DRS 5/20/83 PVN

THE CANCER LETTER

Vol. 9 No. 20
May 20, 1983

Subscription $125 year North America
$150 year elsewhere

P.O. Box 2370 Reston, Virginia 22090 Telephone 703-620-4646

BYPASS BUDGET FOR FY 1985 SEEKS $1.189 BILLION, WOULD FUND 1,018 COMPETING GRANTS, RESTORE CUTS

NCI's 1985 fiscal year "bypass" budget approved this week by the National Cancer Advisory Board totals $1.189 billion (one billion, 198 million), the opening shot in the process which will result in President Reagan's request to Congress next January and the congressional appropriation next year which will fund the Cancer Program for the year starting Oct. 1, 1984.

(Continued to page 2)

In Brief

MELANOMA PRECURSORS CONSENSUS CONFERENCE PLANNED; DRCCA BOARD RAPS CENTERS BUDGET CUT

CONSENSUS CONFERENCE on precursors to malignant melanoma has been scheduled by NCI and the NIH Office of Medical Applications of Research for Oct. 24-26 in Bethesda. The open forum will focus on two precursors: "dysplastic" nevi and congenital nevi. It will address these questions: Can dysplastic and congenital nevi be defined clinically and histologically? Are the nevi precursors to melanoma? What are their prevalence, natural history and determinants? What is the appropriate management of patients with the nevi regarding diagnosis, treatment, followup, familial screening and education? What directions should be taken for future research on precursor lesions to melanoma? . . . **RESOLUTION OPPOSING** the proposed massive cut in the budget for cancer center core grants was approved unanimously by the Board of Scientific Counselors of NCI's Div. of Resources, Centers & Community Activities. The cuts, which would eliminate the grants of 16 centers in FY 1984, "would have a devastating effect on all researchers at those centers," the resolution said. It said that if reductions in the budget must be made, they should not be made totally at the expense of cancer centers. . . . **REGISTRATION DEADLINE** for the Bristol-Myers Symposium on Cancer Research in Venice Oct. 19-21 has been extended to July 31 due to problems with the Italian postal system. Symposium and hotel registration forms and copies of the program are now available from Kathryn Bloom, Bristol-Myers, 345 Park Ave., New York 10154, phone 212-546-4339. Gianni Bonadonna and Umberto Veronesi are organizers of the symposium entitled, "Clinical Trials in Cancer Medicine: Past Achievements and Future Prospects". . . . **JENNIFER CASKEY**, medical oncologist at the AMC Cancer Research Center in Lakewood, Colo., has been appointed hospital director there. . . . **NIH INVITES** nominations of individuals representing small business organizations for membership on peer review groups for the Small Business Innovation Research Program. Nominations may be sent to NIH Consultant File Project, Suite 212, 6400 Goldsboro Rd., Bethesda, Md. 20817.

BYPASS BUDGET WOULD FUND 36 PERCENT OF APPROVED GRANTS, SET 195 PAYLINE

(Continued from page 1)

The bypass budget is the one developed by NCI, with NCAB advice, which goes directly to the President without alteration by NIH or HHS. It was established in the National Cancer Act of 1971, and was intended by Congress to be the only budget for NCI, although modification by the President was not precluded by the Act.

In every subsequent administration, however, NIH has developed its own budgets with significantly different (and lower) figures for NCI, and these have been further watered down by the department. Later reductions by the Office of Management & Budget at the White House invariably leave NCI totals anemic versions of the bypass request. What Congress then gets is not what it asked for in the 1971 Act: The amount of money NCI and its advisors have determined to be that which the National Cancer Program needs and can usefully spend.

The 1984 bypass budget requested $1.076 billion. The President's first request to Congress, last January, whittled that to $989 million, and then in April down to $986 million. The result would be disaster, if Congress does not increase it—many cancer centers would lose their core grants, only 30 percent of approved competing research grants would be funded, all grants would have to take substantial cuts in their budgets from the levels approved by peer review, and the priority score payline would be 190.

Inadequate budget requests for all of NIH this year prompted Congressman Henry Waxman (D.-Calif.), chairman of the House Health Subcommittee, to add a provision to his bill reauthorizing biomedical research and the National Cancer Act which would establish bypass budgets for each of the institutes at NIH. The provision calls for submission of those bypass budgets, including NCI's directly to Congress.

