

THE

# CANCER

RESEARCH  
EDUCATION  
CONTROL

# LETTER

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## NCI TO FUND NEW EFFORT BY COOPERATIVE GROUPS TO EXTEND TREATMENT INTO COMMUNITY HOSPITALS

NCI's Div. of Cancer Control & Rehabilitation is preparing to issue a multiple sole source RFP to as many as 10 Clinical Cooperative Groups to support extension of the groups' treatment programs into community hospitals.

"It's more than a treatment effort," James Wallace, chief of the Treatment, Rehabilitation & Continuing Care Branch, told members of the Cancer Control & Rehabilitation Advisory Committee last week. "It will include a lot of education, for physicians at the community level. It is one of several programs to speed research into action . . . By utilizing the Clinical Cooperative Groups, we hope it will allow immediate implementation of research advances at the community level."

Wallace said 12 of the 18 cooperative groups submitted letters of intent to participate in the program. Six to 10 probably have acceptable  
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### In Brief

#### CCIRC RECOMMENDS CENTRAL ONCOLOGY GROUP FOR PHASING OUT; ROGERS BACKS PAY RAISE

THE COOPERATIVE group which the Cancer Clinical Investigation Review Committee recommended for phasing out (*The Cancer Letter*, Feb. 20) is the Central Oncology Group, *The Cancer Letter* has learned. The recommendation will be considered by the National Cancer Advisory Board at its March 22-24 meeting. NCAB could over-rule CCIRC, but that isn't likely. . . . PAUL ROGERS, chairman of the House Health Subcommittee, has lined up behind the proposal to raise the salaries of the NCI, NIH and Heart & Lung Institute directors. Rogers' support is essential, since congressional authorization is necessary. The *Washington Star* reported last week that Rogers was "distressed" at the prospect of losing NCI Director Frank Rauscher to industry and indicated he'll go along with legislation raising Rauscher's pay and that of NIH Director Donald Fredrickson and NHLI Director Robert Levy to the neighborhood of \$65,000. . . . PERFORMANCE STANDARDS for diagnostic x-ray systems and their major components were proposed by FDA in the Feb. 23 issue of the *Federal Register*. Those wishing to comment on the proposals may do so until April 23. . . . THE NORTHERN California Cancer Center will be a "center without walls," according to its newly named director, Stephen Carter. The current deputy director of NCI's Div. of Cancer Treatment will start his new job July 1. The center will be a consortium to include Stanford Univ., the Univ. of California at San Francisco, Berkeley and Davis; the Univ. of Nevada at Reno; and a variety of local components, including the ACS Northern California Div., West Coast Cancer Foundation, and the San Francisco Tumor Registry. Carter expects to be ready to apply for comprehensive center status within a year.

## GROUPS TO OFFER COMMUNITY MDs PROTOCOLS, SUPPORT, EDUCATION

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protocols, he estimated. The project was devised as a noncompetitive contract, limited to the cooperative groups and available to as many of them as desired to participate, provided they submit acceptable proposals.

The Assn. of Community Cancer Centers has completed the planning phase of a grant awarded by DCCR for a program along somewhat the same lines, to establish working relationships between community centers on the one hand and the cooperative groups and comprehensive centers on the other for clinical investigation.

The DCCR Grants Review Committee considered ACCC's application for implementation of the program last week. Its recommendation will go to the National Cancer Advisory Board later this month. The application asked for about \$500,000 to develop demonstration programs involving four comprehensive centers and three cooperative groups (*The Cancer Letter*, Feb. 6).

Wallace told the advisory committee that community physicians can carry out phase III trials, comparing new treatment with the best existing treatment, "provided they have the proper support, equipment and backup. A major impediment facing the physician is the ability to record what he does and sees considering demands on his time."

Cooperative groups participating in the program will be assigned the following tasks:

- Determine how quality of care can be upgraded in hospitals serving the medically indigent.
- Provide community physicians with well-defined protocols, particularly to help evaluate new treatment in late phase III studies.
- Plan and provide supporting services, including nurse oncology specialists, and data managers.
- Expand data monitoring and analysis systems.
- Implement continuing education programs for physicians.
- Encourage community physicians to participate in regular cooperative group meetings.
- Disseminate findings promptly and widely.

