THE CANCER LETTER

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ACCC ASKS MORE COMMUNITY REPRESENTATION, CLEAR SEPARATION FROM CENTERS IN NEW NCI DIVISION

The Assn. of Community Cancer Centers has called for increased representation by community professionals on NCI advisory groups and review committees—particularly on the advisory board of the proposed new Div. of Cancer Resources, Centers & Community Programs—and for a clear separation of the management and budget of the centers and community programs in that division.

In a "white paper" submitted to William Terry, acting director of the Div. of Cancer Control & Rehabilitation who heads a task force drafting organizational details of the new division, ACCC also offered several suggestions on qualifications of the new division director.

Noting that the "white paper" was prepared in response to NCI Director Arthur Upton's request for the association's views on commu-

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In Brief

DCCR ADVISORY COMMITTEE MEETING RESCHEDULED; DURANT TO HEAD COOPERATIVE GROUP CHAIRMEN

CANCER CONTROL and Rehabilitation Advisory Committee meeting, postponed twice because of uncertainties involved in the reorganization of DCCR, has been scheduled again, this time for July 30 . . . . **JOHN DURANT**, chairman of the Southeastern Cancer Study Group, made the mistake of not attending the recent meeting of the Cooperative Group Chairmen's Committee. In his absence, his colleagues elected him head of the committee for the next year, replacing Paul Carbone. . . . **SHELDON SAMUELS**, member of the National Cancer Advisory Board and director of Health, Safety & Environment for the AFL-CIO, responding to a comment that risk/benefit ratios must be considered in regulating carcinogens: "Risk/benefit ratio is the modern version of cannibalism". . . . **IRVING SELIKOFF**, also an NCAB member and director of the Environmental Sciences Laboratory at Mt. Sinai School of Medicine, to Eula Bingham, director of the Occupational Safety & Health Administration: "How about the 230 chemicals already identified as carcinogens?" (and which have not been subjected to regulations by OSHA or other agencies). . . . **HISTOPATHOLOGY** of head and neck tumors is the subject of a conference Sept. 15 in San Francisco, sponsored by the Northern California Cancer Program. Contact NCCP, Head & Neck Cancer Network, 14th Ave. and Lake St., San Francisco 94118. . . . **THIRD ANNUAL** Scripps Memorial Hospital Cancer Symposium Oct. 31-Nov. 2 in San Diego will include sessions on breast, CNS, and urologic cancer; updates on lung, GI and gynecological cancer and malignant melanoma and sarcomas; leukemia and lymphoma. Joseph Capozzi is program chairman. Contact Nomi Feldman, Cancer Symposium Coordinator, 2321 Moerena Blvd., San Diego 92110, phone 714-275-0650.

ACCC ASKS THAT CENTERS, COMMUNITY PROGRAMS NOT COMPETE WITH EACH OTHER

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nity involvement in NCI programs, the document says:

"The recent initiatives by Dr. Upton to reorganize NCI's cancer control and centers activities appear to hold promise in clarifying and emphasizing the role of the community and in clearly delineating the prevention efforts of the institute. With new leadership, ACCC believes the new Div. of Cancer Resources, Centers & Community Programs can make a significant impact on research and on the development and application of proven technology into widespread application.

"By coupling community programs with those of the comprehensive and specialized centers, NCI establishes a broad national base of resources for its efforts. ACCC sees many common goals between these efforts. We would like to see more community and center programs in cooperative efforts:

"—Centers desiring to pursue clinical research studies and outreach programs may find willing partners in the community.

"—Communities developing 'comprehensive' programs may look to centers as models, or potential resources.

"Both have much to offer each other. And, where comprehensive and specialized centers cannot reach all parts of the nation or all cancer patients, a well developed community effort can ensure that no patient is without high quality management, no matter where he or she lives. As equal partners, both have much to offer each other.

