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RESEARCH EDUCATION CONTROL

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RESEARCH CONTRACT DOLLARS WILL DROP IN 1980, BUT WILL INCREASE SHARPLY FOR SOME PROGRAMS

Funds allocated by NCI for research contracts will continue to fall through the 1980 fiscal year, reflecting in part the NCI reorganization which has as one goal the transfer of a substantial portion of research contracts to grants. It also carries out the policy adopted by the National Cancer Advisory Board of reducing the amount percentage of NCI's budget going to contracts by about 1-1½% a year.

The 1980 budget proposal demonstrates clearly, however, that research contracts are not going to disappear. Those programs getting increased attention—namely, carcinogenesis, and epidemiology, along with clinical research—will continue to make increasing use of the contract mechanism.

The programs bearing the brunt of the reduction in contracts are those which Director Arthur Upton, NCAB members and other NCI

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In Brief

NEW ENVIRONMENTAL CANCER RESEARCH CENTER OPENED IN TEXAS; CALIFANO: NO PROMISES

NEW, MAJOR center devoted to study of environmental causes of cancer was dedicated this month at the Research Div. of the Univ. of Texas Science Park. Located near Smithville, Texas, the center is part of the Univ. of Texas System Cancer Center. The $4.1 million, 44,000 square foot facility includes two lab buildings, a conference center and a maintenance headquarters. The staff now includes 45 persons, will expand to 100 in two years, with 15-18 scientists. Each lab building contains eight double laboratories and support facilities, including darkrooms and an area for electron microscopy. They are designed for biohazard containment. The conference center includes a 100-seat auditorium, several smaller conference rooms, an audiovisual area, kitchen, and library. . . . **JOHN HOGNESS** has resigned as president of the Univ. of Washington. A former member of the National Cancer Advisory Board, Hogness said he plans to return to teaching. He served as first president of the National Institute of Medicine when it was organized in 1971. . . . **GIORA MAVLIGIT**, M.D. Anderson investigator, defending his institution's policy of using historical controls in clinical trials rather than randomizing some patients to an arm receiving no treatment: "Who are the first patients to tell you thank you and goodbye when you tell them they have a 50-50 chance of getting no treatment? The doctors, that's who". . . . **NCI DIRECTOR** Arthur Upton at a recent meeting with Joseph Califano asked if the HEW secretary would act on appointments to the National Cancer Advisory Board by the Board's September meeting. "He said he would try but wouldn't make any promises," Upton said. The six vacancies, including the chairmanship, have existed since January.

IMMUNOLOGY, VIROLOGY RESEARCH CONTRACTS TO REFLECT REORGANIZATION

(Continued from page 1)

advisors have determined were the most suitable candidates for a switch in emphasis from contracts to grants—viral oncology, tumor biology, and, taking the biggest percentage cut as well as the total dollar reduction, immunology.

Those three extramural programs therefore will see the most extensive changes in the next two-three years, as contracts expire and the contractors who wish to continue receiving NCI support in those areas move over to compete for grants.

In the 1977 fiscal year, viral oncology research contracts amounted to $29.9 million (out of a total of $43.7 million for all contracts, which include resources as well as research contracts). With the viral oncology contract effort being phased down and the emphasis moving to grants, research contracts in FY 1980 will be at an estimated level of $24 million. Total funds for viral oncology, including grants, contracts, NCI intramural programs, and management and support will go from $100 million in 1977 to $105.8 million in 1980.

Immunology research contracts will drop from $13.3 million in 1977 to $6.2 million in 1980. Again, that is entirely due to the switch in emphasis and not to any reduction in funds for immunology. Total support for immunology in 1977 was $74.1 million; in 1980 it will be $102.7 million.

Tumor biology accounted for $7.2 million in research contracts in 1977; in 1980, that figure will drop to $4.1 million, while total funds for the same period go up from $67.1 million to $91 million.

Diagnostic research contracts also will drop, although not as drastically. That program spent $11.4 million for research contracts in 1977, plans to spend $10 million in 1980.

