THE CANCER LETTER

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REAGAN'S 1983 BUDGET WOULD FUND NCI GRANTS TO 180 PAYLINE, 26 PERCENT OF APPROVED; INDIRECT COSTS CUT

The 1983 fiscal year budget for NCI submitted by the Reagan Administration started through the legislative process last week with little indication that Congress is in a mood to make any significant changes in it.

The total, $955.5 million, is only a little more than $12 million above the current spending level and thus would not keep up with even

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In Brief

XIIITH CONGRESS DRAWS RECORD NUMBER OF ABSTRACTS, 3,000 REGISTRANTS SO FAR; EXHIBIT AREA SOLD OUT

XIIITH INTERNATIONAL Cancer Congress in Seattle Sept. 8-15 has generated a record response in number of abstracts submitted—more than 4,300, Congress Secretary General Edwin Mirand reports. The entire exhibit area has been sold out, and about 3,000 have registered so far. "We're shooting for 10,000," Mirand said. For registration and program information, write to XIIIth International Cancer Congress, Fred Hutchinson Cancer Research Center, 1124 Columbia St., Seattle, Wash. 98104. . . . **FDA'S APPROVAL** of the NDA for estramustine (Hoffmann-La Roche trade name: Emcyt) astounded some observers. The agency's Oncologic Drugs Advisory Committee twice had rejected in split votes approval for marketing the drug for use against refractory prostatic cancer. The committee last year again failed to approve it on a tie vote (***The Cancer Letter***, July 3). Committee actions are only advisory, but since the practice of submitting NDA approval requests to outside scientific advisors, FDA has rarely approved one without at least a majority vote in support. . . . **HENRY PITOT**, chairman of the National Cancer Advisory Board, rejected NCAB member Rose Kushner's request for a special meeting to review the RFA for the Community Clinical Oncology Program (***The Cancer Letter***, Feb. 19). . . . **JOHN DOUROS**, chief of the Natural Products Branch in NCI's Developmental Therapeutics Program since the branch was established about seven years ago, has left to join Bristol Labs. . . . **RONALD HERBERMAN**, chief of the Laboratory of Immunodiagnosis in NCI's Div. of Cancer Biology & Diagnosis, has moved over to the Div. of Cancer Treatment to head the Biological Development Branch in the Biological Response Modifiers Program. . . .**ROBERT MEEKS** has been appointed head of the Toxicology Div. at Southern Research Institute. He was formerly a senior staff fellow in NCI's Laboratory of Chemoprevention. . . . **HELMUTH GOEPFERT** has been named head of the Dept. of Head & Neck Surgery at M.D. Anderson. He has been acting head of the department since the death last September of Richard Jessee.

NATIONAL CANCER INSTITUTE BUDGET MECHANISM

	1982 Estimate		1983 Estimate	
	No.	Amount	No.	Amount
Research Grants:				
Research projects:				
Noncompeting	1,820	$262,311,000	1,768	$252,519,000
Administrative supplemental	(91)	6,727,000	(91)	6,235,000
Competing				
Renewal	286	45,195,000	298	58,830,000
New	384	41,370,000	408	46,942,000
Supplemental	40	1,640,000	42	1,792,000
Subtotal, competing	710	88,205,000	748	107,564,000
Subtotal, research projects	2,530	357,243,000	2,516	366,408,000
Research centers:				
Exploratory grants			1	200,000
Core grants	54	72,662,000	55	74,824,000
Subtotal, research centers	54	72,662,000	56	75,024,000
Other research:				
Research career program	120	4,973,000	116	4,973,000
Cancer task forces	114	13,770,000	88	10,000,000
Clinical education program	83	5,800,000	88	6,000,000
Cooperative clinical research	196	35,500,000	195	36,000,000
Minority biomedical support	(25)	2,014,000	(22)	2,014,000
Other research	9	4,300,000	29	5,300,000
Subtotal, other research	522	66,357,000	516	64,287,000
Total, research grants	**3,106**	**496,262,000**	**3,088**	**505,719,000**
Training[1]				
Individual awards:				
Noncompeting	129	3,013,000	95	1,981,000
Competing, new	23	538,000	60	1,981,000
Subtotal, individual	152	3,551,000	155	3,211,000
Institutional awards:				
Noncompeting	1,153	19,248,000	840	15,347,000
Competing, renewal			198	3,507,000
Subtotal, institutional	1,153	19,248,000	1,038	18,854,000
Total, training	**1,305**	**22,799,000**	**1,193**	**22,065,000**
Research and development contracts	478	147,386,000	467	144,817,000
	Pos.		Pos.	
Intramural research	1,505	164,009,000	1,505	171,859,000
Direct operations	244	40,893,000	244	41,931,000
Program management	168	11,857,000	168	11,993,000
Cancer control	53	55,323,000	53	55,065,000
Construction		4,500,000		2,000,000
Total, NCI	**1,970**	**$943,029,000**	**1,970**	**$955,449,000**