"The community is clearly a national resource. It is one that will require special attention on a continuing basis. With these thoughts in mind, ACCC offers the following suggestions:

"1. Community input into many program areas of NCI is still quite limited. There is much to be said for the value to NCI of practicing physicians in evaluating programs and initiatives which they will eventually be called upon to understand and perhaps apply. At the same time, a broader knowledge of NCI and NCP efforts will assist community participants in exercising their role as partners in the National Cancer Program with the best possible informed judgments. We would urge an early and substantive attempt to increase the number of well qualified community professionals on advisory and review committees in the Institute which might benefit from their input.

"2. The community needs a continuous mechanism by which it can input to the division on its missions, goals and directions. Much has changed in recent years (hospice, pain management, regional research and growth in the community as a resource, among others). Rapid change will continue in the future. Thus, the Advisory Board that will be established for the new division should have significant participation from community professionals. In addition, community physicians might also assist the division by serving as one year "experts" to the program.

"3. With regard to the new division, we offer some initial suggestions:

"• The new division director. Clearly, both centers and the community will rise or fall on the choice of new program management. We would suggest that among the qualities the director should have are:

"—A sensitivity to the needs of the community, based upon a personal knowledge and exposure to the community environment.

"—A knowledge of how the community can be developed as a resource separately and in concert with other NCI programs.

"—Strong scientific credentials with a broad view of the issues and problems that confront the development of innovative solutions in research and its applications.

"—A broad understanding of the problems and opportunities we all face in developing programs that will be practical and functional delivering high quality cancer care to patients wherever they reside.

"—An understanding of the failures and successes of prior efforts in cancer control and community programs and how both results can benefit formulation of more effective future programs.

"• The status of community programs within the new structure. Within the new Div. of Cancer Resources, Centers & Community Programs, we would hope that the remaining $46 million in DCCR budget would maintain its integrity with separate and appropriate peer review and non-competitive funding, apart from the centers' administrative and research programs. Thus, we would suggest that community programs be given branch level status and that the budget and review be under the leadership of an associate director. Clearly, the choice of this individual would be as important to the future of the effort as that of the division director.

"Quality community cancer care is a natural outgrowth of congressional action in 1971. In that year, the National Cancer Act emphasized the need for special attention to the 110 diseases we commonly call cancer and established a broad research, education and cancer control effort to impact this dread disease. The need for this emphasis has not changed radically subsequent to the passage of the Act. Although research has been very fruitful and we are beginning to see results in reduced mortality, the overall incidence has increased in large part to rising rates of lung cancer. In an average lifetime, if no new advances are made, 53 million Americans or one out of every four will get the disease. Currently, 85-90% of all cancer patients are treated in communities as close as possible to their homes and families. The other

10-15% are treated in university centers where more advanced cancer research is underway.

"In formalizing the National Cancer Act of 1971 and 1974, Congress wisely emphasized demonstration of new treatment techniques in the community. At the same time it urged the education of a large number of cancer specialists. Recent government studies on the number of medical oncologists suggest that a gap in the absolute number needed may be closed by 1985. These specialists, graduates of university based oncology programs, have moved into many communities and have served as 'change agents' in bringing more sophisticated cancer care to our hometowns. It was men and women like these that initially formed the Assn. of Community Cancer Centers in 1974. Their purpose was simply to improve care at the community level in order to make the best care available to their patients. They saw no reason that the same types of programs and resources available to their patients in universities could not exist in communities.

"Congress and the NCI leadership established a separate NCI division to support demonstration and information projects. This move was opposed by some members of the biomedical research community as a loss of dollars for research purposes. To protect this funding, Congress made the budget a separate line item.

"Recently, this effort has begun to show the value of community cancer programs which speed the development and application of new knowledge through participation by local providers interested in cancer care. Indeed, members of both the university and practicing cancer communities have applauded these recent moves to make non-academic oncology specialists an integral part of the National Cancer Program.

"In actuality, the cancer control effort and the community's own efforts to develop high quality cancer programs have created a base which will support clinical research in the future. For example, as more attention is directed toward adjuvant chemotherapy studies with earlier stage disease, the health care providers now in community cancer programs become increasingly important. It is they who see patients with early stage disease and can provide the patient base which university centers cannot provide for the large studies of the future. Thus, the seeds of the congressional decision to educate more oncologists are bearing fruit for today's patients, their communities, and the National Cancer Program's research efforts. Much progress has been made in establishing full spectrum community cancer programs (mostly without federal support). Its role in insuring quality patient care for the 85% of patients treated in a local setting is well established. The potential of the community to contribute to the National Cancer effort is just beginning to emerge. . . .

