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ZBB CONSIDERED USELESS BY NCI STAFF (PRIVATELY); NEW APPROACH GROUPS PROGRAM INTO FOUR CATEGORIES

NCI executives privately say that the heralded "zero based budgeting" brought in by the Carter Administration is for the most part a useless exercise which has absolutely no impact on the budget process except to further complicate it.

Presidential fiats are not to be taken lightly, however. NCI's ZBB for

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In Brief

UPTON OKAYS LAETRILE CLINICAL TRIALS, TO SEEK PROTOCOLS FROM CLINICIANS FOR IND REQUEST

NCI DIRECTOR Arthur Upton went along with the split vote (14-11) of the Decision Network Committee favoring clinical trials for laetrile (*The Cancer Letter*, Sept. 29). Upton said he would ask clinical scientists interested in conducting the phase II trial to submit protocols to the Div. of Cancer Treatment. The protocol or protocols selected would form the basis for the IND request to the Food & Drug Administration. Upton said he hoped the protocol decision would be made in one-two months, FDA approval by the first of the year. . . . **ALTERNATIVE MEETING** to the UICC Congress in Buenos Aires is scheduled for Oct. 5-6 in Paris by scientists who are opposed to meeting in Argentina because of alleged oppression there of scientists and physicians. The Paris program is "Future Trends in Clinical and Laboratory Research in Cancer. Henry Kaplan, Stanford, will chair one session on epidemiology and physiopathology of cancer. Henry Rappaport, City of Hope, will chair a session on clinical oncology. . . . **JONATHAN RHOADS**, still serving six months past expiration of what was to have been his final term as chairman of the National Cancer Advisory Board: "We should note the effect the NCI reorganization has had on percentage of funds for investigator initiated awards. This should be viewed with satisfaction by the scientific community, although they may prefer to dwell on other dissatisfactions. But I am pleased with it" . . . . **BENNO SCHMIDT**, still chairman of the President's Cancer Panel, who like Rhoads will continue to serve until Joe Califano gets around to appointing their replacements: "All the enormous pressures against the Cancer Program have taken their toll. The hammering away goes on from various quarters, despite the progress made and the total unsoundness of the criticism. One manifestation (of how it has taken a toll) is the new budget for 1979. The House and Senate figures are both below the amount needed. I sense that the whole peer review system of establishing priorities is going to be under more stress in the near future. The situation has been allowed to develop where too few scientists in too few review sections, with too little staff assistance, are being worked to death."

TWO-THIRDS OF ZBB PRESENTATION DEALS WITH UNREALISTIC LEVELS OF BUDGETING

(Continued from page 1)

fiscal 1980 has been compiled and sent to the Office of Management & Budget where, if last year's experience is repeated, it will be totally ignored.

The 82-page document might serve a useful purpose in ways other than supposedly helping OMB draw up the President's budget, however. If nothing else, it forced NCI to organize its presentation into statements of long range goals and major objectives needed to achieve each of them, and to break down the budget into priorities.

Two thirds of the presentation is a useless endeavor in that budget estimates are given at so called "minimal levels" and "current levels" of spending. The minimum level is 80% of the FY 1979 budget and current level at the 1979 figure. It is inconceivable that Congress or even the Administration would consider cutting back the Cancer Program by 20%, and very unlikely that it would be held, for FY 1980, to the previous year's total. A third "enhancement" level which NCI set at $1.055 billion was the only realistic level.

For the record, NCI Director Arthur Upton said in a letter to OMB Director James McIntyre which accompanied the budget that "the ZBB approach proved especially useful in facilitating a comprehensive examination of the Institute's programs, and therefore aided in determining priorities among the many essential activities which must be undertaken....

