Identification of the cancer knowledge and technology which should be made available to health practitioners and the general public.

—Dissemination of available cancer knowledge and technology to appropriate professionals and members of the public.

—Motivation of health professionals and the public to make effective use of this knowledge and technology.

—Development of sufficient numbers of adequately trained cancer control manpower.

One of the first decisions, the draft notes, is to determine which groups or institutions are the "targets" for specific programs. Target groups should be selected on the basis of certain characteristics such as:

—Institutions and agencies involved in the operation and provision of cancer control programs and services (centers, health departments, private physicians, etc.).

—Organizations and individuals responsible for providing leadership in the fields which directly or indirectly influence the effectiveness of cancer control programs (voluntary health agencies, medical societies, consumer groups).

—Groups and individuals identified as high risk populations (smokers, asbestos workers, etc.).

—Group and individuals not cited who can reduce the risk of developing cancer by avoiding actions that are harmful and forming health habits that are beneficial (the general public, including children).

PREVENTION

—Increase the understanding of the general public and health professionals of measures that would reduce the risk of cancer. This includes development and support of programs for the basic, specialized and continuing education of medical professions; and improvement of public understanding of present means for the prevention of cancer, including understanding of actions that may be taken by individuals or groups, the probable effectiveness of those actions, and their estimated costs.

—Motivate people to take steps to reduce the mortality and morbidity from cancer. This includes motivation of individuals to establish positive attitudes and practices toward prevention; public education activities that may effect changes in institutional policies; mechanisms to assist regulatory agencies and other public and private agencies in the support of activities to prevent cancer; and adequate federal, state and local legislation to control exposure to carcinogens.

SCREENING AND DETECTION

—Identify screening tests that have the greatest potential for the detection of cancer in the localized or pre-malignant state, are acceptable to providers and the public, are cost-effective, ready for immediate application, and which have the greatest potential for reducing mortality and morbidity.

—Promote the most appropriate screening methods for high-risk groups.

DIAGNOSIS AND TREATMENT

—Aid the establishment of criteria for the optimal diagnosis and primary treatment of cancer. This includes guidelines and criteria for evaluation of new diagnostic and therapeutic methods before general use; guidelines, procedures and mechanisms to support assessment of techniques and procedures as they are now used in diagnosis and treatment; and criteria for optimal standards of tumor-directed treatment (all modalities and combinations thereof, including related supportive care).

—Promote the prompt and positive identification of persons with precancerous and/or cancerous lesions and determine the nature of these conditions. This includes assessing the present status and quality of diagnosis for cancer, including determination of the anatomic site, histologic type, degree of spread, and other parameters significant in patient management; assessing the value of multi-disciplinary approaches to diagnosis; and supporting education and training in diagnosis.

—Establish procedures to assure that optimal care is available to each cancer patient, and that such care is followed by appropriate follow-up, rehabilitation, and continuing care.

REHABILITATION AND CONTINUING CARE

—Review and evaluate the present status of rehabilitation and continuing care in realtion to optimal standards. This includes development of evaluation techniques that could be used by hospitals, physicians, clinics, or community agencies in order to assess the quality and availability of continuing care and rehabilitation services.

—Develop a national capability to deliver follow-up, rehabilitations and continuing care services to cancer patients at the lowest cost compatible with optimal standards. This includes improved health care

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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.

(The following six RFPs related to tobacco research were published March 8 in synopsis form. They are presented here in further detail)

RFP NO1-CP-T-43308-57

Title: *Screening less-hazardous cigarettes: acute bronchitis as an indicator*

Deadline: *April 8, 1974*

NCI is engaged in a program to reduce carcinogenic and other hazards of smoking to human health. This Smoking & Health Program is a broad and structured approach to specific goals through the application of current knowledge and technology in various disciplines; it is not engaged in basic research.

A major objective is development of less-hazardous cigarettes. This requires bioassays to measure the effect of experimental modifications and to evaluate candidate cigarettes. These bioassays must cover carcinogenesis and other hazards, and requirements vary from expeditious screening of many variables to critical evaluation of final products.

The development of less-hazardous cigarettes would be greatly assisted by a screening test which is rapid, sensitive, relevant to longer-term health effects, and applicable directly to man. It appears that such a test may be possible, through application of recent knowledge about the early response of the small airways of the lung to tobacco smoke and other air pollutants. The purpose of the proposed contract is to investigate and recommend, if possible, a routine standardized test.