1. Numbers are full-time equivalents

CENTERS, GROUPS GET SMALL INCREASES; CONSTRUCTION, ORGAN SITES, REDUCED

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the most optimistic inflation estimates. The results: Level funding for some programs, modest increases at best for some, reductions for others, and one of the most competitive years yet for R01 and P01 grants.

Competing individual investigator initiated and program project grants would be funded, under the present breakdown of the budget, to a payline of 180 priority score, which would include only 26 percent of approved grants. A total of 32 competing program projects would be funded, also estimated to be about one fourth of those approved.

The squeeze also will be felt on indirect costs, with an NIH-wide directive to slash those costs by 10 percent.

The budget estimate for noncompeting research grants totals $252.6 million, down almost $10 million from 1982 because of a reduction in number from 1,820 to 1,768. But the total for competing grants, new and renewal, is $107.6 million, up from $88.2 million.

Cancer center core grants would go up from $72.7 million to $75 million, making room for one new grant plus one planning grant.

Cooperative groups would get a $500,000 increase, to $36 million. That total includes $1.5 million for second year funding of the new regional groups, now in the process of being reviewed. There is no money

BUDGET AUTHORITY BY ACTIVITY

	1981 Actual		1982 Estimate		1983 Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Research:						
Cause and prevention research	568	$230,072,000	638	$234,953,000	638	$235,626,000
Detection and diagnosis research	185	56,080,000	200	59,853,000	201	62,358,000
Treatment research	625	315,277,000	611	302,806,000	611	311,590,000
Cancer biology	337	170,741,000	391	174,633,000	391	176,892,000
Subtotal	1,715	772,170,000	1,840	772,245,000	1,841	786,466,000
Resource development:						
Cancer centers support	15	73,470,000	20	74,210,000	20	76,619,000
Research manpower development	11	40,108,000	14	35,055,000	14	34,621,000
Construction	13	6,103,000	14	5,412,000	13	2,872,000
Subtotal	39	119,681,000	48	114,677,000	47	114,112,000
Cancer control:	61	55,432,000	82	56,107,000	82	54,871,000
Total, budget authority	**1,815**	**$947,283,000**	**1,970**	**$943,029,000**	**1,970**	**$955,449,000**

Some of the totals shown here exceed those shown in the same categories on page 2. These figures include proportionate shares of NCI overhead, including staff salaries, charged to the respective programs.

in the 1983 budget for any additional regional groups. The $36 million does not include funds for those groups which had been supported through contracts; their money is included in the total listed for contracts, although they have been switched to cooperative agreements.

Research manpower development funds would drop again, by about $400,000, after suffering a $5 million cut from 1981 to 1982. Institutional allowances would be held to 50 percent of recommended levels.

The embattled Organ Site Program would take another major cut, down to $10 million from the 1982 level of $13.7 million.

Construction grants would be held to $1 million, again reflecting the White House's antipathy to the program despite NCI's initial request of $20 million. (The $2 million shown in the breakdown by budget mechanism includes $1 million for renovations on campus at NIH and at Frederick Cancer Research Facility).

Cancer control would be cut by about $300,000, to $55 million.