"A novel approach has been taken this year by NIH and used by NCI in the budget presentation in that it is presented in terms of science base, application, transfer and training (SATT)," Upton wrote. "Science base activities generally include basic and applied research geared toward the development of new knowledge about fundamental processes. Application includes clinical trials, drug development, and portions of diagnostic research. Transfer represents the Cancer Control Program involving demonstration, control and the transfer of knowledge to the health care community. The training decision unit is the National Research Service Award Program. These activities (SATT) represent phases of research on a continuum ranging from the development of basic knowledge, the application of the knowledge generated, through the eventual transfer of this knowledge or new techniques to community physicians and the public. More specific information on the National Cancer Institute research programs is available in the tabular data included in the budget submission.

"The ranking phase of this budget was accomplished taking certain significant braod factors into account. Since each of the decision units is considered of vital importance, differentiated only by its place held on the continuum of research through transfer, the ranking process was especially difficult. However, it was determined that science base should be given highest priority. One reason for this is that the research included in this area is necessary to build knowledge upon which to base other phases of scientific endeavor. Also, NCI is seeking to comply with the recent Presidential initiative on basic research. Application of knowledge gained through science base activities is the next step on the continuum and is, therefore, given second priority. As this research brings forth new knowledge and techniques, there is a need to transfer these results into general practice. Therefore, the transfer of knowledge is placed after application in priority. Important to the activities of science base, application and transfer is the continued need for trained, highly skilled investigators. Therefore, training is included as a separate decision unit and follows in the ranking. In short, each of the SATT decision units is considered to be of equal importance; their logical sequential occurrence has determined the priority given to each for the ranking process," Upton's letter said.

"What is represented by this ZBB request is an attempt to maintain a balanced program that includes each of the four decision units (SATT) at each designated budget level for fiscal year 1980. Further, the fiscal year 1980 budget for the National Cancer Institute represents the best judgment of managers and administrators at all levels within the institute for a balanced program to include all phases of cancer research (cause and prevention; detection and diagnosis; treatment; and cancer biology) as well as field testing and demonstration of research findings to the medical community and the general public."

Here's how NCI described goals, objectives, methods and accomplishments for each objective:

Science Base

Long-range goal: To provide a better understanding of basic biological mechanisms involved in control of normal and malignant cell growth and behavior. To prevent the occurrence or reduce the incidence of human cancer by developing the means to prevent cancer, or halt or reverse the progression of the disease. To improve, through the Clinical Cancer Education Program, cancer teaching in institutions of higher learning through contributions to expanding the understanding of cancer both among physicians and dentists, and enhancing the quality of oncology specialization.

Major objectives:

1. To conduct fundamental research in biology to improve understanding of normal cellular mechanisms.

2. To improve understanding of cellular control processes that may become altered in transformed malignant cells.

3. To determine the role of the immune system as a basis for manipulating immune responses to control the growth and spread of malignant cells.

4. To improve understanding of the spread of

malignant cells to other sites and the accompanying alterations in cell structure and function.

5. To reduce or eliminate the risk of cancer occurrence by developing improved means to identify causative agents and conditions and the means to eliminate or reduce human exposure to carcinogens.

6. To develop improved means to identify human population groups at high risk to cancer.

7. To develop ways of preventing cancer by reducing the effectiveness of external causative agents or by modifying individuals to prevent the development of cancer.

8. To assist medical and dental schools, teaching hospitals, and schools of public health in improving the quality, the comprehensiveness, and the coordination of their cancer teaching.

Current methods of accomplishing the objectives: Research in this area is conducted in government laboratories and in academic and private institutions through the use of research grants, contracts and intramural efforts. Efforts in this area are concerned with epidemiology, carcinogenesis (physical and chemical), viral oncology, nutrition, immunology and tumor biology research. The Clinical Cancer Education Program awards grants to medical and dental schools, teaching hospitals, and schools of public health. The grants enable institutions to enhance cancer education for all students, house officers and practitioners.

Alternative methods: At present less than one-third of all cancer research in this country is accomplished with funds other than those appropriated to NCI. The only alternative would be complete reliance on other fields of research and other means of support to develop needed knowledge. In that case, the research would be accomplished at a much slower rate. The current approach of direct support to relevant science base research and training assures a continuity of cancer related biological research and allows for more effective use of research results in prevention, diagnosis and treatment of cancer.