The initial contracts will be awarded for three years, with merit review after 18 months and three-year extensions available for those who successfully complete the first three years, Wallace said.

Stephen Carter, deputy director of the Div. of Cancer Treatment, said that DCT "supports this approach wholeheartedly. The cooperative groups are the major clinical trials resource in the United States, with a fantastic potential. . . . It offers the best opportunity to make available the best treatment to more patients. Patients in the cooperative group program are getting the best care," Carter said.

Committee member Louis Leone, Rhode Island

Hospital, said that the effort by cooperative groups to move into multidisciplinary clinical studies "may be more effective in community hospitals than in cancer centers."

William Shingleton, director of the Duke Comprehensive Cancer Center and a consultant to the committee, asked Wallace if there are any plans to offer the same program to the centers.

"The comprehensive centers may not need the cooperative groups to develop their own network," Wallace said. He suggested that some funds might be available to develop cooperative clinical research efforts with community physicians through community outreach programs required of all comprehensive centers.

Committee member Grace Monaco, a leader in the Candlelighters organization, said she has heard some parents whose children have been in cooperative group protocols complain about "the depressing lack of multidisciplinary approaches. Specialists frequently don't know what each other are doing. Nurse oncologists could help."

Monaco asked if there is some way in the cooperative group program to pick up isolated cases of reaction to treatment. "They may not be isolated but we won't know it if the reports aren't correlated."

Wallace insisted that the groups are structured in such a way that reactions are picked up quickly. Serious complications are phoned in, he said, bypassing the regular flow sheets.

Carter explained that community physicians can check with the parent center for information on reactions, and the centers can go directly to DCT. "Cooperative groups have picked up early reactions," Carter said. "Significant reactions won't be missed."

Committee member Hamblin Letton, Southeastern Surgical Congress, commented that the "essence of cancer control is education. This is a perfect example of how to educate physicians."

Committee chairman Gerald Murphy noted that the task related to medically indigent "has an urban connotation." He suggested that the program should include physicians in a rural setting, where distances are more of a problem sometimes than ability to pay.

Oliver Beahrs, committee member from the Mayo Clinic, said, "It is important that we reach out to the periphery, where most of the cancer patients are, and where they are being cared for by busy physicians with no time to properly collect data."

## RAUSCHER TELLS FLOOD EC SUPPORT PERCENTAGE "GOOD"; OBEY UNFRIENDLY

NCI Director Frank Rauscher made his annual appearance before Chairman Daniel Flood's House HEW Appropriations Subcommittee last week and was confronted with the decidedly unfriendly approach of subcommittee member David Obey, Wisconsin Democrat.

Obey previously had criticized the Cancer Program

for supposedly ignoring basic research, draining funds away from other NIH institutes, and emphasizing treatment rather than prevention (*The Cancer Letter*, Jan. 23). He concentrated his criticism last week on the latter point and on implied charges of conflicts of interests by members of NCI advisory groups.

Obey opened his questioning of Rauscher by asking for a list of NCI contracts awarded to members of NCI advisory groups. Rauscher had no such list with him but agreed to supply it for the hearing record.

Later, near the end of the hearing, Obey asked Rauscher for the names of his advisors on environmental carcinogenesis. Rauscher mentioned Philippe Shubik, director of Eppley Institute at the Univ. of Nebraska and chairman of the National Cancer Advisory Board Subcommittee on Environmental Carcinogenesis. Without waiting to hear any other names, Obey asked, "Isn't he a consultant for industry?"

Rauscher acknowledged that Shubik had at various times worked as a consultant for various firms. Obey asked for a list of those firms as well as a list of grants and contracts awarded to Eppley.

Shubik has been under fire lately as his subcommittee has been trying to write guidelines that would help NCI determine when a chemical should be considered a carcinogen. Those guidelines, or criteria as the subcommittee calls them, will have enormous effect on decisions of regulatory agencies and on the food and chemical industries. Shubik has been criticized by some who contend the preliminary drafts of the guidelines have not been strong enough, and by others who feel they are too strong.