"The vast majority of cancer patients are diagnosed and receive care in the community setting. As a result of Congressional action, trained oncology specialists have moved into our nation's communities and are beginning to systematically develop community programs and resources which will help guarantee our nation's cancer patients the highest quality of cancer care no matter where they reside. This effort has also created a new resource for the National Cancer Program, a new partner in this important crusade.

"ACCC believes that recent NCI reorganization efforts can help strengthen community programs and the institute's resource base. At this juncture, a reappraisal of future directions based upon many recent changes in the cancer effort appears to be in order. ACCC would hope to play a major role in this reappraisal. Policies established within the new division will play a key role in NCI's ability to carry out its congressional mandates. . . .

"ACCC applauds Dr. Upton for recognizing the value of community cancer care as a resource for the nation. We offer these suggestions and stand ready to discuss these and any alternatives which the institute suggests. We would be most pleased to assist NCI, its director, the task force or the interim director in any way possible," the paper concluded.

PEPPER COMMITTEE, HEARING PROGRESS REPORT, MAY BE IMPORTANT NEW ALLY

"Frontiers in Cancer Research," Chairman Claude Pepper's title of a three-day hearing before his House Select Committee on Aging, produced an all star lineup of witnesses who described the enormous progress made in cancer research and the opportunities and problems investigators are facing.

One possible result of the hearing: powerful support from the 45 member committee on Cancer Program legislation and appropriations.

Pepper asked a number of witnesses how much additional money they felt NCI could use effectively, above the current budget. The lowest estimate was 25% and they ranged up to 40%.

"We'll attempt to get some additional money when the Labor-HEW bill comes to the floor," Pepper said. ***The Cancer Letter*** learned later that Pepper intended to submit an amendment adding $20 million to the $961 million the Appropriations Committee recommended for NCI for the 1980 fiscal year.

Gordon Zubrod, director of the Florida Comprehensive Cancer Center, pointed out that the Appropriations Committee's plan to transfer $17 million from cancer control and construction "will wreck much of this carefully developed apparatus"—the proposed reorganization which will put centers and control and education programs into a single division, which Zubrod said is necessary to develop linkages between community and regional cancer centers.

"It is devastating to try to support new opportunities by redeploying funds—devastating to research

and to the careers of the people involved," Zubrod said.

Pepper expressed annoyance at the reprogramming proposal, which Congressman David Obey instigated to switch $17 million to the National Toxicology Program. "We'll take care of that on the floor," he said.

NCI Director Arthur Upton and Div. of Cancer Treatment Director Vincent DeVita led off the parade of witnesses.

"The research effort directed to the care of the cancer patient consumes roughly one-third of the NCI budget, or nearly $300 million annually," Upton said. "The program involves the efforts of thousands of investigators in hundreds of institutions throughout the country and overseas. It is a highly integrated program, involving a wide spectrum of basic and clinical sciences. The planning and administration of the program reflect the advice and participation of the scientific community, the health professions, and the public at various levels."

DeVita reviewed the history of treatment research and described new initiatives with radiosensitizers, neutron radiation, hyperthermia, and the biological modifiers program.

Marvin Rich, executive vice president of the Michigan Cancer Foundation, noted that "this nation's battle against cancer has in the past been likened to a war—a war against an enemy of a hundred faces and a hundred ways of wreaking its havoc on a community. Some object to this analogy, but is it not a war?

"Let us consider a more conventional enemy, a military force massed on our borders, and let us imagine what our nation's response would be if every day we listened to the casualty reports and heard that this enemy was carrying off more than a thousand of our citizens every 24 hours—men, women and children alike—and maiming and disfiguring thousands more.

"Could we tolerate these losses? Would we not mobilize our whole arsenal of democracy to seek out and destroy these enemy bands, and make our streets safe once again for our citizens? And I would ask—what limit would we put on our defense expenditures for this campaign? I would guess no limit at all, save the totality of our national will and purpose and purse," Rich said.

