THE CANCER LETTER

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BYPASS BUDGET GOING TO WHITE HOUSE NEXT MONTH WILL SEEK OPTIMAL FUNDING FOR CANCER PROGRAM

NCI's appropriation for the 1981 fiscal year, which starts Oct. 1, is far from settled, but the first step in the battle with the Carter Administration over the 1982 fiscal year funding will be taken early next month when the institute's "bypass" budget is presented to the White House. NCI is asking for $1.92 billion.

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In Brief

HENDERSON CHAIRS REORGANIZED NCAB CENTERS SUBCOMMITTEE; CORE GRANT GUIDELINES ON AGENDA

CANCER CENTER core grant guidelines will be thrashed over again at a day and a half meeting of the newly reorganized National Cancer Advisory Board Subcommittee on Centers & Construction Sept. 25-26. Maureen Henderson, Univ. of Washington, is chairman of the subcommittee, formed by the merger of the centers and construction subcommittees. The meeting will start at 8 p.m. Sept. 25, at the Bethesda Marriott, with a review of the Centers Program and discussion of problems in relation to the need for guideline revisions. Center directors will participate in the discussion. . . . **HENDERSON IS FIRST** chairman of the Centers Subcommittee who is not director of a comprehensive cancer center since the NCAB was established by the National Cancer Act. She is not affiliated with the Fred Hutchinson Comprehensive Cancer Center in Seattle. Previous chairmen were Harold Rusch, Denman Hammond and William Shingleton. Other subcommittee chairmen are Frederick Seitz, Planning & Budget; William Powers, Organ Sites; Gerald Wogan, Environmental Carcinogenesis; and Harold Amos, Board Activities & Agenda and Special Actions. . . . **JOHN HELLER**, director of NCI from 1948-1960 and since 1965 a consultant at NCI on international programs, has retired. From 1960-64, Heller was president and chief executive officer of Memorial Sloan-Kettering Cancer Center. . . . **EPA HAS** extended the comment period to the November meeting of its Science Advisory Board Subcommittee on Airborne Carcinogens on the proposed procedures for identifying, assessing and regulating carcinogens emitted into the air from stationary sources. The proposal was published in the *Federal Register* Oct. 10, 1979. Address comments to Central Docket Section, Gallery 3, West Tower, Waterside Mall, 401 M St. S.W., Washington, D.C. 20460, Attn: OAQPS 79-14. The specific date for the November meeting has not been determined. . . . **PAIN MANAGEMENT** in Cancer Patients is the topic of the Mid-Atlantic Regional Conference at the Univ. of Delaware Nov. 8. Contact WMC Cancer Program, 1202 Jefferson St., Wilmington, Dela. 19801, phone 302-428-2600.

NARRATIVE TELLS HOW OPTIMAL FUNDING WOULD ENHANCE THE CANCER PROGRAM

(Continued from page 1)

The bypass budget authority, granted to NCI by the National Cancer Act, permits the institute to develop a budget independently of NIH and HHS and submit it directly to the President without intervention by NIH or department authorities. The 1982 bypass budget was presented last spring to the National Cancer Advisory Board (*The Cancer Letter*, May 23).

Although the White House Office of Management & Budget has always ignored the bypass budget and undoubtedly will do so again when making up the overall budget the President will submit to Congress in January, that unique authority has proven invaluable to the Cancer Program. It permits NCI to present publicly a rational justification for an optimal program. It offers the one opportunity for the NCI director and his staff to argue in public for an appropriation substantially higher than the amount the President will request.

The justification narrative developed by NCI offers a succinct look at the Cancer Program as it presently exists and as it would be with optimal funding. The narrative follows in full:

The 1982 preliminary budget for NCI of $1.92 billion and 2,238 positions represents an increase of 173 positions and $184.2 million over the 1981 estimate of 2,065 positions and $1.007 billion (requested by the President). The justification of the increases over the 1981 current estimate is presented below for the research, resource development and cancer control programs of NCI.

I. Research

A. Epidemiology – Increase of 35 positions and $10,723,000 over the 1981 estimate of 166 positions and $43,974,000.

Occupational studies, with selected cohort studies that assess the carcinogenic hazards implicated by the bioassay program and by clinical or epidemiologic observations, will be expanded. Efforts to identify the effects of low-level radiation, including joint projects with the Radiation Effects Research Foundation in Japan, will be increased. Patients who have participated in NCI sponsored clinical chemotherapy trials will continue to be monitored for secondary cancers to document the actual carcinogenic potential of such drugs. The carcinogenic effects of environmental pollutants, such as agricultural chemicals, and air and water contaminants, will be monitored.

Methods to improve the design and evaluation of epidemiologic studies aimed at screening, i.e., the early detection of cancer in asymptomatic populations, will be developed. Multidisciplinary projects combining epidemiologic and experimental approaches to evaluate candidate viruses, dietary and metabolic influences, genetic susceptibility, and other causative factors that continue to elude detection by traditional epidemiologic methods will be developed.