Upton has said throughout the reorganization discussions that, despite the effort to move much research funding from contracts to grants, there will still be a place for research contracts. That is evident in the 1980 planning for epidemiology, carcinogenesis and clinical research.

In epidemiology, research contracts totaled $9.9 million in 1977; the plan for 1980 calls for $14.8 million. The total budget for epidemiology will go from $32.6 million to $44.8 million.

Carcinogenesis research contracts amounted to $34.3 million in 1977; in 1980, the estimate is $42.8 million. The total for all mechanisms and inhouse research and support went from $100.7 million in 1977 to $140.3 million in 1980.

Clinical research contracts will climb from $17.1 million in 1977 to $20.9 million in 1980. The total clinical research budget was $121.2 million in 1977, will hit $162.4 million in 1980.

Preclinical research (mostly drug development) will remain at virtually the same level as far as research contracts go—$5.4 million in 1977, $5.6 million in 1980. This program spent a total of $45.5 million through contracts in 1977, most of it for resources and resources development. That figure will go up a little, to $47.3 million in 1980.

AN EARLY LOOK AT HOW NCI PLANS TO SPEND ITS MONEY IN FY 1980

NCI's proposed budget for the 1980 fiscal year offers an early look into program emphasis and planning for the year that will begin Oct. 1, 1979. The figures by research program and by funding mechanism were published in the June 9 and June 16 issues of ***The Cancer Letter***. A narrative explanation of how NCI intends to use that money follows:

Epidemiology

Increase of 21 positions and $6,928,000 over the 1979 estimate of 165 positions and $41,666,000. Research to determine the reason various cancers occur excessively in selected parts of the country; assess the carcinogenic influence of chemical pollutants in the workplace; identify the effects of low level radiation exposures, including exposures from radiation therapy; evaluation the effect of general environmental pollutants such as pesticides and water contaminants; study the relation of nutrition and cancer; design and monitor studies on the efficacy of primary and secondary prevention activities with special emphasis on identifying effective screening programs; studies on the behavioral aspects of cancer; development of more realistic theoretical models to explain the cancer process in order to make better estimates of human risk from laboratory data.

Carcinogenesis (Physical & Chemical)

Increase of 18 positions and $25,351,000 over the 1979 estimate of 283 positions and $122,070,000.

Co-carcinogenesis studies will relate to initiation-promotion effects in carcinogenesis. Compounds suspected of having initiating or promoting action will be administered to animals in order to ascertain the effect one compound may have on the action of another. The purpose is to study the mechanism of action as well as to discover which chemicals have the co-carcinogenesis and initiation-promotion activity. Studies on the role of culture conditions, metabolic inhibitors, and other factors on the growth, lifespan, and transformation of human cells in culture. Ultrastructural investigations of retinoid toxicity will attempt to determine which cellular components are adversely affected by retinoids. Such information would provide insight into which cellular functions are being altered by the application of retinoids and facilitate the design of new retinoids which may be less toxic. These compounds may be used in the prevention of human cancer. Somatic cell genetics research will be conducted to investigate factors which enhance or inhibit cell growth or division.

Extrapolation of animal data to humans in the process of carcinogenetic determination is strengthened if concurrent or parallel studies in human tissues are performed. The number of human tissue systems in parallel will be increased to aid in the indication of possible risk of populations through exposure to environmental chemicals. Funds will be directed to comply with the Good Laboratory Practices Act, by more closely supervising and monitoring government contractors performing carcinogenesis bioassays. A computerized management system to monitor animal experiments in contractor laboratories on a daily basis will be further developed.

A valuable national data source, Publication PHS 149, a compilation of experiments on animal carcinogenesis will be updated. This has not been done since 1974. It is intended to publish five annual volumes (1975-1979).

Bladder cancer research will develop methodology for detecting trace amounts of industrially related bladder carcinogens and their metabolites; to assess the significance of coffee drinking, cigarette smoking and artificial sweeteners in the etiology of bladder cancer; to develop sensitive techniques for measuring compounds and their metabolites in the urine which are known or suspected of being bladder carcinogens; and to test the effectiveness of 13-cis-retinoic acid in preventing the recurrence of bladder cancer in patients.