There would be nothing to stop OMB from drawing up its own figures for NIH and sending them to Congress, and Congress could do with the NIH bypass what it has done with the NCI bypass for the last seven or eight years, essentially ignoring it. But the Waxman provision could give the bypass process a little more visibility, and perhaps more attention from the appropriations committees.

The 1985 NCI bypass budget originated at a meeting earlier this spring of members of the NCAB Planning & Budget Committee with the NCI Executive Committee. The NCAB committee gave its approval to the total figure and the breakdown by program and mechanism Monday night, with final approval by the Board Wednesday.

A number of assumptions was made in arriving at the $1.189 billion total:

—That the 1984 base upon which the budget was built would be $989 million. In reality, the figure almost certainly will be higher when Congress makes the final appropriation.

—A five percent cost of living increase was built in.

—The 1985 budget would support 1,018 competing research projects. The 1984 budget at present assumes support of 817 competing research project grants.

—All grants would be funded at full recommended levels.

—Full payment of indirect costs would be made.

—Reductions in grants budgets made in 1982, 1983 and 1984 would be restored.

—The same number of National Research Service Awards would be supported as in 1983, 1,350 full time equivalents.

—There would be a five percent stipend increase for NRSA trainees.

—The Organ Systems Headquarters grant would be increased by $250,000, to $1 million.

—Organ site grants would be funded from the research project pool.

—Clinical organ site programs would be supported as cooperative clinical groups.

—Additional funding, for a total of $90 million, would be added for cancer center core grants, providing for two additional grants.

—Additional funding would be available for cooperative clinical research, for a total of $52 million.

—Construction grants would be funded at $20 million (compared with $1 million in 1984), and an additional $3 million would be available for construction at Frederick Cancer Research Facility and on the NIH campus.

Basically, the bypass budget provides for a five percent inflation rate plus 15 percent growth. An estimated 36 percent of approved competing grants would be funded, at full recommended levels, with a priority score cutoff at 195.

NCI Director Vincent DeVita called the 1985 bypass budget "a repair budget." It would place the total increase for NCI from 1980 through 1985 at 24.1 percent, or 3.8 percent a year over the five years.

Board member Gale Katterhagen pointed out at the committee meeting that the inflation rate over those same years exceeded 3.8 percent. "It's probably been closer to 40 percent," DeVita said. "We've absorbed a substantial loss of purchasing power."

This is the second "realistic" bypass budget since DeVita convinced the NCAB that the policy should be modified from asking for all the money which could be spent wisely to establishing an amount closer to that which realistically can be expected fro from Congress. That policy change has evoked some criticism, since it does not comply with the spirit of the National Cancer Act. It also softens the "pulling

NATIONAL CANCER INSTITUTE 1985 BYPASS BUDGET GROUP TABLE

(In Thousands of Dollars)

	1983 Dollars	*1984 Dollars*	*1985 Dollars*
GROUP I—INVESTIGATOR INITIATED			
Regular Research Grants	$279,925	$284,205	$349,799
Clinical Cooperative Groups	44,744	42,922	51,991
Program Projects—P01s	113,058	114,251	144,138
Clinical Education Programs	6,000	6,000	8,000
Research Career Programs	5,704	5,242	6,450
Fellowships	25,061	23,740	27,800
Organ Systems	509	750	1,000
Cancer Centers—Core Support	74,928	77,021	90,398
Other Centers Support Grants	2,093		
Cooperative Agreements	1,990	5,010	9,542
Subtotal	554,012	558,871	689,118
GROUP II—CO-INITIATED			
RFA	13,225	13,325	12,202
Research Contracts	31,660	30,372	34,880
Subtotal	44,885	43,697	47,082
GROUP III—NCI/NCP INITIATED			
Research Support Contracts	85,358	78,630	90,249
Interagency Agreements	13,486	12,641	12,895
Subtotal	98,844	91,271	103,144
GROUP IV—OTHER RESOURCES			
Planning Grants			200
Construction Grants	1,500	1,000	20,000
Construction Contracts	1,500	1,000	3,000
Subtotal	3,000	2,000	23,200
Total	700,741	695,839	862,544
Intramural Research	112,293	117,011	128,356
Management & Support	119,273	124,188	134,381
(NIH Management Fund)	(49,006)	(52,088)	(54,850)
Cancer Control (Grants & Contracts)	51,269	52,225	63,719
Subtotal	282,835	293,424	326,456
TOTAL NCI	**$983,576**	**$989,263**	**$1,189,000**

power" of the bypass total in encouraging the appropriations committees to be a little more generous.