The collection and analysis of cancer incidence data from populations not in the SEER program will be coordinated. Epidemiologic studies in the role of nutrition in the cause or prevention of cancer will be developed.

B. Chemical and Physical Carcinogenesis – Increase of 28 positions and $32,950,000 over the 1981 estimate of 331 positions and $162,308,000.

More research is needed to define the action of chemical carcinogens at the cellular and molecular levels and in intact tissues, organs, and whole animals. This information will provide a basis for evaluations of hazards which may be associated with human exposure to environmental carcinogens. Emphasis on a coordinated effort will involve: (1) research on human cells, tissues, and organ cultures, in vitro; (2) studies on alterations in selected large molecules as a result of interactions with carcinogens; (3) development of analytic methods for determination of carcinogens and their metabolites in the body; and (4) the further definition in different species of dose-response relationships.

Model systems for the study of chemical carcinogenesis at the level of target epithelial cells and tissues provide an established base that will be used to assess: (1) mechanisms of carcinogenesis in human cells; (2) host factors that influence susceptibility to carcinogenic agents; (3) quantitative studies of carcinogenic/target tissue interactions for extrapolation from experimental animals to human cancer; and (4) methods to inhibit the multistage processes of neoplastic transformation and progression.

An active program is currently under way to define factors that modulate the transformation process leading to malignancy. A cellular approach will be used to determine the mechanisms of action of factors that increase or inhibit the transformation process.

Research will be supported on DNA repair of carcinogen-induced cell damage, transformation of human cells in culture, and application of recombinant DNA monoclonal antibody formation in the study of biochemical individuality in human carcinogenesis. These studies may also lead to rapid assays for carcinogenic chemicals and identification of subpopulations of humans of high susceptibility to chemical carcinogens.

Little is known about the number of genes which may be involved in the chemical transformation of cells to tumor cells, their gene products and their function in producing the transformed state. Genes responsible for virus-induced carcinogenesis have been isolated and studied. Comparative studies in viral and chemical carcinogenesis will be expanded, resulting in a better understanding of carcinogenesis at the molecular and cellular level.

Substances which inhibit the process of malignant transformation will be developed for use in cancer prevention. The goal of these new efforts is to identify and synthesize specific inhibitors of "transforming" proteins.

Staff levels will be increased in the carcinogenesis testing program of the National Toxicology Program to evaluate chemicals for carcinogenicity. In addition, the testing program will initiate studies to validate and develop alternative and potentially less expensive methods of assessing carcinogenic potential of environmental chemicals.

C. Biological Carcinogenesis – Increase of 6 positions and $11,017,000 over the 1981 estimate of 288 positions and $103,516,000.

Peptides produced by cancer cells, which act as growth stimulators and cell transforming agents have been discovered. Increased support will permit the rapid characterization of at least two peptide growth and regulator factors from humans. Sufficient quantities of these materials are needed to begin clinical studies that can be applied to rapid diagnosis and to new protocols for therapy and prevention. The characterization of the most important cancer-related genes in primates and definition of their applicability to humans would also be accelerated.

Studies using recombinant DNA technology have provided new information about cellular genes involved in cancer and about how they are turned on and off. Additional funding will permit expanded research on two of these genes, one which appears to be involved in host defense systems and the other which is expressed after the cell is transformed. Analysis of these genes will contribute to the understanding of the role they play in major biological processes in health and disease.

A major program will study the pathogenesis of viral leukemia in animal model systems. The research strategy is to culture specific blood cellltypes under conditions that promote cell growth and differentiation. These cells will then be infected with known leukemia viruses and observed for virus expression and leukemic transformation. An increase in funds is necessary to permit the pursuit of this important area of research in greater depth and extend it to other systems including man.

Specific genes of murine RNA tumor viruses which induce malignant transformation of cells have been isolated, and proteins whose synthesis is controlled by these viral genes have been identified. Additional research will determine whether detection of these genes and proteins in human cells might be useful in the prognosis and diagnosis of cancer.

Further studies to develop an in vitro transformation system for murine tumor virus (MuMTV) will be supported. The only means currently available to assess the biological activity of MuMTV is to inject susceptible mice with the virus and examine them for expression of virus in their milk and for the development of mammary tumors. These assays are tedious, costly and sometimes unreliable.

Studies will be undertaken to develop clinically useful markers for rapid detection, diagnosis, and prognosis of herpes virus diseases. These viruses may be involved in certain human cancers.

Diseases induced by Epstein-Barr virus (EBV) in cotton-top marmosets often mimic human disease from silent infection to lymphoma. Studies will provide significant information relevant to the human diseases associated with EBV: i.e., infectious mononucleosis, Burkitt's lymphoma, and nasopharyngeal carcinoma, and the prevention/treatment of these diseases.