The intramural research budget would go up from $164 million to $171.9 million, reflecting the pay increase received by all federal employees. The budget does not include funds for a 1983 pay increase; if as is likely there is a raise, it would have to come from within the budget total.

Sen. Harrison Schmitt (R.-N.M.) opened the Senate hearing on NCI appropriations by noting that there has been "a biological revolution, a revolution in understanding the biomechanical code. This is extremely exciting. The only acceptable alternative to controlling the high cost of medical care is to avoid disease through prevention, and to cure it if it occurs. NIH is the front line for building bases for these noble efforts. If we are not successful, the country will go bankrupt."

Schmitt said, "It is appropriate to note that we are at the 10 year milestone for the National Cancer Program. That is about the attention span of people who work 16 hours a day, seven days a week in research, and when it peaks. Has the Cancer Institute reached its peak, its plateau?"

"We're hitting our stride is a better way of putting it," NCI Director Vincent DeVita said. "We have never seen greater opportunity for preventing disease. We have reached a critical mass with the National Cancer Program allowing us to do things that were impossible to do in 1971."

"Is that with the same people or with new scientists?" Schmitt asked.

"We've trained an entirely new generation of investigators and expanded the base. The results are astonishing, the biological revolution you mentioned," DeVita answered.

DeVita, in response to questions by Schmitt, said:

- NCI would use the money recouped from the reduction in indirect costs to fund more grants.
- There are no "research paths" (Schmitt's term) which are not being followed because of budget limits, with program "roll over" used to fund new projects.
- He fully supported transfer of the National Toxicology Program and NCI's share of it to the National Institute of Environmental Health Sciences.
- There has been a significant number of anticancer drugs developed since 1970 despite a 50 percent cut in the Drug Development Program budget (including inflation) since 1974 and contrary to statements in the *Washington Post* series. That series "was full of inaccuracies and frightened patients unnecessarily," DeVita said. Chemotherapy saves 46,000

lives a year, he pointed out.

• The phase 1 interferon trials, which are now being completed, apparently are demonstrating that tumors responding to interferon, unlike those which respond to cytotoxic drugs, are the slow growing tumors. "I can see a marriage of the two types of treatment."

• He was "disappointed" that the pi meson research in Los Alamos did not produce better results in its pioneering clinical trials. The NCI grant funding that research was recently disapproved. "We have not closed the book on the pi meson facility there. I expect to see another grant application, to see how else we can use pi mesons, and we will follow the clinical trials in Switzerland."

Congressman William Natcher's (D.-Ky.) Appropriations Subcommittee seemed somewhat more disposed toward a possible increase in the NIH budget over Administration recommendations.

"Some people complain about the 1500 percent increase in the budget for the National Institutes of Health since 1954. I say, so what?" Natcher commented in opening the hearing Tuesday. "I say that is money right well invested. There are more people, it is a larger country. We're concerned about the health of the country. I'm proud of the achievements and accomplishments of the National Institutes of Health."

Silvio Conte (R.-Mass.), the top ranking minority member of the subcommittee, said that medical school deans complained to him about the 10 percent reduction in indirect costs planned by NIH. "They say that instead, individual projects should be cut. Reducing indirect cost funding in effect cuts all research projects."

"We concluded that for the time being, when we have to reduce all activities, the only way we could support a reasonable level of research grants is to cut indirect costs," said Thomas Malone, NIH acting director. "We haven't touched overhead until now."

Louis Stokes (D.-Ohio), pointed out that the Administration's budget request for the National Science Foundation is an eight percent increase over 1982. "Don't you feel shortchanged?" The request for NIH is a three percent increase.

"Perhaps we could take some lessons from NSF on how to approach the Office of Management & Budget," Malone joked.

Stokes tried to get Malone to reveal NIH's original budget request submitted to OMB. Malone and other Administration officials are under severe pressure to avoid "budget busting" tactics and to defend the Administration's budget. "Our initial request was $3.7 billion, and that is exactly what we got," Malone said.

That was technically correct, since it was the initial figure sent through the department to the White House. But it wasn't really what Stokes was after.