Obey's attack appeared more to be an attempt to discredit NCI's efforts in environmental carcinogenesis rather than an attempt to get Shubik. He led Rauscher through a series of questions in which he somewhat clumsily tried to make it appear that NCI, for some sinister reason, was conspiring against the good guys in the environmental field.

Obey asked Rauscher what the Carcinogenesis Program (in the Div. of Cancer Cause & Prevention) had requested for funding in fiscal 1977, and then said, "I understand Dr. Saffiotti (Umberto Saffiotti, director of the Carcinogenesis Program) feels he needs a minimum of 80 more people."

"He could use more, I'm sure of that, but 80 sounds high," Rauscher said. "My problem is, we won't get 80 additional people for all of NCI. Dr. Saffiotti always gets the highest priority with us." Referring to his notes, Rauscher then told Obey that Saffiotti had requested 160 positions and was getting 129. "He also told me he could use effectively another \$15 million, provided he could get the (extra) people."

"How many work for Dr. Fraumini?" Obey asked, referring to Joseph Fraumini, chief of the Environmental Epidemiology Branch.

"Ten to 15," Rauscher responded.

"My information is that it is four," Obey said.

"Why so small?"

"He certainly doesn't have enough people," Rauscher said.

"How many did Fraumini ask for?" Obey pressed.

"Knowing Joe, it was 15 to 20," Rauscher said.

"Can't you take care of that out of the 1976 budget?" Obey asked.

"There's no way," Rauscher said. "There aren't enough trained epidemiologists."

Rauscher outlined the Carcinogenesis Program for Obey, explaining how chemicals are selected for bioassay. Obey commented that with red dye No. 2 in the process of being banned by FDA, food processors are substituting red dye No. 40. "Now we learn that red dye No. 40 may be even more dangerous than No. 2," Obey said.

Rauscher noted that those reservations are based on some short term tests but that red dye No. 40 hasn't gone through the bioassay requiring two to three years.

"But haven't you known for some time that No. 2 was in controversy?" Obey asked. "Why wouldn't NCI do some tests on No. 40, knowing that No. 2 might be knocked out?"

"It was a matter of exposure and selection criteria," Rauscher said. "The chemical structure indicated that No. 40 wasn't in that ballpark. The data presented to FDA by the sponsors was so good that FDA gave it clearance."

Flood wasted no time early in the hearing before calling attention to the impossible situation in which the President's 1977 budget request is \$74 million less than NCI is getting this year. "What would be the impact of that reduction?" he asked.

"It definitely would have an impact," Rauscher said.

"That's the understatement of the month," Flood growled.

Rauscher said a cut of that size would leave NCI unable to award any new project grants, nor any more core grants. "We would not be able to take advantage of the momentum we've built up. We would be in a holding pattern."

Flood said there are some "who say we should accept this budget for cancer, and increase that for other institutes. What's your reaction to that?"

"The other institutes can justify and need more funding," Rauscher said. "I feel just as strongly that the cancer program needs more money."

Flood said he has heard statements about the contribution the other institutes can make to cancer research if they could get a little more money. Rauscher agreed that there was a "very good chance" that could happen and commented that some research at other institutes "is so good we've put \$15 million into supporting it." He also pointed out that basic research in the Cancer Program could in turn contribute to the solution of other disease problems.

Flood asked Rauscher what percentage of the NCI budget was devoted to researching environmental

causes of cancer, after referring to the view that 70 to 80% of all cancers are related to those causes.

Rauscher said 17% of the NCI budget goes into carcinogenesis studies directly and indirectly and agreed that environmental causes could account for as much as 90% of all cancers. "The important question is what percent is caused by things we know nothing about," Rauscher said. "We do know that 40% are caused by tobacco or by tobacco with alcohol, that 4% are related to occupational exposure."

"So you say that 17% of your budget is a proper amount to spend. Did I hear you say that?" Flood asked.

"For chemical studies, the kinds of things we're charged with, that's good, yes," Rauscher said.

Flood asked questions related to epidemiological studies, comprehensive cancer center outreach programs, the nutrition program, breast cancer screening, possible relationship of estrogen to cancer, and the fears by some that fluoridated water may cause cancer (Rauscher said every study he knew about indicated it did not).