D. Nutrition – Increase of 2 positions and $4,509,000 over the 1981 estimate of 10 positions and $20,558,000.

Investigations to identify various biological markers that reflect dietary intake would be initiated. A positive correlation of these markers with specific dietary intake will allow for verification of data obtained through diet questionnaires. Such information is important in developing standardized methodologies for obtaining diet histories to allow interstudy comparisons in epidemiologic and experimental studies on carcinogenicity of dietary factors.

Studies of the effect of certain foods in the inhibition of carcinogenesis will be expanded. Recent evidence indicates some foods enhance the potential for inhibiting carcinogenesis while others perhaps even contribute to reversing this process after it has started. In-depth studies of fractions derived from such foods will provide leads in understanding mechanisms of pathogenesis and may ultimately assist in the primary prevention of cancer.

New approaches to nutritional assessment will be initiated in an effort to derive nutritional parameters of cancer patients.

A trial will be initiated of long term nutritional support (predominantly enteral nutrition) aimed at correcting and then maintaining a normal nutritional status during both inpatient and outpatient care. This long term nutritional support may ameliorate the toxicities of antineoplastic therapy, may enhance tumor responsiveness to antineoplastic therapy, and may result in improved survival.

E. Tumor Biology – Increase of 15 positions and $16,839,000 over the 1981 estimate of 267 positions and $93,805,000.

The years of puberty, the childbearing period, and the perimenopausal age appear to be critical periods in women's lives in respect to the risk of developing breast cancer. Investigations of the sensitivity of the mammary gland to neoplastic changes during these periods will be expanded.

To improve the estrogen receptor assay, which is currently dependent on proper sampling and adequate amounts of tumor tissues, efforts will be extended to produce antisera specific to human mammary cell estrogen receptors. This will facilitate development of sensitive radioimmunoassays. Development of radioimmunoassays will also necessitate research in production of antibodies to antigens of mammary epithelial cells.

Studies will be expanded on genes and gene products involved in the development and maintenance of neoplastic phenotypes. Of particular interest are the factors regulating gene expression in neoplastic cells, since there is evidence suggesting aberrant gene expression in tumors.

Increased activity will occur in the area of breast cancer research, including studies of the interrelationship between estrogenic hormones and carcinogens and their effect on the host-tumor relationship. Biochemical changes in body fluids and mammary tissues will be analyzed, searching for signals of impending abnormalities. The interrelationship among nutritional, hormonal and protein factors which influence growth and differentiation of tumors will be studied.

Studies of the differences between surface composition, structure and function of tumor cells and normal cells will be extended. There is mounting evidence that tubular and filamentous structures on the cells control cell movement and plasticity and possibly the involvement of the cells in the invasive process.

F. Immunology – Increase of 16 positions and $13,162,000 over the 1981 estimate of 140 positions and $85,367,000.

The search for a tumor marker capable of identifying the presence of a primary tumor or the development of metastatic foci continues. Attention has been focused on markers which individually are not sensitive enough, but in combination could be diagnostic. Efforts will be initiated to evaluate the applicability of multiple assays. Both the development of technology and mathematical algorithms for the statistical treatment of such data will be evaluated.

Interferons are a family of low molecular weight glycoproteins produced by mammalian cells in response to viral infection. Recently it has been shown that natural killer (NK) activity can be affected by interferon and agents that induce it. The means by which normal cells could resist the broadly specific NK activity and the role of interferon in NK cell stimulation will be expanded.

Research will be expanded on how the NK cells mediate immune surveillance, the mechanisms for their action, and patterns of specificity of action. Procedures and reagents will be developed to permit the isolation of NK cells which will provide an important aid to the study of the killing mechanism.

Studies of the immunological relationship between tumor antigens and microbiological antigens will be expanded. The objective of these efforts is to look for antibodies to bacterial antigens that would cross-react with human tumors.

The application of somatic cell hybridization techniques to the development of "hybridoma" lines which produce monoclonal antibodies has rapidly expanded. Resources have been established to supply "hybridoma" cell lines to qualified investigators. Thus far, murine plasmacytomas have been used to make the hybrids. An effort will be initiated to develop human lines which can be used to make "hybridomas."

G. Diagnostic Research – Increase of 7 positions and $5,033,000 over the 1981 estimate of 157 positions and $32,460,000.

Most diagnostic imaging systems use ionizing radiation to develop a film or a xerox plate. As the trend to lower the exposure dosage continues, image quality may suffer. To assure sensitive detection systems, new films, electronic recordings, and various filters, coupled in some cases with contrast intensifying agents, will be investigated.

In addition, imaging systems based on energy other than x-ray, such as ultrasound, nuclear magnetic resonance, and thermography, will be investigated. The biological effects of long-term exposure to ultrasound, even at low levels, will be evaluated. This important area of research is aimed at prevention of potential undesirable side effects.

One of the chief problems in assaying for the estrogen receptors in primary breast cancer is the availability of a proper tissue specimen. One possible solution would be to develop a radioimmunoassay for estrogen receptors which would be more sensitive and specific. The search for such an assay will be intensified and once developed it will be evaluated against the existing methods.