Pepper, whose wife recently died of cancer, agreed. "If there were an enemy at our borders killing a thousand of our citizens a day, any member of Congress who would say that we couldn't afford to spend more to defeat that enemy would be hooted down," Pepper said.

Reflecting the intense congressional interest in interferon which had developed in recent months, Pepper's committee heard from three witnesses who are conducting research with the substance. Mathilde Krim, Sloan-Kettering, explained the difficulties in acquiring interferon in sufficient quantities for clinical trials and noted that basic research is required to determine the precise chemical structure of human interferon molecules. "When at hand, such knowledge will make it possible either chemically to synthesize human interferons, which could then be made in unlimited amounts, or to use recombinant DNA technology to insert a gene coding for human interferon in a bacterium or another simple cell, such as can be grown rapidly and inexpensively on a truly industrial scale. Interferon could then be produced very much as penicillin is today, also in virtually unlimited amounts," Krim said.

"When one of these, or both, 'second generation' production methods will be achieved, the cost of interferon production will go down to an estimated one or two cents per daily anticancer dose, and it will become available to all those who need it.

"I want to comment on how we foresee, today, interferon's place in the medicine of tomorrow. We believe that as important as it may become, it is going to be one among many other biologicals used, such as thymosin, lymphokines, etc. We do not think that, in the treatment of cancer, interferon will be a panacea, the cure all. Rather, it is likely to be most useful in conjunction with other treatments, such as surgery, chemotherapy and radiation therapy, which are likely to remain needed to reduce the size of primary tumors and of large metastases. Interferon and other biologicals will importantly supplement these forms of treatment however, in that they may effectively eliminate the residual cells we believe responsible for the tumor recurrences we now find very difficult to prevent. However, even in this adjuvant role, interferon is likely to have life saving potential," Krim concluded.

Jordan Gutterman, M.D. Anderson, referred to a number of clinical studies with interferon.

"During the last 16 months we have been testing leucocyte interferon in 38 patients with advanced cancer. We have treated patients with breast cancer, malignant lymphoma, and multiple myeloma. We have achieved regression of tumors, that is partial or complete remissions in 40-60% of patients with these three diseases. This has been particularly gratifying since we have achieved these responses with little or no toxicity to the patient.

"Dr. Norwood Hill at the Wadley Institute in Dallas has produced his own leucocyte interferon to treat five young children with acute leukemia. Temporary remissions have been achieved in three patients. Dr. Habif at Columbia has achieved remissions in one of two breast cancer patients. Injection of interferon daily into tumor has produced regression in three of three malignant melanoma patients (Dr. Carter at Roswell Park) and three of four patients with breast cancer (Habif).

"These results led the American Cancer Society to appropriate $2 million to study interferon in patients with breast cancer, multiple myeloma, malignant

lymphoma, and malignant melanoma. However, this money will permit the treatment of only 150 patients for one to three months each. We have no additional funding to maintain treatment for those who respond. We also must begin evaluation of the other major forms of cancer such as the three types of lung cancer, childhood cancers, and soforth. We also need money to begin controlled trials to determine if survival can be prolonged in those diseases in which evidence for anticancer activity is already present. We urgently need an appropriation of $36 million to develop production of the three major forms of interferon for cancer. We also need $14 million to develop interferon for viral infections. Currently, the cost per daily injection ranges from $150-$450 per day, depending upon the dose used. However, as most patients on interferon do not need hospitalization, the hospital costs are minimal compared with that required for chemotherapy.

"Interferon opens up a new form of cancer treatment which is nontoxic. There is no nausea, no vomiting, no diarrhea, or the other side effects of chemotherapy. In addition, this material prevents viral infections in our patients. This is crucial since the majority of cancer patients die of infections, many of which are viral. As an antiviral drug only it would be important to develop for cancer patients. We also need to see if interferon could prevent cancer in people at high risk," Gutterman said.