Prostatic cancer studies will examine intrinsic and extrinsic factors and conditions which determine the malignant character of prostatic cancer; to characterize biological markers of prostatic epithelial cells; to further characterize hormone receptors in normal, BPH, and cancer prostatic tissue; and to compare populations with different frequencies of prostatic cancer with respect to risk indicators.

Pancreatic cancer studies will assess the significance of occupational exposure to carcinogens, alcohol consumption, and diet in the etiology of pancreatic cancer; develop better histologic, biochemical, and immunologic information about early stages, growth, and late manifestations of pancreatic cancer; and study the chemical composition of pancreatic juice and bile to determine excretion rates of some suspected pancreatic carcinogens.

Large bowel cancer studies will define the metabolism of action of colon carcinogens, colon cancer promoters and modifiers, and colon cancer inhibitors; study the interactions of colon carcinogens with macromolecules of clear and cytoplasmic proteins of colon mucosal cells; and investigate biochemical and molecular variance of the colon cancer cell which might be explored as markers of colon cancer or its antecedent lesions.

Research will be conducted to investigate the possibility of immunoprevention of cancer caused by the interaction of viruses and environmental carcinogens. Primates harboring certain viruses will be treated with chemical carcinogens to produce malignant tumors. Rigorous analysis of the antigens in these tumors may demonstrate an antigen or antigens common to all tumors of that species. Immunization against this antigen may be useful in preventing the development of certain malignancies, particularly in man.

In parallel with studies in drug-induced cell differentiation, a therapeutic approach to neoplastic diseases, and studies on the long-term toxicity of antitumor agents as to their potential toxic effects on offspring of treated animals, studies will be directed toward the prevention and/or reversal of chemical carcinogenesis in experimental animals. This is referred to as "chemo-prevention," an approach that appears feasible for study in non-human primates.

Viral Oncology

Increase of $2,797,000 over the 1979 estimate of 316 positions and $103,013,000.

Expansion of studies to search for viruses and virus genetics (DNA) information related to the initiation of human cancer will be continued, which will enable the scientific community to understand the process by which normal cells become malignant using viruses as probes. Efforts will continue in identifying the DNA interactions between developing cancer and the immune system, and toward exploring mechanisms for directing the immune response in the prevention of cancer.

Nutrition

Increase of $1,870,000 over the 1979 estimate of 5 positions and $8,184,000.

Research effort will be increased to detect carcinogenic substances in body fluids, such as feces, urine, pancreatic and breast fluids, as they may be determined by specific dietary intakes. Funds are needed for continued clinical studies on intravenous hyperalimentation (the administration of high levels of nutrients), in order to define the role of this supportive treatment in patients undergoing chemotherapy and radiation therapy.

Tumor Biology

Increase of 10 positions and $9,661,000 over the 1979 estimate of 263 positions and $81,286,000.

Differences between cell surface glycoproteins, glycolipids, and lipoproteins specific to tumor cells will be investigated. Characterization of factors controlling the initiation and inhibition of tumor angiogenesis through in vitro testing will be continued. Increased support for studies of m-RNA processing in normal and transformed cells as they relate to cancer will be expanded. Identifying factors that contribute to increased and/or decreased cell-to-cell adhesion will be pursued. Expansion of efforts to study fundamental aspects of cell migration and movement, particularly microtubular and microfilament involvement relative to the cell plasma membrane will continue to be of great importance.

Studies will be expanded to determine the role of the nuclear membrane in normal and neoplastic regu-

latory processes. Expansion of the registry of cancer in marine animals is of great value, both for the study of the biology of cancer and also as a measure of environmental pollution. Investigations of changes in plasma membrane transport processes that accompany in vitro transformation will be continued. As proper containment becomes available, experiments with the techniques of recombinant DNA will be expanded. Exploration of specific genes and gene products that contribute to the neoplastic state employing the methodology of mammalian cell genetics will be studied. Assessment of the role of cell surface proteases in contributing to invasiveness and metastasis will be done. Examination of the molecular mechanisms responsible for tumor vascularization and continued tumor growth will be used to determine specific physiological findings.