Receptor assays are becoming more available, reliable and routine. The relationship of insulin, progesterone, various androgens and corticoid receptors to the outcome of a particular treatment and the prognosis for individual patients will be studied. Application of more than one receptor assay will be evaluated in detail.

One of the theories relating hormones to the risk of developing breast cancer considers the deficiency of progesterone as the responsible factor. Progesterone levels, metabolism and excretion patterns will be studied with newly developed assays. The periods of advanced puberty and early childbearing age will be studied.

Preclinical Treatment Research – Increase of 14 positions and $17,910,000 over the 1981 estimate of 263 positions and $139,925,000.

Investigator-initiated fundamental research studies will be expanded in areas of preclinical treatment, particularly biochemical and pharmacological studies of drug action. These studies would encompass drug design; studies on the biochemical, biophysical, and pharmacological mode of action of drugs in experimental systems; and extrapolation of research into models of human diseases and drug toxicity. In the area of biological response modifiers, the battery of specialized tumor systems will be expanded and other types of experimental systems added to provide a comprehensive evaluation of potential new agents. Efforts willl be expanded on the identification, evaluation, and production of new agents. Fundamental studies on mechanisms of action and basic research studies will be expanded.

Renal capsule modules for testing human tumor drug sensitivities will be expanded to permit examination of a battery of tumors for the percentage of each tumor type responding to treatment. The test is sufficiently rapid that it may be useful for selection of individual patient treatment. This model may approach the time and cost efficiency of various current methods using human tumors in cell culture, and would have the advantage of uncovering therapeutic efficacy at sub-lethal concentrations and under in vivo conditions.

Studies would be carried out on a human ovarian tumor screening model, expansion of mouse ovarian tumor testing, and development of the MXT hormone-responsive mouse breast tumor model. Results using the mouse M5076 ovarian tumor indicate that development of appropriate human tumors in mice would provide an important mouse-human preclinical tumor pair. In addition it would be desirable to pursue developmental investigations of the MXT mouse tumor because there is no hormone-responsive breast tumor currently in the program.

Large scale isolation and purification of human tumor cell growth factor will be undertaken to take advantage of the recently described isolation of this factor from PHA-stimulated, lymphocyte-conditioned medium that stimulates the growth of human leukemic cells. This factor, if available in large quantities, will be useful in enhancing the establishment of cell lines of tissues from human leukemia patients. These cell lines could be useful for studying the effects of drugs used in chemotherapy of leukemia.

The synthesis of small molecular weight peptides or glycopeptides as potential anticancer agents will be explored, based on the fact that several macromolecular peptides like bleomycin, valinomycin, largomycin and echinomycin show good anticancer activity.

Lines of B16 melanoma have been developed with different metastatic properties. When the tumor cells are injected intravenously into the tail veins of mice, tumors develop in specific organs, depending on which cell clone served as the original inoculum. The basis for this selectivity in organ preference for metastasis will be explored, and attempts made to exploit these differences therapeutically.

Expanded efforts will be directed toward the rational design and development of "second generation" drugs, as well as research on methods to minimize or prevent the side effects of existing drugs.

Additional efforts will be devoted to the development and production of dosage formulations, particularly for biological response modifiers, and also to necessary quality assurance procedures.

I. Clinical Treatment Research – Increase of 39 positions and $25,440,000 over the 1981 estimate of 316 positions and $147,420,000.

Clinical treatment research will continue to emphasize studies on the integration of chemotherapy, surgery, radiotherapy, and immunotherapy into optimal total therapy for the individual patient. Studies will be expanded on the use of specialized approaches in conjunction with these modalities, such as radiosensitizers, radioprotectors, and hyperthermia.

The Clinical Cooperative Groups will receive additional support in order to incorporate necessary elements of quality control in the area of statistics, radiation physics, and pathology. Efforts will also continue in the development of multimodal therapy capability and the development of geographically oriented groups.

Studies are needed on interactions of radiotherapy, heat, radiosensitizers and radioprotectors on normal tissue tolerance (lung, kidney, spinal cord), and on basic science investigations into repair mechanisms following cellular insult. Special attention will be directed to distinguishing different mechanisms involved in acute vs. chronic injury.

The radiosensitizer/radioprotector drug development program is expected to develop one or two new hypoxic cell sensitizers and one new radioprotective compound per year. Phase 1 studies will be carried out to determine whether the compounds can be used with conventional radiotherapy fractionation schedules. Phase 2 studies will then be initiated to select schedules which maximize the potential for hypoxic cell sensitization, determine the acceptability of any new radiation fractionation schemes, and confirm the acceptability of the established maximum tolerated dose.

Efforts will be expanded in the area of surgical oncology. These efforts should result in the development of innovative strategies for cancer treatment and the introduction of new techniques into clinical trials.

Tumors of primary clinical interest for treatment with hyperthermia are superficial or deepseated primary tumors in-

volving sites such as those in the pelvic region, lung, abdomen, brain, head and neck, and extremities. Studies will be directed toward methods to deliver controlled uniform heating at depths of up to 10 cm below the surface. Funds are needed to develop equipment and instrumentation to provide uniform deep heating using techniques such as radiofrequency energy, microwave energy, and ultrasound.