Hans Strander, Karolinska Institute, said, "It has been shown in the studies going on at Radiumhemmet in collaboration with other departments of the Karolinska Hospital in Stockholm and other Swedish hospitals that interferon exerts a beneficial effect on patients suffering from a benign tumor, juvenile laryngeal papilloma, and a malignant tumor, multiple myeloma. Also the ongoing study on osteosarcoma has so far given rise to promising results although it is possible in that disease that we could achieve better results by intensifying the treatment. There have now been reports in the literature on an antitumor effect of interferon on:

"a) Benign tumors–juvenile laryngeal papilloma, basal cell carcinoma, bladder papilloma and possibly condyloma; and

"b) Malignant tumors–osteosarcoma, Hodgkin's lymphoma, cervical carcinoma, multiple myeloma and acute lymphocytic leukemia.

"Also, other diseases have responded (unpublished as yet) as will be revealed during these hearings.

"Interferon is part of our natural defense system. It can be obtained in mass quantities, concentrated and purified. It can be given to patients without causing serious side effects. It has been shown that interferon therapy can cause regression of human tumors, both malignant and benign.

"It is my strong feeling that this field should be given financial support for escalation. Much work has to be done on the production of interferon, on its purification, and on the elucidation of its structure, on laboratory effects and effects on animal disease. Extended clinical trials have to be done in order to expand a field which shows great promise for the therapy of malignant disease in man. The treatment of more patients is impossible without an extensive effort to produce larger quantities of human interferon," Strander said.

Enrico Mihich, Roswell Park, explained the biological response modifiers program, which includes R&D on interferon.

"It is very important to invest additional efforts and support into the development of patient response modifier agents which would augment the capacity of the patient to react against its own tumor," Mihich said. "In most cases these agents would be able to cooperate with drugs having toxic anticancer effects by eliminating through the patient's own mechanisms of defense residual tumor cells surviving after cancer reductive treatments. By virtue of the fact that their action would be mediated through normal defense mechanisms of the patient, these agents are less likely to have direct undesirable toxicity to normal tissues, even though lack of unwanted toxicities cannot be excluded a priori.

"Based on the basic knowledge on tumor-host relationships gained over a period of almost 15 years, serious consideration is being given to include in the research and development program on BRM the following groups of agents of potential clinical importance: 1) The interferons which are agents made in white blood cells and in other normal cells in response to stimuli by viruses and certain chemicals and which exert both antiviral and anticancer effects; 2) The thymic factors, which are agents produced in the thymus effecting the functional differentiation and maturation of thymus-derived white cells which are essential in mounting an anticancer immune response. These responses are reduced with aging. 3) The immunoaugmenting agents of natural or chemical derivation, such as bacterial products, which are capable of stimulating the defenses of the patient particularly through activation of macrophages, namely of white blood cells that kill foreign cells; 4) The tumor antigens, namely substances on cancer cell surface which are recognized as foreign and stimulate the responses of the patient. These tumor antigens, modified or not, would be capable of eliciting a specific immune response against the cancer; 5) The lymphokines and other soluble factors from white blood cells which aid interactions among the different cells that mount anticancer responses. These could selectively increase anticancer defenses; 6) The retinoids and other future "chemopreventive" agents that may retard the onset of cancer or the recurrence of cancer after presumed therapeutic eradication; 7) The chemical agents capable of causing increased anticancer defense reactions through selective

inhibition of normal suppressive regulatory mechanisms, and 8) cancer cell differentiation factors which may help reverting cancer cells to normalcy through a process of maturation," Mihich said.

Sydney Salmon, Univ. of Arizona, made a pitch for congressional support of a "major national research effort targeted toward bringing in vitro testing into routine use for patient care and new drug development."

Salmon explained the work of his research team in developing in vitro tumor cell culture and sensitivity tests for anticancer drugs.

"Thus far, our major application of this assay has been to aid in selection of anticancer drugs, particularly for patients in relapse from standard treatment," Salmon said. "This is accomplished by exposing the portion of the patient's tumor biopsy to various drugs in test tubes prior to culture. As of this month, we have made correlations between this laboratory test for drug sensitivity and the results of 148 individual clinical trials carried out in a series of patients on whom the same drugs were tested in the laboratory.