Congressman Joseph Early (D.-Mass.) pursued the matter. The original budget discussions involved a figure of more than $4 billion, Early said. Malone admitted that first estimate developed by NIH was $4.2 billion.

"I know you're defending the Administration's budget," Early said. "But I also know you're not big spenders at NIH. The original submission was probably closer to $5 billion than to $3.7 billion."

Malone said that the initial planning process looks at an optimal budget. "And that wasn't excessive," Early said. "That's what you needed."

Early criticized reduction in support for purchases of new equipment and failure to include funds in the budget to pay for the federal pay increase in the 1982 fiscal year.

Natcher opened the session on NCI's budget by asking DeVita about last year's various congressional hearings and the stories "we saw on the front page of the daily disappointment. What's going on? We believe on this subcommittee you've been doing a good job. What's brought this on?"

DeVita reviewed briefly the Inspector General and General Accounting Office criticisms of NCI contracting procedures which formed the basis for some of the hearings, and said that nearly all of the problems had been rectified. As for the *Washington Post* series, "I felt those articles were biased in the extreme."

Natcher and Conte asked for details on progress in the last 10 years, which DeVita covered briefly. More detailed responses will be made for the published record.

Natcher was critical of the Senate's failure to pass a regular appropriations bill for the 1982 fiscal year. The House bill gave NCI more than $40 million above the level in the continuing resolution which is providing funding through the end of March. It does not seem likely that a regular appropriations bill will be approved by Congress this year.

AACI SEEKS CHANGE IN ACT TO BYPASS STUDY SECTIONS ON SOME SMALL GRANTS

The Assn. of American Cancer Institutes is seeking a number of significant changes in the National Cancer Act which will come up for renewal in Congress this year, including one which would permit the NCI director to award grants up to $50,000 without study section review but with review by the National Cancer Advisory Board.

R. Lee Clark, chairman of AACI's Cancer Act Renewal Committee, reported on the committee's recommendations at the association's recent meeting. The recommendations were also approved by AACI's Lesiglative Committee, chaired by Nathaniel Berlin. They were:

• The NCI director, under a provision of the

National Cancer Act, may now award grants less than $50,000 without approval of the NCAB but they must first pass study section review. The AACI would add to that the power to award under $50,000 grants without study section review but with review and recommendation of the NCAB. Clark said the present authority has been used for the most part to support innovative research and young investigators "and has been used wisely and well."

- Add "developmental research" to the kinds of programs which may be established and supported under the cancer control sections of the law.
- Define the term "cancer control."
- Retain the budget bypass authority.
- Increase cancer center support period from three to five years.
- Create authorization levels—overall for NCI, and a line item for cancer centers.
- Retain the Presidential appointment of the NCI director and NCAB members.
- Require that unexpired terms of NCAB members and members of the President's Cancer Panel, when vacancies occur, be filled within 90 days.
- Delete the present requirement for an annual report by the NCAB to the President and Congress. The NCI director is required to make such reports, and the others are unnecessary.
- Retain the Panel and Presidential appointment of its members.
- Increase the number of times the Panel must meet from four to six.
- Require the Panel to submit names to the President for consideration for appointment of the NCI director and NCAB members.
- Oppose creation of any new boards or councils "which would add another level of bureaucracy." The Senate passed a bill two years ago, which died when concurrence of the House was not obtained, which would have created a new council empowered to review all federal biomedical research budgets and make budget recommendations.
- Specify in the National Cancer Act that programs carried out under or evolved from the National Cancer Program and approved by the NCAB are exempt from the health planning provisions of the Public Health Service Act.

David Sundwall, a staff member of the Senate Labor & Human Resources Committee headed by Orrin Hatch (R.-Utah), told AACI members that Hatch "would like a neat, clean, quick reauthorization. He has no major changes in mind," but will consider suggestions for changes when the committee holds hearings on the renewal. No date for those hearings has yet been set.

"I can guarantee that Senator Hatch is committed to supporting biomedical research," Sundwall said. He pointed out that Hatch fought a $150 million cut in the budget for NIH last year.