Developmental clinical studies to establish the potential therapeutic efficacy and toxicity of specific radiolabelled antibodies for therapeutic purposes are under way in a limited fashion. These will be amplified and moved into phase 1, 2, an and 3 clinical studies to establish the benefit of new radiolabelled antibody agents.

Combined modality studies will be expanded to explore further the use of less extensive surgery in selected diseases.

Clinical trials of biological response modifiers will be extended to include new agents developed within the program as well as to exploit agents already identified.

Studies will be expanded on the exploration of methods for minimizing or eliminating undesirable side effects of treatment, such as nausea and vomiting, as well as methods to reduce the pain associated with the disease.

J. Rehabilitation Research – Increase of $752,000 over the 1981 estimate of $2,010,000.

Increased support will be provided for research to determine optimal nutrition for maximum rehabilitation of cancer patients. Recent efforts on the care and treatment of the terminal patient have included an evaluation of hospices. The increased budget will allow continued support for research into optimal conditions for terminal care.

II. Resource Development

A. Cancer Centers Support – Increase of 1 position and $8,180,000 over the 1981 estimate of 19 positions and $68,576,000.

This program provides a balance of centers of excellence distributed throughout the nation that will conduct basic research, promote a multidisciplinary approach to the clinical management of cancer patients, and serve as a national resource for laboratory and clinical research, training, consultation services, and public education and community involvement. Cancer centers serve to promote coordinated efforts ranging from basic research in cancer biology to clinical research by physicians responsible for the care and treatment of cancer patients in their communities. Exploratory grants have provided funds to institutions for planning new cancer programs or centers.

It is estimated that 61 centers will receive core grants in FY 1982–the same number as in 1981. These core grants to centers will continue to stimulate interaction between laboratory and clinical scientists, thus encouraging new approaches to cancer problems.

B. Manpower Development

1. Clinical cancer education grants–Increase of $1,263,000 over the 1981 estimate of 2 positions and $10,558,000. These grants enable institutions to define their teaching objectives relative to cancer, to develop new teaching materials, and to provide a broad, coordinated multidisciplinary approach to cancer education. For example, family practitioners have learned to use the best available detection, diagnostic and therapeutic techniques in dealing with cancer patients and to obtain expert consultation. The increase would allow an additional five institutions to upgrade the quality of their cancer teaching activities and to broaden their scope. Fifty-five additional undergraduate medical and dental students and 33 additional graduate students would be exposed to specialized periods of cancer instruction. The number of practicing physicians and dentists reached by continuing programs would increase.

2. National research service awards–Increase of 2 positions and $4,551,000 over the 1981 estimate of 12 positions and $23,921,000. The increase would provide for a projected 5% increase in stipend levels and 126 new individual fellowships and 23 competing institutional awards. These awards would support clinical and nonclinical research training in the basic and applied sciences related to cancer.

3. Research career program – increase of $505,000 over the 1981 estimate of 2 positions and $4,223,000. The increase would permit funding for 14 new research career development awards. These awards provide support for young scientists who have demonstrated a high potential for developing into outstanding independent researchers in the cancer-related sciences.

C. Construction – Increase of 1 position and $24,099,000 over the 1981 estimate of 14 positions and $3,845,000.

The objective of the Construction Program is to provide resources for the upgrading of necessary facilities for cancer research. Included is the upgrading and modernization of biohazard and specialized research facilities essential for safety and the effective conduct of cancer research including research in recombinant DNA and chemical and biological carcinogenesis. Funds are also provided for improving clinical demonstration facilities. This budget will enable NCI to partially meet the known needs for the upgrading of chemohazard and biohazard containment as well as research animal facilities used for cancer research conducted at medical schools throughout the United States. In addition, construction funds will be used for upgrading federal facilities, including those at the Frederick Cancer Research Center.

III. Cancer Control

A. Prevention – Increase of 12 positions and $7,244,000 over the 1981 estimate of 12 positions and $13,557,000.

Recent data has shown that smoking cessation programs with adults have been successful. Research will be expanded on methods to improve smoking cessation in blue collar workers and low socioeconomic groups. Research will also be conducted on methods to decrease the number of new smokers in children and teenagers.

Demonstrations of effective smoking cessation and avoidance techniques will be extended to reach a larger audience. The potential impact of reduced exposure to radiation has been demonstrated. Further research will be conducted on methods to decrease unnecessary exposure to medical diagnostic radiation.

The increased budget will allow further research to lessen occupational exposure to known carcinogens. A relationship between diet and nutrition and cancer has been demonstrated. Field trials of diet modification will be initiated to determine whether cancer incidence can be altered. Programs of professional and public education concerning cancer prevention will be increased.

B. Detection, Diagnosis and Pretreatment Evaluation – Decrease of 3 positions and an increase of $200,000 over the 1981 estimate of 24 positions and $17,943,000.