Robert Michel, the top ranking Republican on the subcommittee, suggested that NCI should give more priority to environmental studies. Rauscher responded that it already had top priority in the funding of grants, that NCI made it a point to fund 60-70% of grant applications related to environmental carcinogenesis, "simply to give it a priority."

Michel referred to NCI critics who claim that the Cancer Program is getting more money than it can spend efficiently, that NCI can't effectively develop priorities.

Rauscher pointed out that the National Cancer Plan was developed with "wide input" from a broad range of scientists from the U.S. and around the world. Rauscher then took the opportunity to get into the record (no one had asked the question, usually one of the first to come up at NCI budget hearings) the amount NCI had requested for fiscal 1977 before the White House did its pruning.

Based on the Cancer Plan, Rauscher said, "we asked for \$948 million. We know we can spend that much, wisely and effectively."

"Is there a limit to what you can spend?" Michel asked. "Surely there is some point at which you will be funding low priority research."

"For the first time this year, we didn't come in asking for the full authorization, more than \$1 billion," Rauscher said. "We asked \$948 million. Last year we funded 61-62% of approved grants. This year, under the (President's budget) request (of \$687 million), we would fund only 10% of competing grants."

Edward Patten (D.-N.J.) provided the comic relief. After Rauscher noted that some studies show relationships between obesity and alcohol to some cancers, the portly Patten said, "You just ruined my day. That hits me right in the middle."

Patten objected to the NCI-produced survey which shows that New Jersey has one of the highest cancer rates in the country. "We've got 50 plants that produce vinyl chloride. We've got lead works, copper, zinc, but I seldom see anyone die from it. I'm happy to hear you say only 4% of cancers are occupationally induced. It's like DDT and cranberries. Irresponsible . . . So all this cancer air comes over us. One of the spinoffs from all those chemicals in the air is we don't have all the bugs others have. That's right. Our influenza rate is lower than anywhere in the country. I would rather have the fumes, the smoke. When there's no smoke, no one's working."

### **CANCER PROGRAM PROGRESS OUTSTRIPPED HIS OPTIMISM, RAUSCHER TELLS FLOOD**

Rauscher told the Flood Subcommittee that "success in the Cancer Program is greater and has come more quickly than even I, as an optimist, felt was possible," four years ago when the National Cancer Act of 1971 provided renewed emphasis to cancer research.

Rauscher backed up that claim with a lengthy statement listing "new and accrued (projects started before 1971) accomplishments of direct and definitive benefit to patients through advances in diagnosis, treatment, and rehabilitation, and to prospective patients through advances in detection of risk and prevention. In every sense, these advances are remarkable and have already saved many lives."

Those accomplishments include the traditional milestones of research progress, Rauscher said, "many of which with time, and public patience and support, will reduce and eliminate the diseases we call cancer."

A summary of that statement follows here, edited to conserve space. The full statement will be available from the NCI Office of Communications and will appear in the record of the subcommittee hearings.

#### **Accomplishments of Direct Benefit to People**

- A new treatment strategy of giving anticancer drugs (L-PAM and CMF) postoperatively to women with breast cancer and a high risk of recurrence has significantly lowered the recurrence rate among such patients. There is cause for optimism in these results, because experience has shown that prolonged tumor-free survival leads to increased survival rates.

- Treatment of breast cancer with less radical surgery has shown that it may be as effective as radical surgery. If the trend continues, the results will lead to treatment tailored to the individual patient and in many cases significantly different from the traditional radical surgery.

- With the use of postoperative drug treatment with either high doses of methotrexate followed by an antidote (citrovorum factor) or Adriamycin, the two-year survival rate for osteogenic sarcoma has been increased from 20 to 80%.

- More than 50% of children with acute childhood leukemia treated at various centers now survive more

than five years without disease.

- The addition of immunotherapy to chemotherapy in patients with acute myelogenous leukemia has led to an increase in the number of patients alive and free of leukemia, as compared with the number treated with drugs alone.

- More than 90% of patients with early Hodgkin's disease, and about 70% with advanced disease, are surviving five years. Many of these are free of disease and are expected to live normal lifetimes.