Richard Steckel, outgoing AACI president, suggested to NCI Director Vincent DeVita that consideration be given to the suggestion previously advanced by the association that the budget for core grants be proportional to the total for R01s and P01s. "We have felt that 25 percent should be the target goal," Steckel said.

DeVita has opposed line items in the budget for centers and any other program. "I would have a harder time now to justify an authorization level," he said. "As for proportionality, I don't like it. Any fixed figure might force us in some years to fund at scores which would embarrass us. In other years, it could create a distortion the other way."

Peter Greenwald, director of NCI's Div. of Resources, Centers & Community Activities, told AACI members that the Cancer Control has had some successes, a view some of them have not shared. They were, Greenwald said:

—Advances in mammography, "which probably grew out of the disputes in the Breast Cancer Detection Demonstration Project."

—The public is much more knowledgeable about cancer.

—The work force knows more about carcinogens.

—Cervical cancer had declined, partly due to the Cancer Control Program.

—Smoking has declined markedly.

The chemoprevention trials which DRCCA will support are part of the new direction taken in cancer control. "It may turn out that some studies will prove the null hypothesis," Greenwald said. "We have to be concerned about toxicities, and not expose healthy populations to toxic agents."

Steckel, in his presidential address, suggested that cancer centers be used more fully as an information resource for the public:

"As the recipient of almost $1 billion in public funds annually, the National Cancer Institute has a clear obligation continuously to inform the public and health professionals about its program goals, and about the progress it is making toward realizing those goals. At the present time, information about the National Cancer Program is being transmitted to the public by several different means., through press releases and other media coverage, through congressional oversight hearings on the National Cancer Program (and the media coverage occasioned by those hearings), through innumerable scientific publications from NCI supported investigators and programs, and through cancer center-based informational and educational programs. The information programs at centers include offices of cancer communication, with WATS lines to respond to public and professional inquiries, as well as other informational activities.

"Continuing medical education and allied health education programs conducted at NCI supported

cancer centers also serve to inform the health professions segment of the public about NCI supported activities, and there are numerous cancer center based bulletins and periodicals that are widely circulated and which perform similar functions.

"Finally, and not least, word of mouth communications from patients at cancer centers, and from center personnel and community supporters of centers, serve an important role in transmitting information to the public about progress that is being made by the National Cancer Program.

"It has become increasingly clear from recent events, however, that the various efforts to inform health professionals and the public about progress in the National Cancer Program, are not working that well. Not only are many misconceptions being promulgated in the media and in Congress about the program, but even some physicians and other scientists have become disaffected by what they perceive as the inordinate size and lackluster performance of the National Cancer Program. Among some members of the public as well as health professionals, there are strongly held misconceptions on the appropriate time frame for achieving the goals of the National Cancer Program, as well as misconceptions concerning the goals themselves. One often hears, 'Why hasn't cancer been cured yet?' (e.g., after 10 years of increased federal research support).

"There are also continuing misconceptions on the progress that has already been made in treating cancer. One reads or overhears frequently the erroneous comment that 'there haven't been any improvements in survival (from cancer) over the past 20 years.' Numerous mis-statements concerning the goals and the methodology of the National Cancer Institute's Drug Development Program have appeared recently in the press, and there are also some alarming misconceptions on the part of the public about the motivations that are ascribed to cancer investigators.

"One reads shocking (pseudo) accounts of cancer patients who are being used as guinea pigs; one also hears, increasingly, references to an alleged 'pattern of fraud' in general, and cancer research in particular, in biomedical research. There have been allegations that cancer investigators commonly cover up for other investigators, and that they even attempt to hide research progress in cancer therapy and prevention.

"Finally, there is a widely held misconception by non-cancer scientists, that the National Cancer Program robs support from other legitimate research activities; among some investigators, there is also the concern that our present peer review system may stifle promising, but unconventional new research ideas.

"My message to you today is a very simple one. To prevent and correct many of these misconceptions on the part of the public and health professionals concerning the National Cancer Program, there is one widely distributed informational resource that is still being underused by the National Cancer Institute, and that is the major NCI supported cancer centers themselves. NCI communications with the public, as well as with other scientists, should be supplemented actively now, and on a national basis, with planned firsthand, first person experiences conducted for these people at our cancer centers.