Accomplishments:

1. A neutral factor has been isolated that restores normal growth to malignant melanocytes in cell cultures. This could serve as an important clue to the reasons behind a breakdown in cell interactions leading to malignancy.

2. New immunology techniques have made possible the separation of subpopulations of immunologically active cells, a preliminary step toward manipulation of immune responses to cancer.

3. Current findings from studies of mechanisms of carcinogenesis at the molecular level offer possibilities for the eventual development of methods of inhibiting induction of cancer.

4. Several protein components of RNA tumor viruses have been purified for use as probes to study the nature of the reaction that turns a normal cell into a cancer cell.

5. A network of population based cancer reporting systems has been developed to provide continuing information on cancer experience for a population of more than 20 million. This provides a data base to monitor trends in cancer incidence, cancer mortality and the end results of cancer treatment.

6. Intensive cancer experience has been made available to undergraduate and graduate students through the Clinical Cancer Education Program.

Application

Long-range goal: To develop better ways of finding cancer at an early stage when treatment methods have a better chance of success by improving methods for determining the presence, nature, location and extent of a patient's disease. To develop the means to cure cancer patients and maintain control of cancer in patients who are not cured.

Major objectives:

1. To develop means to identify precancerous conditions and lesions that have a high risk of becoming cancerous.

2. To develop improved methods to determine the presence and exact location of cancer in individuals at the earliest possible stage of the disease process.

3. To improve the ability to predict, in an individual with cancer, the present extent of disease, probable growth, spread and potential response to treatment.

4. To conduct preclinical and clinical treatment research, including clinical trials, to evaluate surgical, chemotherapeutic, radiotherapeutic, endocrinologic and immunotherapeutic approaches to the cure and palliation of cancer.

5. To develop and evaluate supporting measures such as diet and nutritional aspects of patient care and germ-free environments critical for dealing with the side effects of certain therapies for the treatment of cancer patients.

Current method of accomplishing the objectives: Research in this area is conducted in government facilities and in academic and private institutions through the use of research grants, contracts and intramural efforts. Principal objectives include: (1) early determination of persons or groups at a high risk of developing malignancy; (2) improved means by which to recognize and locate the exact location(s) of an existing cancer; and (3) better ways of predicting an individual's response to treatment of cancer, as well as the growth and spread of the disease. Identified with goals of this research are three general areas of investigation: preclinical treatment research, clinical treatment research, and rehabilitation research.

Alternative methods: Detection and diagnosis in individuals may be accomplished through physical means, chemical means, and through other tests. Present scientific knowledge does not provide evidence that one approach is more promising than others. In clinical trials, experience has demonstrated

that exclusive concentration on any single mode of treatment or on only combined modalities would not provide the results or benefits to the patient that an appropriate balance of both single and combined modalities would produce. Although the category of application could be spread among other health research organizations, both cancer diagnosis and treatment are unique and difficult problems, and are best conducted within the setting of a coordinated cancer research program.

Accomplishments:

1. An immunologic test, specific for human blood, has been developed and is being used on fecal samples to screen for early bowel cancer.

2. Flexible fiberoptic endoscopes have been developed and used to determine the exact location of early cancers of the large bowel and lung when there is no x-ray or other evidence of tumor.

3. Radiographic scanning procedures have been developed that improve the ability to determine the exact location of primary lesions and the site of metastatic lesions.

4. The establishment of specific priorities for drugs undergoing preclinical development has facilitated the movement to clinical trial of those considered high priority.

5. A wide variety of clinical studies utilizing combination chemotherapy, in some cases along with other modalities, has continued to demonstrate improved results, such as the established curative potential of combinations containing the drug, cis-platinum, in advanced testicular cancer.