Mammography is an effective screening procedure for breast cancer in women over 50. Field trials will be expanded to evaluate the effectiveness of mammography in women under 50. As a followup to extensive demonstration of cervical screening in 42 states, field trials will be continued to determine whether invasive cervical cancer can be eradicated in defined populations.

Early detection of cancer has led to increased survival rates for cancer victims. Increased professional and public education concerning early detection will be carried out. The increased budget will support improved training for cytopathologists and cytotechnologists.

C. Treatment, Rehabilitation and Continuing Care – Decrease of 2 positions and an increase of $700,000 over the 1981 estimate of 42 positions and $33,834,000.

Programs to increase the participation of community physicians in various aspects of oncology will be carried out. To complement similar programs in prevention and detection, programs will be conducted to optimize professional education and continuing education in oncology.

New programs will be developed in behavioral medicine that will lead to optimal implementation of treatment for patients in all age groups.

DRCCA'S NEW BOARD OF SCIENTIFIC COUNSELORS WILL MEET SEPT. 18-19

The new Board of Scientific Counselors for NCI's Div. of Resources, Centers & Community Activities has not yet been formally established but it will meet anyway Sept. 18-19.

Stephen Carter, director of the Northern California Cancer Program, is chairman of the Board (*The Cancer Letter*, July 25). The appointment of other members has not been completed and may not by the meeting date. If that is the case, the members will attend as temporary consultants to hear DRCCA Acting Director William Terry and other staff members discuss the organization of the division. They also will review a number of projects proposed by staff.

Those nominated to the Board are:

Charles Cobau, Toledo medical oncologist and past president of the Assn. of Community Cancer Centers; Leonard Derogatis, Johns Hopkins psychologist; Lillian Gigliotti, assistant clinical professor of nursing at the Univ. of Pennsylvania; Peter Greenwald, director of the division of epidemiology at New York State Health Dept.; Christine McGuire, professor of medical education at Univ. of Illinois College of Medicine; Anthony Miller, director of epidemiology at the National Cancer Institute of Canada; Charles Moertel, director of the Mayo Comprehensive Cancer Center; Norbert Roberts, medical director of Exxon Corp.; Ernst Wynder, president of the American Health Foundation; Lester Breslow, dean of the UCLA School of Public Health; and Barbara Hulka, department of epidemiology at Univ. of North Carolina.

Waivers will be required for Breslow, Hulka and Moertel, since they serve on other HHS advisory bodies—Breslow as chairman of the Public Health Statistics Committee for the Center for Disease Control; Hulka as a member of the NIH epidemiology study section; and Moertel as a member of the FDA Oncologic Drugs Advisory Committee.

Miller is the only carryover member from the Cancer Control & Rehabilitation Advisory Committee, the advisory group for the division's predecessor. McGuire was a member of the Cancer Control Merit Review Committee.

NO ISSUE NEXT WEEK

The Cancer Letter will not be published next week (Aug. 29) while the staff takes a short vacation. The issue to be dated Sept. 5 will be Volume 6 Number 35, and the full complement of 50 issues will be published before the end of the year. The Cancer Letter office will be closed from Aug. 21 to Aug. 28.

NCI ADVISORY GROUP, OTHER CANCER MEETINGS FOR SEPTEMBER, OCTOBER

2nd International Conference on Cancer Nursing—Sept. 1-5, London.

Large Bowel Cancer Review Committee –Sept. 3-5, Houston Prudential Bldg, open Sept. 3, 7:30–8 p.m.

National Capitol Area Branch American Assn. for Laboratory Animal Science—Sept. 3-4, Marriott Hotel, Hunt Valley, Md.

2nd Annual Preventive Oncology: Nutrition & Cancer– Sept. 6-7, San Francisco Sheraton Palace, Univ. of California Continuing Education in Health Sciences.

European Sumposium on Lung Cancer– Sept. 7-13, Porto Carras, Greece.

Bladder Cancer Review Committee—Sept. 8-9, Boston Ramada Inn, open Sept. 8, 1–1:30 p.m.

Head & Neck Oncology Multidisciplinary Conference–Sept. 8-10, Key Bridge Marriott, Rosslyn, Va.

8th Interbalkan Congress of Oncology-Radiology– Sept. 8-14, Bucharest.

Cancer 1980: Achievements, Challenges, Prospects—Sept. 13-18, Grand Hyatt Hotel, New York.

Advances in Rehabilitation of the Cancer Patient—Sept. 18, Roswell Park continuing education in oncology.

Div. of Resources, Centers & Community Activities Board of Scientific Counselors—Sept. 18-19, NIH Bldg 31 Rm 6, 9 a.m. both days, open.

Research Frontiers in Aging in Cancer—Sept. 21-26, Washington, D.C. Shoreham Hotel.

Biological Bases & Clinical Implications of Tumor Radioresistance–Sept. 21-24, Rome.