- Some patients with various types of advanced non-Hodgkin's lymphomas can be cured (have up to nine years without evidence of disease) by use of drug combinations. The application of these combinations to patients with early disease in conjunction with radiotherapy is being studied.

- It is firmly established that chemotherapy combined with surgery and radiotherapy is curative in 80 to 90% of patients with Wilms' tumor, a previously fatal childhood cancer of the kidney.

- The use of drugs and x-ray therapy in treatment of Ewing's sarcoma, another type of cancer that afflicts children, has led to markedly improved survival of patients with this disease.

- Significant progress has been reported in the treatment of advanced malignant melanoma by chemo-immunotherapy, a combination of an anti-cancer drug (DTIC) and a killed bacterial vaccine (BCG).

- The first successful combination drug treatments of advanced cancers of the colon-rectum and stomach have been reported. Trials of these drug combinations immediately after surgery to increase the cure rates after the primary treatment are now in progress. If this therapy is as successful as it appears, it could significantly reduce the 49,000 annual deaths due to cancer of the large intestine.

- Important developments in the supportive care of cancer patients include transfusions of blood components, such as platelets to prevent hemorrhage and white blood cells to treat infections; and laminar flow rooms to provide an environment that protects patients against infections.

- A test that predicts the response of patients with recurrent breast cancer to treatment with hormones has been developed and is in clinical trial.

- CCNU and BCNU will soon be available for general medical practice. These drugs can penetrate the so-called "blood-brain barrier." and are therefore very important in the treatment of primary and metastatic brain tumors.

- Adriamycin was approved as a prescription drug by FDA in 1974 for use in cancer patients. It has activity against a broad range of tumors, including cancers of the bone and soft tissue.

- DTIC, a new anticancer drug discovered and developed by NCI, became available as a prescription drug in 1975. It has activity against malignant melanoma.

- Maytansine, a plant product recently discovered by scientists in the NCI drug development program, has high activity against leukemia in laboratory animals. Preliminary clinical trials have been started against this and other cancers.

- Seventeen comprehensive cancer and many other specialized centers located around the country are a national resource for basic research, clinical research, community involvement, continuing education of health professionals, research training and communication of cancer information.

- The Clinical Cooperative Group Program has been expanded to emphasize combined treatment research including surgical oncology, radiation oncology, chemotherapy, and immunotherapy.

- The Cancer Control Program is supporting demonstration projects involving networks of cooperating community physicians and hospitals linked to major hospitals to disseminate the latest information and techniques in the diagnosis, treatment, and rehabilitation of breast cancer (12 networks); head and neck cancer (10 networks); and childhood leukemia and lymphoma (7 networks).

- The International Cancer Research Data Bank Program (ICRDB) is actively promoting worldwide exchange of information among cancer scientists.

- A nationwide breast cancer detection demonstration program encompassing 27 projects is under way in 25 states. Some 230,000 women have been examined and 4,000 biopsies have been reported. Of these, about 800 have been determined to be cancer. About 77% of confirmed cancers had not spread, a condition crucial to increased survival; this compares well to the 45-50% of patients diagnosed with localized cancer in the usual medical practice. About 40% of the cancers were detected by the technique of mammography alone.

- More than 30 states are cooperating in a uterine cervical cancer screening program, giving the Pap test to women at high risk who have not previously had it.

- A prototype cell-sorting machine has been able to screen cervical cytology specimens automatically at the rate of 15-25 per hour. This is a significant step toward the goal of automation of the reading of Pap test specimens.

- Use of an improved fiberoptic endoscope, a flexible instrument that permits determination of the location and extent of the tumor, is assisting the detection of cancer of the colon in earlier stages. The instrument is also proving valuable in the diagnosis of cancer of the pancreas.

- Six radiological physics centers were established to assist medical physics practice in cancer diagnosis and treatment, such as standardization of quantity and extent of radiation given. This important quality control mechanism has served as a model for the benefit of the millions of Americans undergoing diagnostic radiologic procedures yearly, and the more than 400,000 cancer patients receiving radiation therapy yearly.