6. Past clinical trials have resulted in positive proof that chemotherapeutic agents can cure patients with advanced cancer. This is possible in over 10 types of advanced human cancers such as acute childhood leukemia, Hodgkin's disease and histiocytic lymphoma. These observations form the basis for the new directions in clinical treatment research. Application of effective drug therapy post-operatively in patients who have the more common visceral malignancies, particularly when the tumor volune is small and vulnerable, form the basis for the large scale clinical trials recently initiated in cancer of the colon, ovary, stomach, lung, and head and neck region.

Transfer

Long-range goal: To facilitate the widespread application of available and new, proven and practical cancer knowledge and technology into the general practice of medicine through the conduct of identification, field test, demonstration, evaluation and promotion efforts in the intervention areas of: prevention, detection, diagnosis and pretreatment evaluation and treatment, rehabilitation and continuing care.

Major objectives:

1. To make available practical and effective methods and techniques of cancer prevention and encourage their use by health professionals and the general public.

2. To encourage, with the aid of health professionals and other groups, a continuous assessment of current practices and the development of principles for the optimal application of knowledge and techniques in the intervention areas.

3. To make practical and effective methods and techniques for cancer screening and detection and pretreatment evaluation available to populations at risk and persons with precancerous and cancerous lesions and encourage their use by health professionals and the public.

4. To make optimal methods and techniques for cancer treatment, followup care, rehabilitation, and continuing care (palliative and supportive) available to cancer patients and encourage their use by health professionals.

Current method of accomplishing the objectives; Cancer control activities are carried on through the use of grants and contracts. The Cancer Control Program, as established under the National Cancer Act, has the responsibility for conducting a national effort to facilitate the dissemination of the latest proven and practical research knowledge or technological advancements to the health community and the public. In meeting these responsibilities, program activities are coordinated with those of state and territorial health departments, and health care delivery institutions, as well as with other governmental agencies, societies and associations involved in all phases of controlling cancer. In this role the Cancer Control Program serves as an intermediary between the research laboratory or clinic and the general health care delivery systems of the U.S. The program does not deal directly with the entire population at risk or afflicted by cancer, but instead develops prototype projects which, if successful, serve as models to be used by the various organizations involved in cancer control.

Alternative methods:

1. Utilize the centers-outreach approach which is predicated on the use of cancer centers as the focal points for reaching out and responding to the community's needs in cancer control Exclusive use of this program is not possible because many communities are not located within a reasonable distance from an existing center and some centers have not developed an outreach capability.

2. Utilize the community based approach which involves the cooperative efforts of medical and nonmedical groups within a community conducting integrated cancer control demonstrations encompassing all interventions for selected disease sites. This approach cannot be used exclusively because its efficiency and effectiveness are currently being assessed.

3. Utilize a multi-faceted approach, including components of items 1 and 2 above, but also including specialized activities, usually involving a single intervention, directed towards a specific problem. This approach provides the greatest flexibility of

approach and diversity of institutional involvement.

Accomplishments:

1. Seventeen cancer information systems have been developed providing professionals and the public with the latest information on cancer (to date responses have been made to more than 120,000 inquiries).

2. Established public and professional outreach programs through comprehensive cancer centers involving professionals in some 1,000 community hospitals.

3. Six community based programs have been initiated involving a total population of over 12 million with activities in breast, colon-rectum, lung, uterine-cervix, head and neck, and prostate cancers.

4. Implemented prototype medical surveillance programs for persons exposed to chemical carcinogens including some 850 vinyl chloride workers, 683 asbestos workers and 2,000 women who were exposed to diethylstilbesterol (DES) in utero.

5. Established demonstrations for breast and cervical screening of large, high risk populations. Cervical screening has involved some 986,188 women with approximately 3,200 cancers reported. Breast cancer screening has involved some 280,000 women with approximately 2,650 cancers reported.

6. Twenty-five demonstration networks have been established that link community hospitals to a primary care hospital which provides oncologic expertise in the treatment of leukemia/lymphoma, head and neck, and breast cancer. Over 8,000 cancer patients have benefited from the expertise provided by these networks.