Although closing volume is not yet fully understood and requires relatively complex laboratory procedures, its exceptional promise as an early indicator offers such attractive prospects of a screening test in man that an applied research project is already timely. This is the main objective of the proposed contract. NCI wishes to emphasize that the goal is a routine test which correlates with significant preliminary effects; it is not a basic study of the underlying physiological mechanisms which result in this correlation.

NCI does not wish to exclude other tests from consideration. Closing volume may prove intractable in the present state-of-the-art,and in any case a multiplicity of available tests is highly desirable. Bidders are therefore invited to propose alternative indicators of immediate bronchitic response, which should be fully documented and supported if possible by first-hand experimental results.

Closing volume measurements as a screening test for experimental cigarettes would depend on volunteer smoking novices, since non-smokers would be technically unacceptable and long-term smokers would include an excessive proposition with chronic lung changes which might suppress or obsure the immediate response to smoke exposure. This suggests exceptional opportunities for prospective studies of the pathogenesis of smoking illness, if routine use of the test establishes a large data base of early smokers. Selected cohorts could be followed in long-term studies, directed particularly towards the value of early tests as indicators of the relative individual hazards of continued smoking and towards the progressive development of smoking-related disease. This is not a direct objective of the proposed contract, but the contractor's investigations are likely to qualify him exceptionally to develop and evaluate the idea, and the NCI will therefore expect some discussion in the final report.

RFP NO1-CP-T-43309-57

Title: *Standardization of aryl hydrocarbon hydroxylase assay, as a screening method to determine smoking hazards in man*

Deadline: *April 8, 1974*

Another goal is to identify high-risk individuals. If it is established that the risks of smoking are much higher in some than in others, and if a routine screening process can identify them, then it will be possible to apply protective measures where they are most needed. There is evidence which encourages hope of success in this, and NCI wishes to support development of a screening test.

The approach is to be based on the role of enzymatic metabolism in chemical carcinogenesis, a recent and very active field of research. It is timely to look ahead to the application of this research to a routine screening test. This anticipation of events will accelerate the practical application of the new body of knowledge if research continues its promising advance, and may also encourage development along the most fruitful lines.

A prospective study in a large population of smokers is advisable, to provide additional information on the relation between AHH activity and human lung cancer. The purpose of the proposed contract is to explore and hopefully establish the feasibility of

a routine screening test, which would be required for a large prospective study.

The requirement is a practical test, based on the most advanced current knowledge, which can be further developed and standardized in large scale trials which are not within the scope of this contract. Basic research is not required, nor is the contractor to investigate the applicability of the test to prospective studies of smoking and health. Beyond this the NCI does not wish to be restrictive about the general approach and invites imaginative and resourceful responses from bidders.

The most important requirement for the product of this contract is that the sampling and laboratory testing procedures shall be suitable for routine use by technicians, comparable to normal blood sampling and analysis. Accordingly, procedure with individual subjects should be rapid and minimally invasive; analysis for AHH should be quick and simple, without reliance on expensive instrumentation; test for inducibility of AHH should be quick and simple.

It should be emphasized that the value of any screening test will be its credibility as an indicator of level of susceptibility, and that one strong link in this will be the correlation of test results with individual lung characteristics.

Alternative approaches will lead to trade-offs which the contractor must evaluate. For example, sample size can be reduced and sensitivity enchanced by culturing cells: however, this is an added burden and cost for the assay laboratory and may also tend towards some loss of accuracy.

RFP NO1-CP-T-43310-57

Title: *Respiratory impairment in beagles exposed to cigarette smoke*

Deadline: *April 8, 1974*

In the development of less-hazardous cigarettes, various assay techniques include smoke inhalation by experimental animals, favored for its approximation–in route of administration and exposure to whole smoke–to human smoking. Small lab rodents have a promising part in current developments but are not well suited to tests of respiratory function in vivo or post mortem and are not biologically close models of man. The beagle is a better model and is particularly suited for pulmonary aspects. Furthermore it is a well-studied and good subject for investigation of hemostasis, and may therefore provide useful concurrent indications of cardiovascular effects despite the limitation of not being naturally prone to atherosclerosis.