- Computer-assisted x-ray tomography is a new technique that has revolutionized the diagnosis of brain tumors and other brain diseases. It is a technique for making a series of cross-section radiographs of brain tissues. It permits location of tumors in a way not previously observable by x-ray. Active development is under way to adapt the machine to make cross-section images of cancer sites in other parts of the body.

- A large study featuring cell examination of sputum and chest x-rays to detect lung cancer in heavy smokers without symptoms of the disease has screened approximately 20,000 individuals and found some 150 cancers. The study has already shown that early lung cancer can be detected in this way and that the fiberoptic bronchoscope can diagnose the exact location and extent of the tumor for surgical treatment. Many of the tumors were small enough that that survival is expected to be better than usual in patients with lung cancer.

- A cancer control project is supporting observation of at least 4,000 young women, born between 1943 and 1963, who were exposed before birth to DES, which their mothers received to prevent abortions during pregnancy. The young women will be followed for five years or more for cancer and other abnormalities of the genital tract. The detection and diagnostic procedures developed in this study may then be applied to the larger population at risk.

- New chemicals found to be carcinogenic include vinyl chloride, and red dye No. 2.

- Less hazardous cigarettes have been developed and evaluated in newly developed inhalation smoking machines. They are now on the market. Acceptance by the public will have a major beneficial impact on reducing the number of new lung and other cancers.

- Progress has been made in developing quick, inexpensive laboratory techniques for identifying potential cancer-causing chemicals for test in the laboratory animal test systems.

- Tests are currently in progress on about 500 chemicals to determine their cancer-causing ability in laboratory animals. The compounds are selected on the basis of level of human exposure, the chemical structure, and preliminary information of their biological activity. Among the chemicals being tested are pharmaceuticals, industrial chemicals, pesticides and agricultural chemicals, metallic compounds, and in addition, natural materials, food additives, and a variety of other environmental chemicals and intermediates.

- A series of monographs, *Evaluation of Carcinogenic Risk of Chemicals to Man*, has been published by the International Agency for Research on Cancer with direct support and collaboration from NCI. These volumes bring together the results of testing of many chemicals for their cancer-causing ability, provide a quick reference for investigators, and prevent unnecessary duplication of testing.

- Publication of an *Atlas of Cancer Mortality for U.S. Counties: 1950-1969* has pinpointed geographic concentrations of cancer throughout the country.

- A cancer control prevention project for workers in Tyler, Texas, exposed to asbestos and another one for workers in Louisville, Kentucky, exposed to vinyl chloride, provide medical surveillance and health education to the workers and their families to assure early detection of precancerous lesions and early cancer. Through programs such as these, models will be developed for monitoring high risk workers exposed to carcinogens and for identifying procedures that will provide early warning of an impending malignancy.

- A statistical association was established between the amount of beef consumed in the diet and an increased occurrence of colon cancer. This information was obtained in a study of colon cancer among Hawaiian residents of Japanese descent. The risk of colon cancer for persons who no longer ate Japanese-style meals but had adopted Western-style meals was about twice that of persons whose diet had remained relatively unchanged. The findings in this study are not considered sufficient to label beef consumption as cancer causing but they assist in the planning of research in different population groups on the complex sequence of events leading to colon cancer.

- The new SEER Program (Surveillance, Epidemiology, and End Results Reporting) is monitoring the trends in cancer incidence, changes in diagnostic and treatment priorities, and associated survival rates of cancer patients.

- A new report has been published on trends in survival rates of patients with cancer. One-year survival results for patients with diagnoses made during 1970-71 suggests that improvement in the five-year survival observed during the 1960s for many forms of cancer will be sustained. Continued reporting of survival for patients treated in the 1970s is expected to demonstrate that recently introduced therapies have been increasingly effective.

- The Cancer Control Program is supporting projects in several communities to demonstrate cancer control techniques, from prevention through continuing care and rehabilitation, relating to a few types of cancer as selected by the communities. The goal is to determine the impact of coordinated cancer control efforts on the cancer problem in those communities.

- The Cancer Control Program is supporting the training of health professional groups to assist in continuing care and rehabilitation of cancer patients. These groups include an estimated 3,600 physical and occupational therapists, rehabilitation teams, maxillofacial prosthodontists, enterostomal therapists, and nurse oncologists.