7. Three projects have been initiated to field test approaches to the hospice concept, which provide continuing care for terminal cancer patients outside the hospital environment.

8. Four projects are under way to study health effects of in uterio DES exposure in DES daughters. It is estimated that one-two million daughters can profit from these projects.

9. Initiated a patterns of care study for radiotherapy. The study design requires a national survey of radiation therapy practices. All cancer patients receiving such therapy should benefit from this project. The study is a "landmark" having a professional medical society (American College of Radiology) assess practices of its members.

10. Management of the professional and worker education aspect of the HEW initiative to inform asbestos-exposed workers of their risk to the health effects of asbestos will continue.

11. Six clinical oncology programs have been funded to demonstrate the community cancer center concept. The project is important because 80% of cancer patients in this nation receive their care in community hospitals.

12. Efforts are continuing to stimulate the training of oncology nursing. From the volume of mail received by NCI, the need for well trained oncology nurses is one of the most frequent needs to upgrade cancer care as voiced by community hospitals and physicians. These community hospitals and physicians are responsible for the care of the majority of cancer patients.

13. Projects are under way to study the psychosocial impact of cancer on patients and family. NCI has major efforts through grants/contracts to systematically study these problems. All cancer patients and their families may be expected to profit from these efforts.

Training

Long-range goal:

To assist in providing cancer research and cancer patient management and training to professionals, scientists, and institutions on a continuing basis.

Major objectives: To foster and support the nonclinical and clinical research training of students at the predoctoral and postdoctoral levels in the areas of cancer etiology and prevention, cancer detection and diagnosis, and cancer treatment and restorative care.

Current method of accomplishing the objectives: The grant mechanism is utilized to provide support (in the form of fellowships) to individuals and institutions in performance of training programs related to cancer research.

Alternative methods:

1. Return to pre-World War II practices where the personnel were left to their own devices and the private sector to secure scientific training and support. This was not selected because it would result in virtually no control over the numbers of students receiving training or the quality of training received.

2. National Research Service Awards are reviewed by a chartered committee of experts in cancer research training and awarded to individuals, universities and other research establishments on a competitive basis. This was selected because individual and institutional applications can be reviewed and awards made more equitably through peer review, thus enabling a high degree of quality control and cost efficiency and enhancing the probability of training more high caliber clinicians and researchers, and providing a more equitable distribution of funds among institutions.

Accomplishments:

1. The Fellowship Training Program to date has produced approximately 9,000 Fellows in the basic and clinical biomedical sciences. The majority of former NCI Fellows have remained in cancer research and/or teaching.

2. National Research Service Awards—In FY 1978 there are 1,177 trainees in 108 research training programs at more than 50 research institutions. An additional 349 postdoctoral fellows are supported by individual fellowship awards which are tenable at more than 100 universities and other institutions. A total

of 380 people will complete their training this year (FY 1978). The average period of training is expected to be about three years. Approximately 66% of the students are studying in the area of cancer etiology and prevention research and approximately 34% of the students are studying in the area of detection and diagnosis research, treatment research and restorative care research.

NCI GIVES REGULATORS DATA NEEDED TO MOVE AGAINST WIDELY USED EDC

The stage is now set for what may be one of the most extensive, difficult and perhaps bitter regulatory actions involving chemical carcinogens ever waged by the federal government.

Publication last week (Sept. 26) in the *Federal Register* of NCI's bioassay report on 1,2-dichloroethane (EDC) removed the last excuse the regulatory agencies have for not moving against the substance, one of the world's most widely used chemicals. Those agencies received copies of the NCI report when it was written late last year, and they were aware of the action by the Clearinghouse on Environmental Carcinogens which determined that EDC was a carcinogenic risk to humans (***The Cancer Letter,*** March 17). But the regulatory agencies took the position that they could not act until the report had been published.