"These firsthand experiences should take the form of increasing numbers of carefully planned public tours and symposia conducted at the major centers, on topics of highcurrent interest in the cancer field. These informational programs should be coordinated on the regional as well as national levels. Furthermore, in the context of continuing education programs for health professionals that are being conducted at cancer centers, the CME programs should also emphasize NCI supported cancer research and associated clinical management activities that are currently taking place at centers, and the relevance of these activities to the National Cancer Program as a whole. Visiting fellowships for community health professionals which are conducted on site at cancer centers should be encouraged, whereby community physicians and allied health personnel are invited to come into the centers to spend several days to several weeks, attending actual clinical rounds and teaching conferences and observing the progress that is being made in the cancer laboratories and clinics.

"In summary, the major NCI supported cancer centers themselves constitute an enormous resource for direct on site public and professional information activities. There are no better means to use this resource than to invite health professionals, responsible media representatives, and members of the lay public directly into the cancer centers to learn first hand about what centers are doing now in the context of our national commitment to conquer cancer. Local community groups and local professional leaders look to their regional cancer research centers as the most immediate and highly visible manifestations of the National Cancer Program, and as a ready means to provide them with first hand information on progress that is being made in cancer research and patient care. Accordingly, there is no better single place for direct and positive public communications to occur about the National Cancer Program than on site at each of the major NCI supported cancer centers that are distributed around our nation."

BONE MARROW TRANSPLANT REGISTRY CONTRACT WILL BE RECOMPETED

The article on concept approval of several projects by the Div. of Cancer Treatment Board of Scientific Counselors in last week's issue of ***The Cancer Letter*** was incorrect on one of those concepts.

The contract for maintenance of the International

Bone Marrow Transplant Registry was listed as approved for noncompetitive renewal. That is not the case. The contract will be recompeted, and the RFP announcing the recompetition will be available soon.

DCCP BOARD APPROVES CONCEPT OF STUDY ON BLACK/WHITE SURVIVAL DIFFERENCES

The Board of Scientific Counselors of NCI's Div. of Cancer Cause & Prevention gave concept approval last week to a study it will support jointly with the Div. of Resources, Centers & Community Activities on survival differences between black and white cancer patients.

The DRCCA Board had previously given its concept approval to the study. The three year project will cost an estimated $450,000, with DRCCA putting up $250,000.

The DCCP Board also gave concept approval for the competition of three resource contracts and for the noncompetitive renewal of two other contracts.

The staff narrative on the black/white survival study:

Many studies of cancer patient survival have indicated that blacks show a poorer prognosis for most types of cancer, even when adjustments have been made for age and stage of disease. Among both sexes the racial difference is particularly large for cancer of the colon, rectum, urinary bladder, and Hodgkin's disease. Among women alone, the survival rates for breast cancer and cancer of the uterine corpus are much lower for blacks than whites, and among men there are large racial differences for cancer of the larynx, prostate, and kidney.

A growing awareness of the scope of this problem has prompted a call for research aimed at identifying causes of the survival differences and mechanisms for reducing the racial gap. In February 1981 the National Cancer Advisory Board made a commitment to try to remedy the poor survival experience of black cancer patients. As a preliminary step toward this end, it is necessary to determine how much of the variance in the mortality of black and white cancer patients is due to factors which are amenable to change. On the basis of existing data, some tentative hypotheses can be developed concerning possible causes of the racial differences in survival. However, further research is required to evaluate the relative importance of contributing factors. These variables might include differences in the stage of disease at diagnosis, differences in histologic type; differences in host vulnerability to the growth and spread of cancer; differences in socioeconomic status which might in turn impact on other contributing factors; and differences in treatment regimens and compliance.