Immunology

Increase of 10 positions and $9,732,000 over the 1979 estimate of 212 positions and $87,052,000.

Additional stimulation of the technology for the production of specific antibody by somatic cell hybrids directed at tumor associated antigens which are produced, could be used in detection, diagnosis and therapy of cancer. Studies will be expanded in the role which the immune system plays in initiation and development of tumors caused by biological, chemical and physical carcinogens. This goal is to manipulate the immune response to interfere with the transformation process. Studies of the process by which immunologically active cells recognize cell surface antigens of tumor cells as a first step in the latter's destruction of an immunologic response will be continued. Development of rational immunotherapeutic protocols founded on a basic understanding of the inherent mechanisms and the constraints imposed on these mechanisms by chemotherapy and/or radiation therapy effects offer advances in controlling metastases.

Study of the role played by anti-idiotype specific antibodies and cells in regulation of the lymphoid system, particularly as related to lymphoid malignancies will provide patients' immuno-surveillance to control their immune response. Laboratory development of new approaches to immunotherapy using blood factors such as tumor necrosis factor, complement, and lymphokines, hyperthermia and tumor-directed antibodies carry radiation or toxic drugs will be undertaken. Studies will be continued on the genetic control of immune responses to tumors in animal models and in humans. Expanded attempts to manipulate immune responses to promote tumor destruction and to avoid tumor facilitation which provide an analysis of subclasses of lymphocytes and use of cell surface markers to resolve serological and functional heterogeneity regulation. Preclinical studies of new immunotherapeutic approaches will be expanded to stress the mechanism of action, dosage schedule and rate of administration of immunotherapy. Trials for the evaluation of the therapy with MER and BCG will be expanded. Development of new assays with the capability to differentiate between different cancers, benign diseases and the unaffected population, as well as to monitor the host's response to immunotherapy which will serve as "early warning system" for recurrence of tumors.

Studies of the interactions between the immune state and responses to carcinogens and to transformed cells will be undertaken, with particular attention to the relations between nutritional state and immune response. Efforts on the elimination of carcinogens and of potentially malignant cells by immune mechanisms will be pursued. Continued development and evaluation of immunodiagnostic tests for cancer, plus immunochemical and serologic approaches for isolation, purification and characterization of human antigens will be expanded.

Diagnostic Research

Increase of 3 positions and $4,559,000 over the 1979 estimate of 142 positions and $33,536,000.

Continued efforts in the development and production of short-lived isotopes to be used in the detection and diagnosis of cancer will be of great interest in the research environment. Exploration of the chronobiology of the breast to indicate optimum times for screening and therapy will be pursued. Development of tumor marker assays for early detection of cancer will be introduced and utilized. Development of computer-assisted automated techniques will be used to identify preneoplastic cells and bladder cancer cells in urine.

Studies will be undertaken to identify carcinogenic risks in current diagnostic techniques and development of methods to eliminate them, e.g., reducing the radiation dosage in mammography, liver and brain scans. Efforts will be made to intensify investigation of cell markers for rapid and accurate identification of neoplastic cells in utero-cervical, lung, bladder and colo-rectal cytology. Prospective analysis and evaluation of current diagnostic techniques for pancreatic cancer will be given high priority. Expansion of the studies in the area of preneoplastic states and development of early detection methods prior to clinical or radio-physical manifestations are a vital resource in achieving increased survival rates.

Preclinical Treatment Research

Increase of 10 positions and $12,682,000 over the 1979 estimate of 316 positions and $120,533,000.

Support is needed for the further development and use of the human tumor kidney capsule model for screening in order to increase the effectiveness of the human tumor xenograft screening panel by determining which tumor in the panel has the greatest sensitivity to a candidate drug. Additional funds are required for the in vivo evaluation of newly identified hypoxic cell sensitizers, including an expanded program for the more detailed in vivo testing of radiosensitizers and in-depth testing using fractionation

studies on both low drug doses and radiation doses, in order to determine the enhancement ratio as a function of drug dose and tumor concentration, as well as radiation dose per fraction.