EDC has such widespread use that it could be the target of nearly every federal regulator—Environmental Protection Agency primarily, but also the Food & Drug Administration, Occupational Safety & Health Administration, and Consumer Product Safety Commission. It was the 16th highest volume chemical produced in the world in 1975. Production is now estimated at 10 billion pounds a year in the United States and is expected to increase 4% a year. According to the National Institute for Occupational Safety & Health, about two million workers are exposed to EDC annually in the U.S., and of those, 33,000 receive full time occupational exposure.

EDC is a colorless, oily liquid with a chloroform-like odor. It is a source chemical from which other chemicals are made. These include vinyl chlorid, methyl chloroform, vinylidine chloride, perchloroethylene, trichloroethylene, carbon tetrachloride, and the chlorofluorocarbons (freon compounds). EDC had been used extensively as a commercial solvent and extraction solvent, but many of these applications have been taken over by methyl chloroform, TCE and perchloroethylene, all made from EDC.

It is used in making gasoline antiknock additives, although this use is declining as leaded gasolines are phased out. Other uses include metal degreasing and some textile drycleaning, making adhesives, fumigating grain, and in paint removers. EDC may appear as a food additive as a result of its use to extract spices such as annatto, paprika and turmeric. Its use in cosmetics is generally limited to nail lacquers.

EPA reported that a survey of surface waters near heavily industrialized areas found that EDC was detected in 26% of the samples taken. The concentrations ranged from the detection limit of one part per billion to a high of 90 ppb, found at a Pennsylvania site in the Delaware River Basin.

EDC can be taken into the body by ingestion, inhalation or skin absorption, and is highly toxic by any of those means. Acute poisoning has severe has severe effects and can result in death.

The NCI bioassay produced unequivocal results. EDC administered orally to male rats caused forestomach cancers, hemangiosarcomas of multiple organs, and subcutaneous fibromas. Female rats exposed to EDC developed mammary cancers—in some high dose animals as early as the 20th week of the study. The chemical also caused breast cancers as well as uterine cancers in female mice, and respiratory tract cancers in both male and female mice.

Anticipating the widespread interest the test results would create, NCI published a summary of the technical and background information in the report. The summary and copies of the full report may be obtained from the NCI Office of Cancer Communications, Bethesda, Md. 20014.

INCREASE IN ESTIMATE OF WORK RELATED CANCER DUE TO CHANGE IN STUDY METHOD

HEW Secretary Joseph Califano startled many Cancer Program participants and followers a few weeks ago when he told an AFL-CIO conference on occupational safety and health that a new, unreleased study had found that the number of cancer cases that are job related is considerably higher than previously estimated.

Califano said that the study will show as much as 20% of all cancer is or soon will be related to exposure to carcinogens in the workplace. Industry estimates have estimated the number between 1 and 5%, and until now, no one had any figures to dispute that.

The study to which Califano referred was a cooperative effort by NCI, the National Institute of Environmental Health Sciences and the National Institute of Occupational Safety & Health. The Field Studies & Statistics Branch of NCI's Div. of Cancer Cause & Prevention handled the NCI phase of the study.

Field Studies & Statistics Chief Marvin Schneiderman told ***The Cancer Letter*** that the higher estimate came about largely due to a change "in the way we look at various estimates of environmental carcinogenesis." In the past, researchers and their statisticians have associated one illness with one cause, in cancer as well as other diseases. "The fact is that cancer is a disease of interactions," Schneiderman said. "By ascribing a cancer to a single cause, we precluded looking at other causes."

The study looked at eight different kinds of occupational exposures "where the data were firm" and assigned probable or potential causes to two, four or six different exposures, if that many were appropriate.

Asbestos exposure by itself is expected to be responsible for 15-18% of all cancer deaths over the next 30-35 years. If that is correct, then the 20% estimate for occupationally caused cancer probably is low.

"We're just starting to see the increases from asbestos," Schneiderman said. "We may be two years away from the big increase."

The overall death rate has continued to increase despite a drop in younger age groups as a result of improved treatment. This was attributed by some to the continuing increase in lung cancer incidence in older age groups due to smoking, with the peak in cigarette related cancer still to be reached.