It is entirely possible this year that Congress will give NCI more than its bypass request for FY 1984 of $1.076 billion. Adding the amounts to pay for NCI's share (817) of the NIH total of 5,000 competing grants, restoring funding to the recommended levels, paying full indirect costs, and adding modest amounts for construction, clinical research, training, and intramural research could place the total close to the bypass request.

The American Cancer Society has asked Congress for $1.5 billion for NCI in 1984. The Waxman bill authorizes $1.32 billion for 1984. Even considering that the House authorizaion would be reduced in a compromise with the Senate, where the bill by Sen. Orrin Hatch (R.-Utah) would authorize only $1.006 billion, the 1985 authorization quite likely would exceed $1.189 billion by a substantial amount.

FOUR NEW ANTISMOKING PROJECTS GET CONCEPT APPROVAL, $6 MILLION A YEAR

Four new extramural projects for smoking prevention and cessation which will involve as many as 20 cooperative agreement awards worth a total of nearly $6 million a year were given concept approval by the Board of Scientific Counselors of NCI's Div. of Resources, Centers & Community Activities.

The projects are in the areas of youth education, physician intervention, mass media, and self help. They were developed in four workshops organized by DRCCA during the past year.

Joseph Cullen, DRCCA deputy director, said the goal of the studies is to develop proven interventions

that are cost beneficial, cost effective, durable, and generalizable.

"We hope to get one million people a year to stop smoking," Cullen said. "The time is now to turn from etiological studies to mass intervention."

The four concepts, along with the staff's description and justification:

Longitudinal evaluation of school based smoking prevention programs. Up to five awards anticipated, for up to 10 years each, with estimated first year funding of $300,000 each. Competing renewals will be required after three years and again after six years.

The goal is to determine the long term effect that school-based smoking prevention programs have on the rates of adoption of habitual cigarette smoking behavior.

Objectives are to develop and evaluate school-based interventions to prevent the onset of habitual cigarette smoking, and to provide for the long term followup of the study cohorts and their controls; and to provide for the long term followup of study cohorts and their controls who have been a part of previous, school-based programs that have been recognized as state of the art interventions in smoking prevention.

The acquisition of smoking behavior is primarily an adolescent phenomenon. Studies have shown that initial or experimental smoking occurs most often in early junior high school years. It is well recognized that school based programs provide a mechanism for reaching virtually the entire population of youth. Recent studies have produced some promising results that indicate that the adoption of smoking behavior is significantly decreased (at least in the short term) in those youth receiving smoking prevention programs through the schools. The primary purpose of the proposed studies is to determine if such interventions have a long term effect in reducing the rates at which individuals adopt cigarette smoking use behaviors as habits. The modification and/or adoption of existing interventions for implementation and long term followup will be encouraged. The target audience for the interventions will be school aged youth at the high school level and below. Studies which propose to followup previous intervention participants and their controls will be considered where the original study design provides a reasonable expectation that valid and reliable results can be obtained.

The most desirable approach to reducing tobacco related cancer is to delay, reduce, or prevent the onset of habitual smoking behavior. The school age population affords an opportunity to achieve this reduction since the adolescent years are those in which the greatest risk for adoption of the smoking habit exists, and the large majority of children do in fact attend school. While some studies have demonstrated at least short term reductions as a result of school based interventions, there is a need to verify their long term impact before resources are devoted to the significant problem of assuring that such interventions are disseminated to and used by school systems throughout the nation.

Cullen's report included a summary of the workshops. Participants in the workshop on the role of youth education in smoking prevention and cessation developed these research questions:

—How do knowledge, attitudes and beliefs affect behavior?

—How do adolescents make decisions?

—What is the etiology of health behavior?

—What are the most appropriate/effective intervention packages?

—How can large trials be designed to look at multiple variables/multiple interventions?

—What role does community involvement play in intervention strategies?

—What is the most potent behavioral model?

—How well is skills training being done?

—Should smoking be assessed in relation to other risk taking behavior?

—Can a better understanding of natural networks and their influence on behavior be acquired?

—What are the physiological measures for smoking behavior?

—How can a clearer understanding of smoking populations be acquired?

—An analysis of these questions resulted in the identification of three major areas of potential research related to youth:

—Long term followup of smoking prevention and/or cessation efforts.