Funds are needed for the continued development of new anticancer agents. Leads on new promising structure of natural and synthetic products which have exhibited significant activity in the screening, biochemical, and other programs will be expanded and developed. Such studies will focus attention on synthetic areas of greatest potential. The areas proposed for study and synthesis are novel heterocycles, nucleosides, antibiotic analogs, macrocycles, quinones, coordination complexes, peptides and alkaloids.

As the analog program is undergoing restructuring, there is a greater need to develop new congeners of drugs with a broader spectrum of antitumor activity and of particular importance, drugs demonstrating a higher degree of tumor specificity with less host toxicity—so-called "second generation" drugs. The characterization of synthetic and natural product agents for formulation, and the accumulation of pharmacological data on these agents in animals and early clinical trials is often delayed by the lack of adequate, specific and sensitive methods to detect antitumor drugs and their metabolites in physiological tissues and fluids. An increased effort in the development of radioimmune assays for these agents provides the potential for acquiring this data when other methods are not available.

Support is needed for studies on the induction of differentiation of tumor cells. Investigations in drug-induced cell differentiation represent a new therapeutic approach to the treatment of neoplastic diseases. This approach is directed toward uncovering chemical agents with the ability to "redifferentiate" or normalize transformed malignant cells. Funds are needed for improved in vitro pre-screens to identify new types of natural products such as those affecting cell surfaces, specific enzymes, differentiation, etc., and the more systematic exploration of fungi as sources of new agents.

Support is required for the development and use of animal screens for hormonal agents. Since many human tumors, at least at some phase of their development, are known to respond to agents which act on specific receptor sites or which interfere with hormone metabolism, some capacity is needed for in vivo testing against hormone-dependent and hormone-responsive systems.

Support is needed for new toxicity models for preclinical drug evaluation. In particular, efforts are needed for a model to replace the monkey. Resources are needed for models for comparison of analogs for specific toxicities characteristic of the parent compound, including toxicities such as the cardiotoxicity of anthracyclines, the renal toxicity of platinum derivatives, and the neurotoxicity of radiosensitizers in order to select materials with equal activity but less toxicity for clinical trial.

An expansion is needed of current investigative efforts in preclinical species to determine the efficacy and toxicity of antitumor drugs delivered by the intraperitoneal route. Limited early phase I studies with one drug, MTX, verify the practicality of this approach in the treatment of women with "minimal residual disease" ovarian cancer. Further preclinical pharmacologic and toxicologic studies are necessary to identify other drugs as candidates to be tested in the clinic. Additional funds are needed for the development and screening of potential radioprotective agents. Studies already carried out under Dept. of Defense auspices demonstrate therapeutically beneficial sparing of radiation damage to normal tissues by such agents, and it is hoped that better compounds will provide a significantly improved therapeutic index in man.

With the increased use of chemotherapy, research is needed into the effects of chemotherapy combined with radiation. Basic mechanisms of x-ray/drug interactions need to be investigated, as well as the responses of both normal tissues and tumors to the combination treatment.

Descriptions of how other NCI research programs plan to spend 1980 fiscal year funds will appear next week in ***The Cancer Letter.***

CLEARINGHOUSE SUBGROUP FINDS EIGHT COMPOUNDS CARCINOGENIC, RISK TO MAN

The Clearinghouse on Environmental Carcinogens Data Evaluation/Risk Assessment Subgroup, reviewing reports on 17 compounds coming out of NCI's Carcinogenesis Testing Program, agreed that eight of them were carcinogens and were possible risks to humans.

Eight of the others were not carcinogenic, the Subgroup agreed, although there was disagreement on one. Results of the test of another were inconclusive, the Subgroup found.

The eight carcinogens:

Hydrazobenzene, used as an intermediate in dye manufacture. William Lijinsky, the primary reviewer, said that although there were some shortcomings in the test, there was an unquestionable carcinogenic response in the treated animals and that it could be a carcinogenic risk to humans.