"But we found that, even when we discounted more than enough for smoking, the rates still were going up," Schneiderman said. "What we were beginning to see, without realizing it, were the cancers from asbestos exposure. We had been ascribing too much to smoking."

The study, which has not yet been released, comments that industry estimates on occupationally related cancers have lacked scientific documentation. It says that during the next 30-35 years, the average number of cancer deaths directly related to asbestos exposure will be 67,000. Last year, about 375,000 cancer deaths were reported.

Both the *Washington Post* and Associated Press accounts of Califano's speech reported the 67,000 and 375,000 figures as representing the respective number of cancers. Those numbers actually refer to deaths; the total number of cancers occurring annually in the U.S. is 675,000, excluding skin cancer.

IG REPORT CLEARS SHUBIK OF CONFLICT OF INTEREST WITH EPPLEY CONTRACT

The HEW inspector general's investigation of the contract NCI has had with Eppley Institute for carcinogenesis research completely cleared Eppley and its director, Philippe Shubik who is also a member of the National Cancer Advisory Board, from any improprieties and conflict of interest charges in administration and fulfillment of the contract.

However, the IG apparently bought the view of Shubik's critics—mostly those in the Nader type public interest groups—that the fact that Shubik had served as consultant for some industrial firms was an apparent if not a legal conflict of interest.

The IG report referred to what it admitted was an allegation by Shubik's critics concerning the role he played in development of a set of criteria for assessing the carcinogenicity of a chemical. This was a charge made at that time by the Nader Health Research Group. (The IG report incorrectly referred to it as development of a definition of a carcinogen.)

Shubik was chairman of the NCAB's Subcommittee on Environmental Carcinogenesis, which was asked by then NCI Director Frank Rauscher for help in determining when and if test results show a compound to be carcinogenic.

Shubik was permitted to bring in consultants to help with the task, and the group he put together represented the most respected and qualified people in the field. They met almost monthly for nearly a year, and finally arrived at a consensus which was supported by all members of the group.

The IG report noted: "An example of the type of issue addressed by the subcommittee is the question of whether a chemical that causes benign (rather than malignant) tumors should be classified as a carcinogen. Dr. Shubik argued that it should not be, and the final report concluded that chemicals of this nature are 'suspect.' "

The report added immediately, "However, Dr. Shubik's position was, we are advised by Dr. Upton, well within the bounds of scientific inquiry. In any case, Dr. Shubik's participation in this debate related to general issues of universal applicability."

The report did not include references to positions of the other members of the subcommittee and the consultants. Shubik did not ram his opinion down their throats and, in fact, did not argue that point any more forcefully than a number of others. Genuine doubt existed throughout the group that something that causes a benign tumor should should be called "carcinogenic" since benign tumors are not considered to be cancers. The language of the document the group finally produced was careful to note that benign tumors should be considered threats to health and perhaps to life.

The IG report agreed with the General Accounting Office findings that administration of the Eppley contract by NCI was inadequate and that review of the contract did not follow "establish procedures." The use of ad hoc rather than standing committees was criticized, although acknowledging NCI's position that the multidisciplinary nature of the Eppley contract made review by standing committees impractical.

The IG report discusses in detail Shubik's role and found no evidence of illegal or improper activities.

"No instance was found in which Dr. Shubik, while serving on the NCAB, participated in a matter which related to the Eppley contract. The NCAB, in addition to its general advisory responsibility, has grant award authority but not contract award authority and, for this reason, never reviewed the Epply contract proposals.

"We did determine that Dr. Shubik was an advocate for Eppley in its dealings with NCI during the time he was the principal investigator for the contract and, to a lesser extent, after he stepped down

from this position in 1975. However, the NCI officials interviewed indicated that, to their knowledge, Dr. Shubik did not attempt, in any way, to use his official position on the NCAB to influence any decision affecting the Eppley contract. Therefore, there is no reason to believe that Dr. Shubik acted illegally in this respect. Nevertheless, the variety of roles Dr. Shubik has assumed is troubling. It appears that it would be extremely difficult for either Dr. Shubik or NCI officials to limit Dr. Shubik's influence to, and keep unrelated, each of his several roles. . . .