International Symposium on Gastric Cancer–Sept. 22-23, Univ. of Birmingham, England.

Prostatic Cancer Review Committee—Sept. 22, Roswell Park, 8:30 a.m., all open for annual program review.

Recent Advances in Diagnosis & Treatment of Lung Cancer–Sept. 24-25, Dallas, annual Charles A. Sammons Cancer Center Symposium.

Cancer Research Manpower Review Committee–Sept. 25-26, NIH Bldg 31 Rm 4, open Sept. 25, 9–10 a.m.

Nature, Prevention & Treatment of Clinical Toxicity of Anticancer Agents– Sept. 25-27, Institut Jules Bordet, Brussels.

National Cancer Advisory Board Subcommittee on Centers & Construction—Sept. 25-26, Bethesda Marriott Hotel, 8 p.m. Sept. 25, 8:30 a.m. Sept. 26, open.

Progress in Cancer Control—Sept. 29-30, Roswell Park.

CEA: Its Role As a Marker in the Management of Cancer–Sept. 29-Oct. 1, NIH consensus conference, Masur Auditorium.

Div. of Cancer Cause & Prevention Board of Scientific Counselors—Sept. 29-30, NIH Bldg 31 Rm 9, 9 a.m. both days, open.

Trends in Oncology for the New Decade—Oct. 1-2, Roswell Park continuing education in oncology.

Div. of Cancer Treatment Board of Scientific Counselors–Oct. 2-3, NIH Bldg 31 Rm 10, 8:30 a.m. both days, open (closed Oct. 2, 7 p.m.–8:30 p.m. for intramural program review).

New Approaches to Cancer Therapy–Oct. 2-3, EORTC symposium, Madrid.
Piedmont Oncology Assn. and Piedmont Oncology Nurses Assn. Annual Conference–Oct. 3-4, Bowman Gray School of Medicine, Winston-Salem, N.C.
American Thermographic Society–Oct. 4-5, New Orleans.
National Cancer Advisory Board–Oct. 6-8, NIH Bldg 31 Rm 6 (the schedule for the Board and subcommittee meetings will be available later).
National Conference Gynecologic Cancer–1980–Oct. 9-11, Los Angeles Hilton, sponsored by the American Cancer Society.
Cancer Control Grant Review Committee–Oct. 13-14, NIH Bldg 31 Rm 8, open Oct. 13, 8:30–9 a.m.
Symposium on Carcinogenesis & Biological Effects of Tumor Promoters–Oct. 13-16, Castle of Elmau, Bavarian Alps, IARC and German Cancer Research Centers.
Western European Workshop on Cancer Education in Schools–Oct. 13-15, Madrid.
American Society of Therapeutic Radiology–Oct. 21-25, Dallas.
Swiss Cancer Congress–Oct. 24-25, Zurich.
Present Concepts in Leukemia Pathophysiology–Oct. 24, Houston Shamrock Hilton.
9th International Tutorial on Clinical Cytology–Oct. 25, Nov. 1, Vienna.
4th Annual Scripps Memorial Hospital Cancer Center Cancer Symposium–Oct. 27-29, Vacation Village, San Diego.
International Symposium on Fundamental Mechanisms in Human Cancer Immunology–Oct. 27-29, Galveston.
Best Approaches in a New Era–Oct. 31-Nov. 1, Univ. of North Carolina, Chapel Hill, multidisciplinary management of lung, head and neck, prostatic and bladder cancer patients.

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 Contracting Officer or Contract Specialist named, Research Contracts Branch, National Cancer Institute, Blair Building, 8300 Colesville Rd., 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-05712-58

Title: *Collection and evaluation of human tissues and cells from patients with an epidemiological profile*

Deadline: *Oct. 17*

Offerors must have experience in using human tissues and in obtaining informed consent as well as knowledge of state laws pertaining to human experimentation. This shall include the legal definition of somatic death.

Tissue is to be collected at the time of surgery and immediate autopsy (i.e., within 30 minutes of death) from patients with and without cancer. The patients with cancer will be eligible as donors only if they had not received previous therapy. The minimal number of nontumorous specimen to be supplied: a. surgical specimens: colon (100 cm2 epithelial surface area of each specimen), bronchus (10 cm2 of epithelial surface area, each specimen) and lung (5 gm, each specimen)–40 each per year. b. Immediate autopsy (non-cancer patients): colon, trachea, bronchus, lung, liver and pancreatic duct–8 each per year.

Tissue required both for pathological examination and to assess its viability will be used by the offeror; the bulk of the specimen will be promptly sent to NCI. Documentation of the fact that these minimal requirements can be met should be noted. Non-neoplastic and neoplastic tissue must be defined and classified by routine light microscopy, high resolution light microscopy (1 micron sections), cytochemistry, immunocytochemistry and electron microscopy (scanning and transmission). Cytochemical and/or immunological assays for measurements of calmodulin, actin, tubulin, human growth hormone, ACTH, chorionic gonadotrophin, carcinoembryonic antigen, keratin, mucus, and other such materials are required.