1,2-dibromoethane, used as a gasoline additive. Lijinsky, the primary reviewer, noted the poor survival among control male rats and mice but said the evidence for carcinogenicity was convincing. He concluded it could be a carcinogenic risk to man. Louise Strong, the secondary reviewer, criticized the oral route of exposure since exposure to humans is mainly by inhalation or skin contact. Lijinsky said the oral exposure allowed the administration of a sufficiently high dose to produce cancer within the animal's lifespan.

0-anisidine hydrochloride, used in dye manufacturing. Despite several experimental shortcomings, including poor survival, primary reviewer Joseph Highland concluded it was carcinogenic. Secondary reviewer Michael Shimkin said it probably was a risk to humans.

Thio-TEPA, an anticancer drug. Squamous cell carcinomas and hematopoietic neoplasms were induced in both sexes of treated rats and the latter disease in males. Lymphomas and lymphocytic leukemia were induced in both sexes of mice. Primary reviewer George Roush agreed it was carcinogenic and was a risk to man.

4-chloro-m-phenylenediamine, used in the production of photographic film. Primary reviewer Sidney Wolfe noted significant dose related increase in incidence of adrenal pheochromocytomas in treated male rats and increased incidence of hepatocellular carcinomas and adenomas in treated mice. He concluded it would appear to be a carcinogenic risk to humans.

5-nitro-o-toluidine, used as a dye synthesis intermediate. Shimkin agreed that it was carcinogenic but said his preference would be to qualify it as a hepatocarcinogen. David Clayson said it would be a potential human carcinogen.

Phenazopyridine hydrochloride, an analgesic. Shimkin said that while the report said the compound induced colonic polyps in treated rats, it did not indicate whether they were multiple or whether metastases were detected. He said the carcinogenic risk to man is minimal.

Estradiol mustard, an anticancer drug, targeted against tumors thought to have estrogen receptors. Primary reviewer Louse Strong agreed with the report's conclusion that it is carcinogenic and is a risk to humans.

Highland disputed the report on the bioassay of p-anisidine hydrochloride, also used in dye manufacturing, which concluded that the evidence from the test was insufficient to establish the carcinogenicity of the compound. Highland suggested that the slides from the high dose treated male rats be reexamined to determine if the incidence of preputial gland tumors was higher than reported. The Subgroup approved a motion to that effect which said that the report would be reconsidered if additional tumors are found.

The compounds determined not carcinogenic:

Dicofol, a pesticide; iodoform, an antiseptic; formulated fenaminosulf, a plant fungacide; 4-amino-2-nitrophenol, used in dye manufacturing; dioxathion, a pesticide (while agreeing it was not a carcinogen, the Subgroup agreed it could present a risk for testicular damage); 3-amino-4-ethoxyacetanilide, an antipyretic pharmaceutical product; and 2-chloro-p-phenylenediamine sulfate, a hair dye component.

Wolfe and Highland disagreed with primary reviewer John Weisburger's conclusion that 4-amino-2-nitrophenol did not pose a carcinogenic risk to humans, although the report concluded it was carcinogenic in rats. A conclusion on carcinogenicity was not reached in mice because a maximum tolerated dose was not achieved, Wolfe said. Weisburger argued that, unlike the results of this study, human carcinogens induce a high yield of cancer in a relatively short time in experimental animals.

ONCOLOGIC FEDERATION THREATENED BY WITHDRAWAL OF SOME SOCIETIES

The American Federation of Clinical Oncologic Societies, founded in 1972 with seven organizations as members, appears to be in some trouble, with one or more component societies discussing withdrawal.

The seven original members are the American Assn. for Cancer Education, the American Radium Society, the American Society of Clinical Oncology, the American Society of Therapeutic Radiologists, the Society of Gynecologic Oncologists, the Society of Head and Neck Surgeons, and the Society of Surgical Oncology (formerly the James Ewing Society).

Another organization, the American Society for Head and Neck Surgery, was elected to membership in 1975.

Purposes of the federation, as stated in its constitution, "shall be to facilitate and promote multidisciplinary efforts to improve patient care, education and research in the field of cancer by:

"A. Fostering clinical oncology among professional societies.