—Social variables involved in the initiation of smoking.

—Multiple intervention packages.

The working groups established to develop recommended research in these areas proposed the following study concepts and developed a working group report for each of them.

- Long-Term Studies: Developmental Orientation of Curricula Interventions for the Prevention of Habitual Smoking Behavior in High-Risk Populations of School Students.
- Prevention of Multiple Negative Health Behaviors in Youth.

Board member Ernst Wynder commented, "When the tobacco industry concentrates on getting one percent of the market for a new brand, they allocate $50 million for advertising." Wynder suggested that the insurance industry might be interested in cooperating one way or another, considering the economic return they might enjoy if cigarette smoking is significantly reduced. "More of the insurance companies might be encouraged to give special rates to nonsmokers."

Evaluation of physician/dentist delivered interventions for smoking prevention and cessation. Up to five awards anticipated, for up to five years each, with estimated first year funding of $275,000 each. No less than one year of followup will be required from the end of the intervention period.

Goal: To reduce the incidence/prevalence of cigarette smoking by enhancing the effectiveness of physicians and dentists in prevention and cessation counseling and support.

Objectives: a) to identify/develop, implement, and evaluate brief, structured interventions for physicians and dentists to assist their patients with smoking prevention or cessation; b) to develop and evaluate mechanisms to encourage physician and dentist utilization of smoking prevention and cessation interventions; and c) to develop and evaluate mechanisms to encourage patients to request assistance with smoking cessation from their physician or dentist.

There are approximately 380,000 physicians and 135,000 dentists practicing in the United States today. Physicians and dentists are in a unique position to influence patients to quit

smoking. They enjoy prestige and credibility as sources of health related information. The proposed research studies will take advantage of this unique relationship that clinical care providers have with patients in providing health information and counseling. Utilizing the patient-doctor interaction, interventions will be identified/developed and tested to determine the effectiveness and cost efficiency of conducting smoking prevention and cessation programs through physicians' and dentists' offices.

Participants in the workshop on the role of physician intervention developed these research questions:

—What is the most effective combination of interventions for affecting physician behavior? For affecting patient behavior?

—What is the most appropriate defined population (by provider, by client?)

—What specific interventions are effective in motivating patients to change behavior, in assisting patients to change or sustain behavior, and in reinforcing physician behavior?

1. Should interventions focus on behavior change or strategies of motivation and followup?
2. What are the differences between verbal and nonverbal physician communication?
3. Can differential prescriptions (interventions) on the basis of patient motivation/dependence be developed?
4. Can interventions be designed to cue physician behavior (e.g., color charts)?
5. Which self-help materials are most effective?
6. Are there interventions which affect both light and heavy smokers?
7. Can interventions be developed which organize physicians for coordinated smoking cessation efforts?
8. How can interventions be developed by intensity—include nicotine gum?
9. Does nicotine gum increase physician/patient interaction on smoking?
10. Can interventions be designed which provide physicians with feedback opportunities on patient success?
11. Is guided questioning more effective than physician advice as a basis of the intervention?
12. Can interventions be designed which require patients to return for smoking visits?
13. Are specific interventions more effective for specific populations (e.g., low income)?
14. What aspects of an intervention should be done by the various members of the dental team?
15. Which interventions are most effective for preventing smoking from being initiated?

—What kinds of physician training are required?

1. How can physicians' confidence in their ability to affect patient smoking behavior be increased?
2. Is there a national model (e.g., HBP) that can be used to affect physician behavior regarding smoking—participation?
3. Should physician groups be trained in differing manners and given different interventions to use?
4. How can physicians be trained in techniques of integrating interventions into practice (include HP/DP program efforts)?

—What should constitute the characteristics of interventions? Active participation of patients? Target date setting? Personality variables on which program should focus? Reimbursement eligibility under existing systems? Use of ancillary aids (e.g., smoking records)?

The workshop agreed that the questions cited fell into two primary research areas:

—Studies to design and test effective methods of intervention.

—Studies to establish cause-effect relationships.

These two areas became the basis for setting up the working groups to further develop the research concepts that NCI might profitably pursue.

The deliberations of the working groups resulted in the following recommended program concepts and a report on each concept.

—Development and evaluations of physician- and dentist-delivered smoking control intervention.

—Determination of the effectivenesss of various combinations of physician interventions in affecting patient and physician behavior.