"A review of the financial disclosure forms which Dr. Shubik filed with HEW indicates that Dr. Shubik was employed at various times by a number of private corporations, in addition to several non-profit educational and research organizations. A review of NCI records shows that Dr. Shubik was and is engaging in significantly more consulting arrangements with private industry than other members of the NCAB or other NCI advisory groups.

"In order to determine the effect, if any, of Dr. Shubik's private consulting work on his performance as a special government employee, we reviewed minutes of the National Cancer Advisory Board meetings which Dr. Shubik attended and the minutes of the Subcommittee on Environmental Carcinogenesis, which Dr. Shubik chaired until recently. We also discussed this subject with employees of NCI who attended these meetings. Our objective was to determine if there was any instance in which Dr. Shubik participated in a discussion which would have had a direct and predictable effect on any of the organizations or corporations by which he was employed at the time of the action.

"In particular, a review was made of the allegations that Dr. Shubik participated in the debate as to whether to retain the 'memo-of-alert' procedure for informing concerned government agencies of preliminary findings that a substance is cancer-causing and that this decision affected General Foods, one of his consulting clients. The memo-of-alert system was used only four times, and was highly controversial. The last time it was used, in March 1975, involved a compound called trichloroethylene (TCE). Among TCE's uses is its role in removing caffeine from coffee. General Foods, a producer of a decaffeinated coffee, was affected by the publicity resulting from the memo-of-alert which announced that TCE might be cancer-causing and apparently altered its production procedures to eliminate use of TCE.

"Following the TCE memo-of-alert, the NCAB Subcommittee on Environmental Carcinogenesis discussed the memo-of-alert system. The transcript of this meeting of Nov. 10, 1975 indicates that there was general dissatisfaction with the system among the subcommittee members. The publicity surrounding the release of preliminary data in the TCE episode was cited as an example of the undesirable results of the alert system. Dr. Shubik did not appear to play an influential role in the subcommittee's deliberations, though he later summarized the subcommittee's conclusions in a report submitted to the NCAB on Nov. 18, 1975. Briefly, the subcommittee's recommendation was that the memo-of-alert system should be abandoned and replaced by rapid publication of test results through scientific channels. This advice, however, was given after the TCE decision and did not affect TCE. The discussion and conclusion of the subcommittee were of general applicability relating to the advisability of publicizing preliminary test results."

In summary, the IG report said:

"Our review confirmed NCI's failure to use required procedures in contract awards to the Eppley Institute. In part, we attribute these deficiencies to the weak role played by contracting officers. We also conclude that the Eppley project officer was overextended and unable to oversee the contracts adequately. Furthermore, Eppley officials had a close relationship with some NCI officials; however, we found little to indicate that this was anything more than a reflection of the fact that cancer specialists belong to a relatively small scientific community. We found no instance in which Dr. Shubik attempted to use his official position on the NCAB to influence any decision affecting NCI awards to Eppley."

The IG commented that Shubik had failed to fill out all the financial disclosure reports required of HEW consultants in the time frames required. This was forwarded to the Justice Dept., which found no basis for any criminal action. The report in the *Washington Post* on the IG investigation said, "Justice has decided not to prosecute," as if such action had been considered. Shubik was furious, feeling that made the IG report seem to be one which condemned rather than cleared him.

HEW Secretary Joseph Califano wrote in a memo to Asst. Secretary for Health Julius Richmond that "even though the Inspector General has uncovered no evidence of criminal violations or the department's conflict of interest regulations and procedures, I wish to take immediate action to preclude potential conflicts of interest, both real and apparent, on the part of consultants and special employees."

The Cancer Letter —*Editor* JERRY D. BOYD

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