"The results on these advanced cancer patients can be summarized as follows: The test has had 96% accuracy in predicting which drugs the cancer cells would be resistant to when they received treatment. This type of predictive information could spare patients needless toxicity and expense resulting from drugs which would be useless in that specific patient's treatment. While the population of patients whom we tested was mostly in relapse from standard treatments, we were successful in identifying drugs to which the patient's cancer would be sensitive 62% of the time. Sensitivity in the patient is measured in terms of substantial tumor shrinkage or disappearance of all evidence of gross cancer. On a chance basis (from what we call 'clinical judgment') we would anticipate only 5-10% success in patients with ovarian cancer or melanoma who had relapsed from prior treatment, so that 62% predictive accuracy is quite promising and likely would be even better in previously untreated patients. . . .

"I want to caution that this assay is not yet ready for application in every hospital; however, I believe the time is now ripe to initiate a large scale clinical research program in this area involving at least 25-30 of our nation's cancer centers. This would include four objectives—large scale clinical validation, simplifying and automating the test, testing the feasibility of using this assay for new drug screening, and augmenting studies of the biology of human tumor stem cells."

Salmon noted that the DCT Board of Scientific Counselors had unanimously voted that a major effort should be initiated to implement testing this assay for new drug development and screening. "Unfortunately, the existing DCT budget is grossly inadequate to launch the program that would seem reasonable. My overall projection is that $50 million would be spent wisely in human tumor stem cell research over the next three years. I would recommend that Congress add this amount to the proposed NCI budget and target it to this specific area which I believe should have a high priority because of its high likelihood of success in important practical terms for our nation's cancer patients and for solving the cancer problem. Such funds are not currently available for a program of this magnitude which I firmly believe can be fully justified on the basis of the findings which I report to you today."

Emil Freireich, M.D. Anderson, discussed progress in treating adult acute leukemia and how clinical research with that disease has developed knowledge useful in research on other forms of cancer.

"Perhaps the most important property in adult acute leukemia is the susceptibility to fundamental understanding of the malignant disease process that exists in this disease," Freireich said. "Because the cancer arises in an organ which can be regularly sampled, that is, the bone marrow and the blood, it has been possible to manipulate both the tumor and normal cells in a variety of complex and ingenious ways. Leukemic cells have been grown in short term culture in vitro and it is possible to then evaluate those materials which modulate or regulate both the proliferation and the differentiation of normal cells, hemapoeitic stem cells and leukemic cells.

"Moreover, long term cultures of leukemic cells of normal cells have been established permitting investigation not only in the differentiation processes, but the products of the cells for early detection and for therapeutic targets in later dates. The enormously improved fundamental knowledge of the behavior of individual leukemic cells is one of the most important reasons for increased attention to this disease. Because this is "liquid" as a tumor, it allows the study of the tumor as individual cells and an understanding of the interaction of these cells with other cells in the host. This last property may prove to be the most important of the properties in adult acute leukemia.

"The delivery of the best treatment currently available for adult acute leukemia is certainly a justifiable objective. However, in the clinical research setting, it has been possible to demonstrate not only that these research findings benefit the patients participating in those programs, but also that the knowledge derived from this rapidly improving treatment can have prompt and effective application to the cancer problem in general. I would strongly support the position that increased funding for the creation of centers to investigate adult acute leukemia in major programs throughout the country would be an important contribution to the continuing rapid progress in the control of cancer. The treatment strategy has already demonstrated a limited but sub-

stantial success. There is every reason to believe that it will continue to be an important area for both investigation and progress," Freireich said.

Solomon Garb, AMC Cancer Research Center, defended the Cancer Program and described several areas of progress.

"It is now clear that this program is succeeding," Garb said. "The tide is turning. The main question is how rapidly we will move ahead. Those of use who care for patients will do our utmost, whether the tools given to us be old or improved. We ask that Congress help the Div. of Cancer Treatment of NCI develop for our patients better, more effective and less toxic treatments.