Expertise with non-neoplastic tissue, both in recognizing biochemical and morphological stages of reversible and irreversible ischemic cell injury and in culturing the human tissues, is essential in evaluating the viability of the tissue. Capability to transport viable tissue at any time day and night to NCI in Bethesda, Md. is required. Since success of experiments depends crucially upon viable tissue, promptness in delivery of tissue is a requirement (within 90 minutes travel time from the NIH). The methods of transportation should be specified.

A team of trained interviewers and experienced epidemiologists is necessary to abstract the medical record and to obtain a complete history from the donor and/or donor's family. The privacy of the donor must be assured. Offerors must respond to all of the above tasks and must demonstrate a capability to manage the entire project. Written agreements for participation in this program from chairmen and/or division heads of the departments of surgery, pathology and epidemiology are required.

Facilities for and experience in the safe handling of human tissue and chemical carcinogens are required. Renovation of facilities will not be provided by the government under the auspices of the contract and therefore, the contractor must have the necessary facilities and equipment in operating condition. A brief documentation of facilities, including space and equipment available to this project must be provided.

Total professional level of effort including those individuals supported as well as those not supported by the proposed contract should be at least five person-years per year. A four year contract is anticipated.

Histological, pathological, cytochemical, electron microscopic and cell/organ culture expertise are re-

quired for the successful attainment of the proposed project's objectives. Names and qualifications of staff identified for these responsibilities should be cited wherever possible.

Contract Specialist: Mary Armstead
Carcinogenesis
301-427-8764

RFP CP-BC-11000-76

Title: *Repository for storage and distribution of viruses, sera, reagents and tissue specimens*

Deadline: *Oct. 3*

NCI is seeking the services of a contractor to provide a low temperature storage facility for specially developed biological reagents and clinical specimens. The contractor's facility must be within a 50 mile radius of NCI and have at least 3,500 square feet of dedicated floor space.

The contractor will be required to receive inventory and store research reagents and normal and neoplastic human specimens necessary for research purposes. Additionally, the contractor shall distribute these materials to designated laboratories and investigators (both foreign and domestic), and maintain an accurate inventory control system.

Government furnished equipment such as freezers and generators are available to the successful offeror.

Contract Specialist: Steve Metcalf
Biological Carcinogenesis & Field Studies
301-427-8888

RFP NCI-CB-14346-18

Title: *Study of immune responses of mice and rats and tumor associated antigens*

Deadline: *Mid-October*

The Collaborative Research Program of the Div. of Cancer Biology & Diagnosis, NCI, is seeking an organization qualified to maintain a colony of up to 5,000 mice and/or rats, including the housing of approximately 500 nude athymic mice. Contractor is also required to breed selected strains of inbred mice for production of congenic strains and to perform immuno assays of in vivo resistance to intravenous challenge of radiolabeled tumor cells. The government will provide necessary animals, and tumor cell lines for the required work.

The contractor must have a minimum of four separate animal rooms approximately 6 x 10 to 12 x 7 feet for purposes of holding and breeding of inbred strains of mice and approximately 150 square feet of laboratory space for laboratory work.

The organization must be located in close proximity to the NIH (35 mile radius) so that frequent pick-up and deliveries of animals and fresh specimens are possible within one hour limit to protect biological activities of specimens and to minimize the transportation effect on experimental animals.

It is anticipated that the contract will be awarded for three years requiring approximately 2.5 staff years per year.

Contract Specialist: Helen Lee
Biology & Diagnosis
301-427-8877

NCI CONTRACT AWARDS

Title: Analytical services for the Cancer Centers Program

Contractor: CDP Associates Inc., $495,987.

Title: Long term followup of the Breast Cancer Screening Project participants

Contractor: St. Vincent's Medical Center, Jacksonville, Fla., $458,382.

Title: Latin American cancer research information project, continuation

Contractor: Pan American Health Organization, $1,802,985.

Title: Acquisition, indexing and keyboarding of cancer-related meeting and dissertation abstracts

Contractor: Herner and Co., Arlington, Va., one-year contract, $152,280.

Title: Training programs for maxillofacial prosthodontists and maxillofacial dental technicians

Contractors: Indiana Univ., $479,968; Univ. of Texas System Cancer Center, $406,791; Health Research Inc., Roswell Park Div., $219,951; and Eye & Ear Hospital of Pittsburgh, $210,833.

Title: Reagents for characterization of cell subpopulations, continuation

Contractor: Univ. of Illinois, $75,911.

Title: Studies in the significance of mutations in carcinogenesis, continuation

Contractor: Johns Hopkins Univ., $196,333.

Title: Cancer Control Program for Clinical Cooperative Groups—Children's Cancer Study Group, modification

Contractor: Univ. of Southern California, $571,805.

Title: Etiologic studies of cancer in New Jersey, continuation

Contractor: New Jersey Dept. of Health, $424,334.

The Cancer Letter _Editor Jerry D. Boyd

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