In addition to the recommendations of promising research related to physician intervention in smoking, workshop participants posed several other suggestions related to smoking activities. It was suggested that NCI pursue the following:

- Develop a smoking control/cessation program in all funded cancer centers.
- Incorporate smoking questions on national boards and in training examinations for physicians.
- Require NCI clinical research grantees to include smoking cessation programs.

The use of self-help strategies in smoking prevention and cessation. Up to five awards, for up to five years each, with estimated first year awards $250,000 each, one year followup from the end of the intervention period.

Goal: To reduce the incidence/prevalence of cigarette smoking through the use of self-help strategies.

Objectives: To develop and evaluate individual and/or group self-help strategies to prevent or reduce cigarette smoking; and to develop and evaluate assessment procedures for determining the effectiveness of self-help strategies in preventing and reducing smoking behavior.

It is estimated that 33 million Americans quit smoking between 1964 and 1982. A great majority of these individuals stopped smoking without the assistance of organized, formal smoking cessation programs. In addition, most current smokers indicate a preference for quitting with procedures they may use on their own. Research funded by NCI has begun to identify differences between successful and unsuccessful self quitters. NCI funded investigators have also identified consistent stages in the process of self quitting. To build upon these initial studies, the research supported in the proposed program will focus on the development of self-help intervention strategies, their implementation, evaluation, and followup.

The workshop on the role of self help in smoking

prevention and cessation identified these areas of research need:

1. Development of a more explicit theoretical framework for self-help interventions related to smoking. The need to use a systems approach in addressing this area was also noted.

2. Determination of the relationship of the individual to his/her social context:

—What is self-help in relationship to other things/-tasks?

—What is self-help relative to other people?

—How does culture affect group formation?

—What type of information is addressed within a group to solve the problem of smoking?

3. Development of interventions:

—What kind of information is needed for different goals?

—Is there a hierarchical feature (from abstract to concrete) involved?

—Does an individual need an overview of what he/she is doing (meta-theory)?

—Does information provided change the individual's perceived role?

4. Methodological considerations:

—Monitor and measure what subjects do.

—Look at the sequence in which things are done.

—Take into account individual differences (types of people versus types of person situations).

—Emphasize longitudinal designs (history of smoking, history of the individual, history of the individual's group).

—Better define the dependent variables, i.e., how to represent smoking as well as other factors (side effects).

—Improve sampling (e.g., How should subjects be recruited? What subgroup considerations ought to be taken into account?).

—Determine appropriate use of cross sectional versus longitudinal designs.

After examining these issues, the group's work was structured around three assignments:

1. Research related to informal, self-help processes with special emphasis on mutual aid self-help groups.

2. Research stemming from the NCI sponsored self-help projects.

3. Methodological issues related to research in the area of self-help and smoking prevention and cessation.

Working groups established to develop recommendations in these three areas identified several methodological considerations to be taken into account in self-help research and proposed the following project/study concepts:

- Development and evaluation of social networks to promote cessation and maintenance.
- The use of self-help intervention strategies in the control of smoking.

Development and evaluation of smoking prevention and cessation interventions using the mass media. Up to five awards, for up to five years each with no less than three years of followup from the end of the intervention period, estimated first year funding at $350,000 each award.

Goal: To determine the longterm effect of mass media interventions designed to prevent the onset and/or reduce the prevalence of cigarette smoking behavior.

Objectives: To develop and evaluate innovative techniques that significantly increase the longterm effect of single or multiple mass media interventions for smoking prevention or cessation; to develop and evaluate innovative techniques for the reinforcement and maintenance of positive prevention and cessation behaviors generated as a result of mass media interventions; and to provide for the longterm followup of study cohorts and their controls who have been a part of previous, mass media interventions directed at smoking prevention and cessation.

Mass media approaches to smoking cessation have the potential to reach thousands of smokers at one time, offer a convenient and inexpensive means for obtaining assistance with quitting, can substantially reduce the burden of providing such assistance through the health care system, and can contribute to developing a social climate that is more supportive of prevention and cessation behavior. Mass media campaigns directed at smoking behavior have been used with increasing frequency in recent years. However, few studies have been conducted to assess the effects of specific campaigns. Those that have been done reveal minor, short term effects on behavior change. Even these studies though have been criticized for various aspects of their study design. Beyond that, little is known about the longterm effects of such interventions. The proposed studies are designed to develop and evaluate innovative, but cost efficient techniques with potential for widespread application. Longterm followup of study and control cohorts from previously conducted mass media interventions may also be supported if the original study design provides a reasonable expectation that valid and reliable results can be obtained.