"There have been criticisms that the Cancer Program puts too much emphasis on treatment. Mr. Chairman, NCI only puts 23% of its budget into research to find better treatments! Who thinks that is too much?

"Mr. Chairman, I have several requests to make of this committee.

"First, and most important, please don't allow any bill to pass that would take away from NCI its budgeting and program independence.

"Second, please see that an adequate and reasonable proportion of NCI funds is allocated to find better treatments for patients who have cancer now. If necessary, please increase the total NCI budget.

"Third, please investigate the delays that keep possibly lifesaving medicines from our patients.

"Finally, Mr. Chairman, please hold hearings every year. We recognize that the cancer program costs a lot of money and we want the American people to know that this money is well spent," Garb concluded.

Bernard Fisher, Univ. of Pittsburgh, described the various clinical trials in breast cancer conducted by the National Surgical Adjuvant Breast Project which have had such profound impact on treatment of that disease.

"The early findings from the first protocol indicating that L-PAM was effective—particularly in premenopausal women—was a milestone in that it provided the impetus to the proliferation of adjuvant therapy trials in this country and around the world utilizing a great variety of drug combinations and therapeutic strategies," Fisher said. "No longer is there a question as to whether adjuvant chemotherapy should be employed. The question is what regimen is apt to be best for which patient.

"Our own studies are now demonstrating that the two-drug combination [L-PAM and 5-FU] is having a beneficial effect on postmenopausal women. When considered in toto, findings from all of our protocols indicate an advantage for patients who have been treated with adjuvant chemotherapy. . . .

"The NSABP is at present carrying out two additional protocols. One is directed toward determining whether the anti-estrogen tamoxifen, when used in conjunction with chemotherapy, provides an advantage over the use of chemotherapy alone. Over 1,200 women are participating in that study. Another trial is evaluating the worth of the non-specific immunostimulating agent C. parvum. It is too soon to have meaningful results from either study.

"It may be of interest to you to know that over 5,000 women have been entered into our ongoing trials and they will be followed as long as they are alive and there are funds available for that purpose. From those patients there have come to our data center more than one million pieces of information providing an unrivaled opportunity to study this disease. Of particular interest to this committee in that regard is the information accumulating to indicate that breast cancer in older women may be quite different from that occurring in those who are in younger age groups. Those differences relate both to the tumor, e.g., its pathology and its hormone receptor status, and to the host, e.g., hormonal production, and immunological competence. Consequently there are differences in the outcome of patients with breast cancer which are related to their age. You may also be interested to know that the federal funding to the NSABP during the past eight and one-third years for accomplishment of these landmark studies as well as a large number of others which time prevents mentioning was only $7,141,750 —a cost effective program to say the least," Fisher said.

ADVISORY GROUP, OTHER CANCER MEETINGS FOR JULY, AUGUST

Toxicology Guidelines Subcommittee of the FDA Oncologic Drugs Advisory Committee—July 9, 9 a.m., Parklawn Bldg Rm A, open.

Clinical Trials Committee—July 10, NIH Bldg 31 Rm 4, open 8:30—9 a.m.

Cancer Special Programs Advisory Committee—July 11-12, NIH Bldg 31 Rm 9, open July 11, 9—10 a.m.

Century of Mammalian Genetics & Cancer—1929-2029—July 17-20, Jackson Laboratory 50th anniversary symposium, Bar Harbor, Maine.

Pancreatic Cancer Review Committee—July 19, Tidewater Place, New Orleans, open 8:30—10 a.m.

Cancer Center Support Review Committee—July 19-20, NIH Bldg 31 Rm 6, open July 19 8:30—10 a.m.

Biometry & Epidemiology Review Committee—July 24, Landow Rm A, open 8:30—9 a.m.

Meeting on Guidelines for Lab Use of Chemicals Posing a Potential Occupational Carcinogenic Risk— July 24, NIH Masur Auditorium, 9 a.m.—5 p.m., open.

President's Cancer Panel—July 25, NIH Bldg 31 Rm 7, 9:30 a.m., open.

Cancer Clinical Research Guidelines Subcommittee of the FDA Oncologic Drugs Advisory Committee—July 27, Parklawn Bldg Rm B, 9 a.m., open.