A severe restriction in rapid development of less-hazardous cigarettes is that current bioassays do not display unequivocal diagnostic signs before a considerable time lapse, and these signs are mostly accessible only at autopsy. In dogs exposed to smoke, frank pathological evidence of chronic bronchitis and emphysema typically does not develop before about 1 to 1½ years (and neoplasis not before 2 to 3 years). The need is for early indicators of pulmonary impairment, and it is highly desirable that these can be monitored, and progression followed, by repeated tests in vivo.

This is the main purpose of the proposed contract: to develop and prove the technical means for an early verdict on the probable hazards of various experimental cigarettes towards respiratory health. It is not a basic study of the etiology and pathology of respiratory disease. However, one aspect of pathogenesis is likely to determine the success of this development effort. It is established in experimental animals and man that an observable sequence of response to continued smoke exposure is acute bronchitis, chronic bronchitis, and emphysema; but it is still a matter of speculation whether these are sequentially related in such a way that the appearance of one is a strong predictor of its successor. The contractor will be required to devote close attention to this problem, always bearing in mind that the practical issue is whether, for example, an early indicator of acute bronchitis is an acceptable substitute for later signs of chronic disease in the evaluation of candidate cigarettes.

Demonstration of such indicators will not meet the purpose of this work if reliable and convenient means for measuring them are not available. The study of respiratory pathogenesis must therefore be paralleled by development of observational techniques which are suitable for routine and standardized bioassays.

NCI desires also to take advantage of this substantial investigation to observe concurrent effects to the fullest extent possible without detracting from the main purpose. One such line is the study of hemostasis. It is also required that tissues be examined during the program for precursors and development of neoplastic processes, and retained for retrospective fuller study, even though the weight of evidence is that these signs do not appear until other pulmonary impairment is well advanced. In addition it is hoped that bidders will show knowledge and imagination in proposing concurrent observation of peripheral effects which may either provide early indictors of response to smoke or may substantiate and amplify other indicators.

It is required that dosing with smoke shall be by existing experimental methods: specifically, exposure of tracheostomized beagles by use of a particular smoking machine. NCI imposes this constraint because a substantially different approach would not contribute so effectively to the present overall advance on a concerted front, and would probably require an unacceptable delay in preliminary development and demonstration.

NCI requires that one specific test be fully investigated as an early indicator: namely, closing volume measurement. This shows promise of being a very

early and sensitive indicator of acute bronchitis in man, and it is being further investigated. Methodology for its application to the beagle has not been developed and this is an important part of the effort. In requiring this test, however, NCI does not wish to discourage other tests which the bidder may propose.

RFP NO1-CP-T-43312-57

Title: *Metabolic studies on tobacco smoke constituents*

Deadline: *April 8, 1974*

It is necessary to attain a fuller knowledge of the overall metabolic fate and associated kinetics of many of the chemical compounds, or classes of compounds, present in cigarette smoke.

NCI desires to center its interest on four specific compounds present in cigarette smoke. They are carbon monoxide, hydrogen cyanide, nitrogen dioxide and nicotine. Each of these has well established acute toxic manifestations, but far less is known of their toxicity at the exposure levels encountered in cigarette smoking. Accordingly, NCI desires to know the primary pathways and the major chemical changes as well as the rates at which these changes occur for the four constituents of tobacco smoke named above.

Specific objectives are:

–Prepare a detailed review covering the relevant literature of the past 25 years with particular reference to the toxicology and pharmacology of the specified compounds.

–Carry out experimentation in specified animals to determine (or to substantiate previous determinations of) the metabolic fate of these compounds when administered by the respiratory route.

–Measure the overall metabolic kinetic rates, primarily in terms of body clearance expressed as half-life or other applicable measure.

–The data above will be obtained for the four pure compounds singly and in combination.

–Finally, a known cigarette smoke will be spiked with the compounds to determine whether the other components of cigarette smoke will have any effect on the rate of clearance or clearance pathways of the compounds in question.

One of the most important factors bearing on approach to the relevant experimental methodology is that of dosimetry. In order that the data from this contract can be as nearly comparable as possible with data obtained elsewhere on the effects of whole smoke as possible. This will restrict choice of animal to the rat, hamster or tracheostomized dog. For each of these, an acceptable exposure method has been developed. It is proposed that the rat will be used for all experimentation.