#### **Accomplishments in Basic Research for Further Benefit to People**

- Two studies specifically on the black population in the U.S. have been published. One study reported generally lower survival rates among black cancer

patients as compared with white patients in the study, even when the disease was diagnosed at a localized stage. The other study on the occurrence of cancer showed high rates for black males for all sites combined, and low rates for black females. These studies are an important step in the search to understand and improve our ability to control cancer in the black population.

- Publication of the data from the Third National Cancer Survey presents information on all cancers newly diagnosed during the three-year period 1969-1971 in seven metropolitan areas, two entire states, and Puerto Rico. Among the important findings were indications of a significant increase in cancer among U.S. black males, particularly cancer of the prostate, esophagus, and lung, and a trend toward a more uniform incidence across the country. It was also found that skin cancer occurs much more often than previously estimated.

- A Diet, Nutrition, and Cancer Program is developing projects to produce and disseminate information on nutrition for cancer patients and on the relationship between nutrition and cancer causation.

- Six organ-site programs are studying laboratory and clinical aspects of the most common cancers—breast, lung, large bowel, bladder, prostate, and pancreas. By coordinating research on detection, diagnosis, treatment, and prevention for these types of cancer, we hope to more quickly increase our ability to control the major cancer killers.

- New leads have emerged in the treatment of ovarian cancer, the fifth most common cancer killer of women, opening the way to combination of surgery and post-operative drug treatment as in breast cancer.

- In the continued search for new anticancer drugs, some 20 new agents were identified as having potential for further development in the past year.

- A purified form of CEA, a "marker" protein found in the blood and called carcinoembryonic antigen, appears to be very specific for detecting cancer of the large bowel. CEA is being evaluated as a diagnostic test in patients with symptoms of the disease and as a screening test in persons without symptoms.

- A virus from leukemic cells of a patient with acute myelogenous leukemia, a rare form of blood cancer occurring primarily in adults, has been isolated and found to be similar to the two viruses that cause cancer in non-human primates, the gibbon ape and woolly monkey. This finding does not indicate that leukemias, or other cancers, are contagious in man either by coughing, sneezing, or any other forms of contact with cancer patients. The isolation of the virus is scientifically important because it permits us to take the necessary further steps to identify the one or more factors that cause acute myelogenous leukemia.

- Evidence has been obtained to show that only a small part of the genetic material of a cancer virus controls tumor induction. This indicates that the chances are good for separating the cancer gene from

other genes of the virus. Isolation of the viral cancer gene would simplify efforts to understand the transformation of normal cells into tumor cells.

- A recent finding of potential importance for the prevention of cancers in man is the protection of laboratory animals against cancer, using vaccines prepared against viruses isolated from certain chemically induced tumors.

- Differences between the membranes of normal and malignant cells are under study because scientists believe that tumor-inducing activity of cells is determined by the cell surface properties.

## **REVISED GUIDELINES FOR CORE, EXPLORATORY GRANTS NOW AVAILABLE**

New guidelines for cancer center core and exploratory grants have finally been approved by NCI and are available to prospective applicants.

The revised guidelines are a refinement of existing procedure and involve no basic changes, according to Simeon Cantril, director of the Cancer Centers & Treatment Program in the Div. of Cancer Research Resources & Centers.

Institutions and investigators planning to submit applications prior to the next deadline, June 1, should obtain the new guidelines immediately. Write to Cantril, NCI, DCRRC, Westwood Bldg Room 826, Bethesda, Md. 20014.

Cantril said the revisions "were long overdue," the first changes in center grant guidelines since the familiar redbook appeared in June, 1973. Since then, NCI adopted the policy against umbrella grants, and the new guidelines reflect that change.

"Mostly, they explain in detail what we mean by various terms," Cantril said.