The workshop on the role of the mass media identified the following as the key research issues:

—What are the effects of media plus adjunctive efforts?

—What are the effects of tailoring messages to specific audiences?

—What kind of information needs to be provided at different stages of the adoption process?

—What types of intervention are required for highly motivated people versus poorly motivated people?

—What role can media play in skills development—how to quit? how to maintain?

—What influence can media have on adolescents?

—How can incentives/rewards (information and inducements) be used to motivate smoking cessation?

—How can creativity in using the media be achieved?

—How can health and other professionals be motivated via the media?

—What is the effectiveness of media efforts? How should media efforts be evaluated?

—Does information acquisition lead to behavior change?

—Can people who control media be lobbied?

—What is dose-response relationship (repetiton/-consistency of messages)?

NCI CONTRACT AWARDS

Cancer Communications Program support
Nancy Low and Associates, Washington, D.C., $2,592,349.

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. NCI listings will show the phone number of the Contracting Officer or Contract Specialist who will respond to questions. Address requests for NCI RFPs to the individual named, the Blair building room number shown, National Cancer Institute, 8300 Colesville Rd., Silver Spring, Md. 20910. RFP announcements from other agencies reported here will include the complete mailing address at the end of each.

RFP NCI-CP-FS-31034-77

Title: *Support services for clinical epidemiological studies*
Deadline: *June 20*

The Clinical Epidemiology Branch, Field Studies & Statistics Program, NCI, studies peculiarities in the occurrence of cancer in persons, families, communities, or industries that may lead, in conjunction with recently developed laboratory research, to new etiologic knowledge. NCI wishes to contract with an organization which is highly experienced in assisting in all support phases of epidemiologic studies of cancer. Activities include 1) preparing for data collection; 2) providing forms and personnel for data collection from interviewing, abstracting and coding; 3) collecting data, including by in-person and telephone interviews, by abstracting medical and vital records, and by coding all information; 4) entering, editing, and tabulating data manually and by computer; 5) managing and supervising all support activities to assure quality; and 6) other assistance, including reporting progress.

This support contract calls for collecting, coding, and processing data on cancer and other medical conditions, family histories, and environmental factors (occupation, residence, drugs, diet, and personal habits).

The respondent must have had at least four years of relevant experience utilizing its own personnel in the conduct and management of epidemiologic studies of cancer, i.e., both cohort (followup) and case-control studies. Prior experience in carrying out genetic and familial research studies will be an additional advantage. Only one contractor will be selected; therefore, organizations that are not experienced in conducting all the activities designated in the RFP will not meet the requirements for this procurement.

Key personnel needed are one fulltime project director, who will also serve as a study manager, two other fulltime study managers, and one parttime programmer/analyst. Additional temporary personnel include interviewers, abstractors, coders, forms designers, trainers, and data processors. One support person will be located with our Boston office, but the government will not pay for relocation.

This contract is expected to last three years, beginning in August or September 1983 depending on the progress of the competitive procedure. Organizations submitting proposals for this project must have, or be willing to establish offices within 50 miles of the NIH offcampus facility, the Landow Bldg., 7910 Woodmont Ave., Bethesda, Md. 20205. Frequent discussions and consultations with NCI project officers necessitate that the contractor have a substantial operational office with key personnel near Bethesda to minimize the expense to the government. The government will not pay for establishment of such an office.

Contract Specialist: Patrick Williams
RCB, Blair Bldg. Rm 114
301-427-8888

RFP NCI-CM-37608-28

Title: *Selective acquisition of chemicals and drugs for cancer chemotherapy*
Deadline: *Approximately July 20*

The Drug Synthesis & Chemistry Branch (DS&CB), Developmental Therapeutics Program, Div. of Cancer Treatment, NCI, is seeking sources to provide liaison, acquisition, and documentation services as outlined below:

This project will support the overall program objectives of DS&CB by accomplishing three interrelated objectives:

1. Providing the DS&CB with a suitable volume and variety of "new" chemical structures of synthetic compounds from which the DS&CB can select the ones it regards as the best candidates for evaluation in the anticancer screening program. Experience with the selection process at DS&CB suggests that at least 20,000 new chemical structures per year become a major portion of the pool of structures available to DS&CB through contribution of this project, a literature monitoring project, NCI's European liaison office, and submissions made directly to NCI.