Behavior and life style may impact on the racial difference by influencing promptness of consultation, utilization of the medical system for diagnosis and treatment, compliance with prescribed regimens. It is anticipated that retrospective analyses of patient records will have value in clarifying the possible role of prior medications, previous malignancies and treatment thereof, delay in seeking medical care, concurrent illnesses, indicators of socioeconomic status, extent of disease, cancer therapy and supportive care, and cause of death. Retrospective review may be of limited value for exploring the full range of behavioral issues that impact on survival. Therefore a longitudinal study of new cancer patients who can be interviewed with respect ot behavioral and other factors must be conducted.

The most appropriate source of patients for this total endeavor is likely to be population based registries which would provide ample numbers of patients and results which could be considered representative. Alternative sources of cases might, of course, be justified. Collaboration between institutions that have different areas of expertise and resources may provide a mechanism for accessing and studying appropriate pools of patients.

This project will focus on both biological and behavioral/-life style aspects of the black/white differential in patient survival. Four sites selected on the basis of the magnitude of survival differences and relative frequency of occurrence will be explored: endometrium, breast, colon/rectum and urinary bladder.

Max Myers, who will be DCCP project officer for the study, said that while "it is difficult to arrive at sensible cost estimates," the cost per case is expected to be $156 for a prospective study and $56 for a retrospective study.

Board member Hilary Koprowski said that on comparative cellular immunity, "if you get enough consultants, they'll tell you to abolish this part. We don't know enough."

Board member Brian Henderson said it would be unlikely that information on use of exogenous estrogen would be available retrospectively from charts. Also, diet and nutrition information is not available on charts.

"It looks as if the stage at initial diagnosis will be a major factor," said Board member Bernard Weinstein.

The three resource contracts which will be competed are:

Animal holding and related services, $497,000 first year, $1.5 million total for three years.

This is a multi-user resource contract necessary to support both biological and chemical carcinogenesis programs. The type of services provided include: maintenance of a variety of animals (mice, rats, rabbits, guinea pigs), breeding of several strains of mice, generation of antisera, collection of tissues and fluids from live and dead animals, autopsy and tissue preparation for histology and electron microscopy, and observation of experimental animals for signs of disease.

DCCP Director Richard Adamson said that the dollar figure was a maximum and that it would be reduced as the bioassay program at Frederick Cancer Research Facility is phased out (and transferred with the National Toxicology Program to the National Institute of Environmental Health Sciences), making buildings available there for animal holding.

Hybridoma assays and related laboratory tests, $220,000 first year, $660,000 total for three years.

The Experimental Oncology Section has developed a series of monoclonal antibodies that are reactive with defined antigens on the surface of human mammary carcinoma cells, and which are not reactive with the surface of normal cells. Experiments are now being conducted toward the following goals: (a) the use of radiolabeled monoclonal antibodies for the in situ detection of metastatic human mammary tumor lesions in lymph nodes and at distal sites. Studies in the EOS to date have demonstrated that radiolabeled monoclonals and antibody fragments can successfully detect human mammary tumors in athymic mice. (b) The use of these monoclonals as prognostic indicators. Studies have already shown a spectrum of reactivity for different monoclonals with different mam-

mary tumors. Further studies will define if the expression of specific antigens in tumor cell populations are indicative of the degree of differentiation and/or malignant potential of that tumor mass. (c) The use of these monoclonals to study the biology of mammary tumor cell populations. Studies have shown that certain growth conditions and compounds may alter the expression of tumor associated antigens on the cell surface. Further studies are required to define if these compounds can ultimately be used to enhance antibody binding to tumor cells in situ. (d) These antibodies have been used to identify and purify novel human tumor associated antigens. Studies are under way to develop solid phase and liquid radioimmunoassays to determine the presence and diagnostic or prognostic significance of these antigens in bloods of cancer patients. (e) Studies are under way to clone the genes coding for the proteins being detected by these monoclonals. Studies are also in progress to characterize new monoclonal antibodies of human and nonhuman primate origin. These may be of advantage if monoclonals are eventually used therapeutically in the management of carcinomas.