### **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. Some listings will show the phone number of the Contract Specialist, who will respond to questions about the RFP. Contract Sections for the Cause & Prevention and Biology & Diagnosis Divisions are located at: NCI, Landow Bldg. NIH, Bethesda, Md. 20014; for the Treatment and Control Divisions at NCI, Blair Bldg., 8300 Colesville Rd., Silver Spring, Md. 20910. All requests for copies of RFPs should cite the RFP number. The deadline date shown for each listing is the final day for receipt of the completed proposal unless otherwise indicated.*

### **RFP NO1-CP-67763-59**

**Title:** *Resource for microscopic and autoradiographic technology*

**Deadline:** *April 23*

NCI has a need for a resource which will provide preparation and examination of tissues for high resolution autoradiography and high resolution light and

electron microscopy. Proposers should not suggest specific research problems. During the course of NCI's collaborative research program, specific tasks will be identified for performance under this requirement. Each task will be a relatively short study of less than six months.

**RFP NO1-CP-65762-59**

**Title:** *In vitro cultivation of normal, prostatic epithelial cells*

**Deadline:** *April 23*

NCI has a requirement to develop techniques or procedures to culture primary cells from epithelial elements of human and rat ventral lobe prostate having as many normal biological characteristics as possible. Normal cells established in culture must ultimately be characterized to conform their being (a) normal, not BPH or carcinomatous, (b) of prostate origin, and (c) of epithelial region.

**RFP NO1-CP-65764-59**

**Title:** *Influence of repeated low dose irradiation on mammary gland carcinogenesis in estrogenized rats*

**Deadline:** *April 23*

The proposer is to define the operational variables which influence the synergism observed in animal models. Evidence has shown that in the use of rat strains a synergism exists with both x-ray or neutron irradiation and estrogen administration in the induction of mammary gland tumors. This evidence must be considered in view of mammographic exposure as well as incidental chest radiation during period of high estrogen levels, e.g., during replacement therapy or steroidal contraception. NCI is seeking proposals to address this problem within the limits of the RFP workscape.

**RFP NO1-CP-66765-59**

**Title:** *Glucuronidase, sulfatase and other deconjugating enzymes in the pancreas and its secretions*

**Deadline:** *April 23*

NCI has a requirement to study in vivo or in vitro the enzymatic potential of the pancreas and its secretions and other appropriate tissues for deconjugation of various chemical carcinogens in bile. Each of these two experimental approaches have their advantages and utilization of both concomitantly by the same or different institutions may be attempted. Proposers should assess various possible methodologies for research relevance and potential for meaningful results and subsequently provide a rationale upon which the

conceptual approach is based.

**Contract Specialist for the RFPs above:**

Harold Smith

Cause & Prevention

301-496-6361

**RFP CDC-99-OSH-118(6)**

**Title:** *Engineering plan for carcinogenic materials*

**Deadline:** *Approximately April 12*

The National Institute for Occupational Safety & Health is soliciting proposals from organizations interested in the development of an engineering control research and development plan for carcinogenic materials.

**Contracting Officer:**

L.A. Sanders

NIOSH-Room 1-58

5600 Fishers Lane

Rockville, Md. 20852

**CONTRACT AWARDS**

**Title:** Immunotherapy of accessible neoplasms and analysis of immune status in vivo

**Contractor:** State Univ. of New York, \$50,000.

**Title:** Immunotherapy: Mechanism of action of immunopotentiators

**Contractor:** Medical College of Virginia, \$76,451.

**Title:** Transfer factor and delayed hypersensitivity in the mouse

**Contractor:** Walter and Eliza Hall Institute of Medical Research, Victoria, Australia, \$42,335.

**Title:** Metabolism of antineoplastic agents

**Contractor:** Oregon State Univ., \$279,520.

**Title:** Development and implementation of at-home rehabilitation programs

**Contractor:** Cancer Center Inc., Cleveland, \$262,475.

**Title:** Studies of papoviruses of the SV40 polyoma group

**Contractor:** Johns Hopkins Univ., \$30,000.

**Title:** Oncogenic studies of RNA tumor viruses in experimental systems

**Contractor:** UCLA, \$35,560.

**Title:** Development and evaluation of cancer care coordinating team

**Contractor:** Queen's Medical Center, Honolulu, \$251,497.

**Title:** Facility for supplying immune related cell lines

**Contractor:** Salk Institute, \$72,042.

**Title:** The immunological stimulant properties of amphotericin B

**Contractor:** Jewish Hospital, St. Louis, \$60,000.

**The Cancer Letter**—Editor JERRY D. BOYD

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