"B. Offering to provide administrative assistance and facilities to increase the effectiveness of the member societies in conducting their individual programs.

"C. Offering to coordinate scientific programs and the dissemination of information.

"D. Exploring other means and programs to carry out the primary purpose of the federation."

Why, at a time when the growth in the National Cancer Program would seem to make those purposes even more necessary now than they were six years ago, are some societies considering withdrawal? One of the federation leaders, who is anxious to keep the federation together, listed some of the reasons for the "apparent disenchantment":

"First, there is some competition among some of the societies particularly the larger ones which are trying to be multidisciplinary and attract oncologic specialists from all disciplines. These bigger societies feel that they can do everything that the federation could do without giving up any of their autonomy.

"The leadership of some of the societies are not convinced that the functions noted above are worthy of pursuit and, moreover, since the presidents, past-presidents, and presidents-elect are the ones who are members of the board of governors and since these people have been extremely active in their own indi-

vidual societies, they have not had much time for federation matters.

"The American Cancer Society has given financial support for several years to the federation and there are some who, I believe, see the federation as a means of control of the various oncologic societies by the cancer society. (Only a couple of people feel this way and I, myself, feel it's a false concept.)

"I think a number of the individual societies and their officers seem to feel that the federation is an adversary rather than a supporting organization for the individual societies.

"The American Cancer Society having supported the federation for several years and seemingly not getting a very interested response from the individual organizations, it seems not to feel it worthwhile to take the initiative to push the federation into a viable position.

"Perhaps the most important problem is the organizational structure of the federation. The senior officers of the individual societies have automatically been placed upon the board of governors of the federation yet many of these have no interest or even sometimes have actively expressed disinterest in the federation. Thus, we have the spectacle of the election of a president of the federation who has never been to a meeting of the board of governors and who has previously expressed disinterest in the federation. If the federation is to survive, I believe that people selected from the various societies must have an expressed interest and willingness to work to further the concepts of the federation."

The goals of the federation were "and still are laudable," the federation leader insisted. The societies "need a means of intercommunication with one another and a coordination of activities, including meetings, and collaborating on a number of projects." These include:

A. A central computerized list of members kept up to date with address changes, phone numbers, training, society membership has been developed and utilized by individual societies in a variety of ways as well as forming the basis for the very useful directory of members of all the federated societies.

B. A newsletter has now been made available to all members of all societies as one means of intercommunication of ideas, projects, meetings, items available, etc.

C. There has been some assistance in preparation of annual meetings including for a while printing of programs.

D. Combined meetings of the societies. In order to cut down upon meeting time and travel and in order to collaborate more effectively by joint meetings, not only for scientific purposes but for other purposes as well. "While the idea is good and although there have been several joint meetings of two or three societies at the same time, there have been a number of practical problems preventing its more extensive application. There are one or two people who have felt that failure to mold the various societies into joint meetings of four societies in the fall and the other four in the spring shows that the federation is neither viable nor useful."

E. A national voice. Many have felt that the combined societies can and should play a national role and make their voice felt in a number of areas including the National Cancer Advisory Board, a critique in recommendations for the National Cancer Act and its revisions.

F. An AMA section on oncology. There are a number who feel that the clinical oncologist should develop some mechanism to utilize the programs, power, and staff of the AMA more effectively to promote oncologic interests. This could be done best through combined action via a federation rather than on an individual society basis, they contend.

G. Education. The education of medical students, residents, fellows, practicing physicians, and the continuing education of the general physician as well as oncologic specialists is an area of tremendous expansion. Coordination and collaboration among the various specialty groups to accomplish the most in these areas seems essential. "The federation role is justified if this were its only activity and if it were done well with a central office to promote, coordinate, develop, and evaluate a variety of educational projects."

H. The prevention of cancer. With the tremendously growing interest in causes of cancer, its prevention and early screening and detection, all of the individual societies should have an interest in this area. "This interest is best expressed through the federation with delegation to the new American Society for Preventive Oncology."