Exposure will be made, with modification as necessary, using the intermittent exposure apparatus developed at Oak Ridge National Laboratory. Estimate of retained dose will be made by use of radioactive or other applicable tracers.

The fate of principal intermediates should also be investigated. For example, nicotine is rapidly converted, primarily to cotinine, which has a much longer half-life in the animal than does nicotine.

It should be noted that long-term chronic exposures are not desired for the purposes of this contract. In case of high toxicity, for example from nicotine, it may be necessary to start animals at a low dose and allow them to accommodate to doses high enough to provide detectable blood or tissue levels.

RFP NO1-CP-T-43313-57

Title: *Clinical trials for pharmacological approaches in smoking withdrawal*

Deadline: *April 8, 1974*

The most obvious way to reduce the health hazards is for people to stop smoking. However, despite substantial publicity given to the adverse effects of cigarettes, per capita consumption in the United States declined only slightly, since the Surgeon General's report on smoking and health in 1964. The experience of clinics which have offered counseling on smoking withdrawal are also discouraging. In a typical example, only 60% of a group desiring to quit smoking did so over a period of two months with the help of skilled and intensive counseling, and half of these relapsed after six months. There are many who want to cease smoking but who find it impossible, or extremely difficult, to do so. There are also many individuals to whom smoking constitutes an unacceptably high risk and who thus urgently need assistance to stop smoking.

Dependence on smoking is a complex situation involving both the physiological and psychological constitution of the individual smoker. However, there is reason to believe that nicotine plays an important role in this dependency. It may be possible to alter the response to nicotine by the use of drugs so that smoking cessation will become less difficult for many people. It is the purpose of this contract to investigate two classes of drugs for this purpose: nicotine agonists which lower the threshold of nicotine acceptance; and nicotine antagonists which block, or reverse, the physiological effects of nicotine.

The objectives of this contract are:

–To assemble a group of volunteers who want to stop smoking cigarettes.

–To compare physical and physiological findings after limited smoke withdrawal with those found immediately after smoking two cigarettes.

–To offer the volunteers assistance in smoking cessation in the form of counseling for all and medication or placebo based on statistical design using randomization.

–To compare the medications used in the study

with regard to the degree to which each produces a change in the patients' smoking habits.

–To compare physical, physiological and psychological findings with degree of smoking and withdrawal for each medication used.

The following material presents what NCI believes to be minimal requirements for the intended contract. Bidders are urged to develop this material further and to provide details of proposed methodologies.

The volunteer group should cover a representative span of ages, e.g. 25-50 years. Volunteers should be non-obese, free of cardiovascular symptoms or other previous or existing symptoms which would contraindicate use of the proposed medications,and should not be on medication which would interfere with or distort physiological tests or which would be contraindicated by the proposed medications. Criteria for rejection on psychological grounds should also be developed.

Three control subgroups should be established. One will receive only counseling and one will receive counseling plus a placebo. It is desirable to have a third control group composed of individuals who smoke but who can quit at will. This group might be thought of as "nicotine non-dependents". A subgroup for each drug investigated will be required. The number of individuals in each control and treatment group should be calculated to provide a level of significance to be proposed by the bidder. It seems clear that this contract will envisage a group of several hundred volunteers.

It is assumed that smoking withdrawal can be obtained, to the extent that it will be, in six weeks. Follow-up should be done on months 4,8 and 12 post-treatment. Repeat of physiological tests and physical examination should be done at least at month 12.

Four agonists and five antagonists for nicotine are suggested. Recommendation of substitutes or additions is invited.

Agonists–nicotine, lobeline, cotinine, acrecoline, and other drugs with nicotine-like response.

Antagonists–benactyzine, chlorpromazine, propanolol, mecamylamine, ecolid (chlorisonolamine chloride).

RFP-NO1-CP-43316-57

Title: *Evaluation of the acceptability to smokers of candidate less-hazardous cigarettes*

Deadline: *April 8, 1974*

In the development of less-hazardous cigarettes, their evaluation in bioassays will produce a succession of candidate cigarettes which must also be tested for acceptability to the smoking public. There is at present no proven capability to undertake this routine service. This contract will develop, demonstrate and test such a capability.