Cancer Control & Rehabilitation Advisory Committee— July 30, NIH Bldg 31 Rm 7, 9 a.m., open.

Clearinghouse on Environmental Carcinogens Chemical Selection Subgroup—July 30, NIH Bldg 31 Rm 8, 9 a.m., open.]

National Cancer Advisory Board Subcommittee on NCAB Organization —July 31, NIH Bldg 31 Rm 7, 9 a.m., open.

Animal Quality in Biomedical Research—Aug. 20-24, Utrecht, The Netherlands, General Assembly & Symposium on Laboratory Animals.

Other meetings in August will appear in the July 27 issue of ***The Cancer Letter****, if any more are scheduled.*

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. Some listings will show the phone number of the Contract Specialist, who will respond to questions. Listings identify the respective sections of the Research Contracts Branch which are issuing the RFPs. Address requests to the contract officer or specialist named, NCI Research Contracts Branch, the appropriate section, as follows:
Biology & Diagnosis Section and Viral Oncology & Field Studies Section—Landow Building, Bethesda, Md. 20014; Control & Rehabilitation Section, Carcinogenesis Section, Treatment Section, Office of the Director Section—Blair Building, Silver Spring, Md. 20910.
Deadline date shown for each listing is the final day for receipt of the completed proposal unless otherwise indicated.

RFP N01-CP-85630-72

Title: *Data bank on environmental agents*
Deadline: *July 30*

NCI is seeking two year proposals to develop information resources to handle a large volume of data and information encompassing several scientific disciplines; i.e. carcinogenesis, mutagenesis and toxicological research. Proposals will include searching the proper sources to supply the data and information required, for example: 1) supplying bibliographies with or without a screen for relevance (formats to be specified), and 2) supplying critical analysis in defined areas of carcinogenesis, mutagenesis and toxicology with varying degrees of contractor participation.

Involvement will range from scanning data and information and supplying reports on information prepared by established guidelines to the actual involvement in manuscript preparation (i.e., analysis, writing and editing) and possibly printing and distribution. Although the actual specific task requirements are not presently known, it is intended that basic ordering agreements will be awarded to those proposers who are capable of performing the tasks envisaged in the RFP. As the specific requirements develop, the tasks will be competed only among those who are awarded a basic ordering agreement.

Contract Specialist: Jackie Matthews
Carcinogenesis
301-427-8771

NCI CONTRACT AWARDS

Title: Conduct a combined study of the possible association of dietary factors and noncontraceptive exogenous estrogens with breast cancer, continuation
Contractor: Univ. of Hawaii, $84,488.

Title: FDA/NCI special study of the role of saccharin in bladder cancer in the general population, continuation
Contractor: Louisiana State Univ. Medical Center, $65,233.

Title: Support for coordinated processing of fresh viable human specimen materials, continuation
Contractor: EG&G/Mason Research Institute, $37,394.

Title: Holding facility for small laboratory animals, continuation
Contractor: Litton Bionetics, $99,465.

Title: Effect of environmental factors on endog. MMTV expression, continuation
Contractor: Michigan Cancer Foundation, $25,000.

Title: Immune assays for enzymes and isozymes in cancer
Contractor: Johns Hopkins Univ., $135,712.

Title: Biochemical mechanism of endocrine induced breast regression, continuation
Contractor: Univ. of Texas Medical School at San Antonio, $352,500.

Title: Radioimmunoassay of immunoglobulin molecules, continuation
Contractor: Meloy Laboratories, $130,287.

Title: Studies and investigations on therapy of patients with stage II and stage III carcinoma of the breast, continuation
Contractors: UCLA, $75,000, and Evanston Hospital, $79,000.

Title: Specific and nonspecific immunotherapy as an adjunct to chemotherapy in skeletal and soft tissue sarcomas, continuation
Contractor: UCLA, $100,000.

Title: Data management support to selected treatment and rehabilitation programs, modification
Contractor: Small Business Administration, $32,955.

Title: Clinical application of assays for tumor associated antigens
Contractor: Northwestern Univ., $70,611.

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