The selection process is, in part, a computerized evaluation. In addition, selections are made only from among those structures known to be "new" to the NCI automated data base. Thus, the structures must be entered into a temporary file in the automated data base. The staff of this project prepares the structures provided by all DS&CB structure sources for computerized selection. The number of structures at this point may be 40,000 per year or more.

The preparation is done in one of two ways de-

pending on which system is in operation at the time: a) the NCI Chemical Information System operated for NCI by Chemical Abstracts Service or b) the NCI Drug Information System. In either case, a chemical structure is drawn or input by computer terminal along with specified nonstructural data to identify each structure.

The selection process is only partially computerized; it is also an evolving science performed by experienced medicinal chemists. This project supports the informational needs of these chemists by performing specified chemical searches and analyzing feedback data created by the selection process.

Once the selections have been made, the contractor acquires samples of the synthetic compounds in quantities adequate for evaluation. Sample sizes of 400 mg or more are usually required. The sample acquisitions are performed by this project using a combination of methods including field operations by the contractor and/or correspondence with potential suppliers. Field operations involve the contractor sending collection teams to a supplier's location, weighing out the selected samples into prelabeled bottles, and transmitting the samples to the contractor's facility. Field operations are normally conducted for suppliers contributing to the 20,000 structures provided by this project.

Acquisitions made by this project by correspondence include two major types: a) informing suppliers of selections made from their structures provided earlier (these include some structures among the 20,000 provided by this project, structures provided by NCI's European liaison office, and structures provided directly to NCI) so that the supplier may transmit the samples to the contractor's facility in lieu of a field operation, and b) direct mail acquisition attemps of compounds reported in the scientific literature and selected from the literature monitoring project's reports.

Reacquisition, i.e. the acquisition of samples previously tested, is the responsibility of this project. This activity involves the receipt of requests for reacquisition, the gathering of facts related to the reacquisition, and initiating the correspondence to achieve the reacquisition. Part of this responsibility includes tracking these reacquisition attempts through successful reacquisition or until the decision is made to terminate the request. Both the CIS and DIS require input related to reacquisitions.

2. Registration of the acquired compounds into the permanent automated chemical data base. "Registration" is the process by which each new sample to be tested by NCI is entered into NCI's permanent data base and identified with a serial accession number, the "NSC number." This is a highly controlled process because: 1. it sets the pace for many other processes at NCI, and 2. it establishes the permanent chemical data base of the anticancer screening program.

Control for the first reason is obtained by requiring that a fixed number of compounds are registered per year. The current requirement is that 10,000 synthetic compounds are to be registered per year and a much smaller number (approximately 200-400) natural products are registered per year. Thus, the total registrations are 10,200 to 10,400 per year. Since it is very important to minimize the length of time from receiving a sample to the issuance of printed screening results from the anticancer evaluation, it is further required to regulate the rate of registrations on a weekly basis. The goal is to keep the number of registrations made weekly as constant as possible throughout the year and still end up with the required yearly total. Experience has demonstrated that this weekly control of registrations permits the screening results to be obtained in as short a time as possible.

Control for the second reason, i.e., to maintain the permanent data base as accurately as possible, will be this project's responsibility. Currently, the Chemical Abstracts Service shares this responsibility because they operate the CIS. Either before or after this project begins, the DIS will be operational. Under this DIS, this project assumes full responsibility for input of data to the system and, consequently, for the accuracy of that data.

3. Providing complete correspondence and record keeping services required to maintain the overall DS&CB acquisition effort. Beginning with the first steps in the liaison effort to acquire new chemical structures for selection, through the acquisition process, and continuing through reacquisition efforts to acquire additional samples of materials previously tested, a significant amount of correspondence and other acquisition activities must be maintained and managed for reference as required. This is also this project's responsibility.

The principal investigator should be a PhD organic or medicinal chemist having experience in areas relevant to this project, e.g., liaison, acquisition, contract management.

The procurement is a total small business set aside. The SIC number is 2833.

Contract Specialist: Ann Linkins
RCB, Blair Bldg., Rm 228
301-427-8737

The Cancer Letter _Editor Jerry D. Boyd

Published forty-eight times a year by The Cancer Letter, Inc., P.O. Box 2370, Reston, Virginia 22090. Also publisher of The Clinical Cancer Letter.