Cigarette models which are acceptable by technical criteria must be screened for smoker acceptability, to find which offer the best combination of characteristics. The long-term program will develop successive groups of candidates. The cost-effectiveness of the screening process is clearly important. The optimal solution might be a two-tier process of preliminary screening and elimination, followed by final evaluation of only two or three candidates. Proposals should emphasize the preliminary screening, which is the more immediate requirement.

The contractor will be required to:

–Identify criteria for cigarette acceptance by the smoker.

–Determine which of these criteria can be evaluated reliably to give best quantitative estimates.

–Develop protocols for a routine evaluation service, based on criteria that are important to acceptance and can be reliaby assessed.

–Test the procedures in a pilot run, using two or three types of cigarettes supplied by the NCI

–Conduct a full scale demonstration/evaluation of ten types of less-hazardous cigarette supplied by the NCI.

The proposed contract is concerned with the intrinsic characteristics of cigarettes and not at all with extrinsic factors such as packaging and advertising. However, cigarettes must be evaluated in the context of those environmental and smoker factors which modify their acceptability. Methods to attain an objective evaluation of acceptability have not been fully developed or standardized. Considerable ingenuity can be applied to improve the situation, and NCI expects that proposals will reflect originality in this approach.

It appears that a practical method of evaluation within the foreseeable future will be some variant of the acceptance panel, in which a number of individuals savor various types of cigarette and record personal reactions. The problems in securing a group evaluation that is reliably representative of a given market are considerable: not only must the panel be statistically representative of the market, but it must also react like the market population although tested in unfamilar circumstances. An alternative is to use a panel of trained experts.

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

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.

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.

Subcommitte on Centers, Bethesda Holiday Inn, Montgomery room, March 17, open 7:30 p.m.-8.

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.

Committee on Immunobiology, March 31, April 1,2, closed.

President's Cancer Panel, NIH Bldg 31, conference room 3, April 2, 9:30 a.m., open.

Diagnostic Research Advisory Group, NIH Bldg 31. conference room 7, April 4 & 5, open April 4 9 a.m.-11.

Cytology Automation Committee, NIH Bldg 31, conference room 3, April 5, open 9 a.m.-10.

Tobacco Working Group, NIH Bldg 31, conference room 7, April 8 and 9, 9 a.m.-5, all open.

Biohazard Control and Containment Working Group, NIH Bldg 31, conference room 3, April 11, open 9 a.m.-9:30.

CONTRACT AWARDS

Title: Breast cancer detection demonstration project
Contractor: Iowa Lutheran Hospital, Des Moines, $122,366

Title: Continuation of metabolism of antineoplastic agents study
Contractor: Stanford Research Institute, $73,010

Title: Study of synthetic & biochemical approaches to chemotherapy
Contractor: Collaborative Research, Inc., Waltham, Mass., $89,557

Title: Cancer training programs for physical and occupational therapists
Contractor: Univ. of Texas (Houston), M.D. Anderson, $327,079

Title: Carcinogenesis bioassay of environmental chemicals
Contractor: Mason Research Institute, Worchester, Mass., $631,315

Title: Isolation and chemical characteristics of soluble human tumor specific antigens
Contractor: Scripps Clinic & Research Foundation, La Jolla, Calif., $74,144

Title: Mouse mammary tumor virus production facility
Contractor: Wolf Research & Development Corp., Riverdale, Md., $250,093

Cancer Control

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mechanisms to restore maximum physical and functional capabilities to cancer patients and to provide for maximum palliation of patients with progressive cancer; improved means to restore the patient's lifestyle, promote re-entry into the community, and provide effective vocational and family counseling; direct care services for patients at home who do not need frequent professional care but whose familites cannot carry the long-term burden of care without assistance; promote concepts of continuing care and rehabilitation as necessary, desirable and effective components of full cancer patient management; educational programs for cancer patients and their families, employers, insurors, and the community in general; and develop insurance programs, prepaid health services and other payment mechanisms to insure financial coverage for the total scope of outpatient and home care service.

The draft plan shows each of the objectives with the policies required to meet the objective, the approaches that may be taken, and suggested projects for each.

The Cancer Newsletter—*Editor* JERRY D. BOYD

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