The president of the American Assn. for Cancer Education, Richard Bakemeier, and two past presidents, Charles Sherman and V.K. Vaitkevicius, sent a memo to all presidents of federation societies suggesting changes to strengthen the organization. The memo said:

"The AACE is concerned that one or more component societies are discussing withdrawal from the federation. We hope that during any such discussions, decision will be made to remain in the federation and to strengthen it for we believe that now more than ever joint action is valuable. We agree that changes need to be made to improve the federation and would like to make the following comments:

"1) The board of governors should be composed of men interested in the activities of the federation. Their terms of office should be long enough for them to become involved and knowledgeable. They should be selected by the component societies on the above bases. (These changes were agreed upon at the last meeting of the board and are only now in the process of being implemented.) They should be allowed to take place, before deciding that the federation cannot

make more significant contributions.

"2) It would seem very important to select a president for a long term (two or three years) to bring about needed changes and consolidate improvements. It is important to select a president who has the time and interest in the federation to work to make it successful.

"3) Staffing of the federation to assist in coordinating the activities of its component societies needs to be improved. Central staffing by persons interested in both the individual organizations and the federation could eliminate a lot of duplication (records, dues, communications, organization of meetings, etc.) and strengthen collaborative activities (legislation, education, liaison with other groups, joint meetings, etc.). Obviously, there must be a balance between federation principles of collaboration and the autonomy of individual organizations. However, a large percentage of individuals belong to more than one organization (frequently three or four) and certainly it is to the advantage of such persons to have the various organizations to which they belong cooperating with one another.

"4. The Assn. of Community Cancer Centers has applied for membership in the federation. They have developed a very effective legislative program and a viable relationship with Congress. They have analyzed the current version of the National Cancer Act and made specific recommendations. They could act as the 'legislative arm' of the federation (with representatives from each of the component societies). This would strengthen that role of ACCC to have the backing of all the oncological societies, and such legislative input would be of obvious value to the goals of member societies of the federation.

"5. The American Society of Preventive Oncology has also applied for membership in the federation. This society grew out of an ad hoc committee of the federation and is beginning to develop a number of projects. It can and should be a 'federation arm' in the area of cancer causing agents and their control. They are considering development of a 'packaged course' in preventive oncology for the other component societies to be offered as part of the annual meetings of those societies.

"6. The American Assn. for Cancer Education was asked (at the federation meeting last fall) to serve as the 'educational arm' of the federation and we had hoped each of the other societies would appoint representatives to work with us. Because some of the societies have been persuaded to consider withdrawing from the federation, representatives have not been appointed and this potentially important activity has not progressed as hoped.

"7. With the reorganization of the AMA voted last December, it is now appropriate for certain organizations to select AMA delegates directly—the federation would be an obvious grouping to get this accomplished and make oncology and its interests felt at the AMA level.

"8. Other worthwhile interests, activities, and projects could be identified by physicians and staff who are really interested in the federation."

NCI CONTRACT AWARDS

Title: Prolactin interactions in mammary gland cells, continuation
Contractor: Univ. of Kansas Medical Center, $86,200.

Title: Glycoproteins of the mammary cell surface, continuation
Contractor: The Wistar Institute, $89,300.

Title: An evaluation of surgical adjuvant chemotherapy utilizing 5-FU, cytoxan and prednisone, continuation
Contractor: Mayo Foundation, $95,000.

Title: Study of glycoproteins of the mammary cell surface, continuation
Contractor: Pennsylvania State Univ. (Hershey), $103,000.

Title: Studies & investigations on therapy of patients with stage II and stage III carcinoma of the breast, continuation
Contractor: UCLA, $90,000.

Title: Comprehensive cancer center communications network
Contractor: UCLA, $349,313.

Title: Breast Cancer Detection Demonstration Program, renewal
Contractor: Emory Univ., $152,097.

Title: Implementation of the hospice concept for the care of terminal cancer patients
Contractor: Kaiser Foundation Research Institute, $1,645,373.

Title: Incorporation of nine alteration/renovation projects at Frederick Cancer Research Center
Contractor: Litton Bionetics, $311,606.

The Cancer Letter —*Editor* JERRY D. BOYD

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