The contractor will provide proper facilities and technical support to carry out the following routine protocols designated by the NCI project officer: (a) standard and routine hybridoma techniques such as cell fusion, passage of cultures, and cell cloning; (b) routine solid phase radioimmunoassays for the detection of murine, human and nonhuman primate monoclonal antibodies; (c) cutting of tissue sections and routine immunoperoxidase assays.

Production, purification and concentration of tissue culture fluids and cells, $315,000 first year, one year.

This is a resource support contract shared by the Laboratory of Viral Carcinogenesis and the Laboratory of Tumor Virus Genetics.

The Laboratory of Viral Carcinogenesis studies the interaction of free oncogenic viruses, integrated viral and cellular genes alone or in conjunction with carcinogens and cocarcinogens. The Laboratory of Tumor Virus Genetics utilizes a multidisciplinary approach to study the role of RNA viruses in malignant disease.

Many phases of these activities require cell culture techniques for the production, characterization and assay of experimental biological products. Among these are retroviruses, growth factors, specific nucleic acids, antigens and marker molecules. These reagents must be rescued from the cell culture media by many-fold concentrations and purifications that combine a variety of biophysical and biochemical protocols without compromising their biological activity. Due to the volume, this requires the use of a continuous flow centrifuge.

The staff had requested $492,000 for the first year and a total of $1,476,000 for three years. The Board trimmed that to $315,000 and approved the recompetition for one year only.

Noncompetitive renewals were approved in concept for a feral mouse breeding colony, $86,000 first year, $276,381 for three years, with Litton Bionetics; and extension for one year of the contract with Louisiana State Univ. Medical Center for a case control study of lung, pancreas, and stomach cancer in southern Louisiana counties, to cost an estimated $115,000 to add an additional 100 interviews.

NCI OFFERS HYBRIDOMA CELL LINES TO "ANY LEGITIMATE SOURCE"

NCI has announced the availability of hybridoma cell lines which it is willing to supply "to any legitimate source (commercial or other). . . in the interest of assuring an adequate supply of anti H-2 and anti Ia hybridoma antibodies to the scientific community."

These hybridoma cell lines are:

Anti-H-2—3-83P, 12-2-2S, 15-1-5S, 15-3-1S, 15-5-5S, 16-1-2N, 16-1-11N, 16-3-1N, 16-3-22S, 20-8-4S, 23A-5-21S, 23B-10-1S, 27-11-13S, 28-8-6S, 28-11-5S, 28-13-3S, 28-14-8S, 30-5-7S, 31-3-4S, 34-1-2S, 34-2-12S, 34-4-10S, 34-4-21S, 34-5-8S, and 34-7-23S.

Anti-1a—14-4-4S, 17-3-3S, 25-5-16S, 25-9-3S, 25-9-17S, 26-7-11S, 26-8-16S, 28-16-8S, 34-1-4S, and 34-5-3S.

Evidence of an organization's interest and capability to produce is a prerequisite; therefore, a brief resume of experience and capabilities must be sent with request for hybridoma cell lines within 90 days of this publication to Shelby Buford Sr., contracting officer, Research Contracts Branch, NCI, Blair Bldg. Room 105, Bethesda, Md. 20205. Make reference in the request to Contract No. N01-CB-25585.

"It is hereby noted that cell lines provided are for research purposes only," the NCI announcement said. "Cell lines and their products shall not be sold or used for commercial purposes. Nor will cells be distributed further to third parties for purposes of sale, or producing for sale cells or their products. Secondary distribution shall only be under the terms outlined herein.

"The cells are provided as a service to the research community. They are provided without warranty of merchantability or fitness for a particular purpose or any other warranty, express or implied. In addition, the recipients of the cell lines agree to indemnify and hold harmless the United States from any claims, costs, damages, or expenses resulting from any injury (including death), damage, or loss that may arise from the use of the cell lines."

NCI CONTRACT AWARDS

Title: Investigation of steroid sulfation and estrogen binding in human breast cancer
Contractor: Roswell Park Memorial Institute, $4,774.

Title: Support to the Smoking, Cancer and Health Program
Contractor: Prospect Associates, Ltd., Potomac, Md., $175,638.

The Cancer Letter _Editor Jerry D. Boyd

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