THE CANCER LETTER

P.O. BOX 2370 RESTON, VIRGINIA TELEPHONE 703-620-4646

Vol. 5 No. 39

Sept. 28, 1979

Subscription $125.00 per year

UPTON STRUGGLING TO WRAP UP REORGANIZATION OF DCCR BEFORE NEXT WEEK'S MEETING OF NCAB

NCI Director Arthur Upton and his staff were still trying this week to pull the loose ends together on the final phase of the reorganization Upton began 20 months ago. Upton would like to be able to present at the meeting next week of the National Cancer Advisory Board the final details on how the Div. of Cancer Control & Rehabilitation will be re-

(Continued to page 2)

In Brief

NCAB CENTERS SUBCOMMITTEE TO HAMMER OUT NEW PROPOSALS FOR COMPREHENSIVE CHARACTERISTICS

CENTERS SUBCOMMITTEE of the National Cancer Advisory Board has scheduled five hours for the afternoon of Oct. 2 to wrap up revisions of the "characteristics" demanded of comprehensive cancer centers. A series of proposals and recommendations have been drafted since the subcommittee recommended in 1978 that the characteristics—criteria for recognition as comprehensive—should include a core grant. The subcommittee proposal also included a procedure for "derecognition" for centers which lose their core grants. The various proposals were put on hold while NCI went through its reorganization agonies. The Assn. of American Cancer Institutes came up with its suggestions (*The Cancer Letter*, July 13) which William Terry, acting director of the Centers Program, called "constructive." But Terry had reservations about part of the AACI proposal. Terry said he would ask the subcommittee to consider all the various suggestions and hammer out a recommendation to take to the full Board at its Oct. 3-5 meeting. The subcommittee meeting will start at 1 p.m. in NIH Bldg. 31 Conference Room 6 and will be open. . . . **THE FDA** Oncologic Drugs Advisory Committee will hear reports from its subcommittees which developed recommendations for new preclinical toxicology guidelines and guidelines for clinical testing of oncologic drugs. NCI's Div. of Cancer Treatment had proposed new preclinical guidelines eliminating monkeys and dogs in toxicology tests. The subcommittee went along with dropping monkeys but will ask that some use of dogs be continued. The other subcommittee developed recommendations for clinical testing which "we will be able to live with," said Vincent Bono, chief of DCT's Investigational Drug Branch. NCI and the committee previously had objected strenuously to clinical guidelines FDA had written. . . . **EORTC HAS** signed a contract with the Commission of European Community, an agency of the European Common Market, which will provide research support for the organization. . . . **"PHARMACEUTICAL ASPECTS** of Cancer Care" will be the topic of the 15th annual San Francisco Cancer Symposium March 15-16, sponsored by the West Coast Cancer Foundation and ACS. Contact WCCF, 50 Francisco St. Suite 200, San Francisco 94133, phone 415-981-4590.

SEARCH COMMITTEE HAS 30 CANDIDATES FOR DIRECTOR OF REORGANIZED DCCR

(Continued from page 1)

structured to include the cancer centers, organ sites, construction, and manpower training programs.

Upton's original plan for a reorganized DCCR was to permit it to keep all of its existing activities except for all or most of its Preventive Medicine Branch. DCCR prevention activities were to have been moved to a new Div. of Cancer Prevention, along with some of the staff and programs from the Div. of Cancer Cause & Prevention.

Establishing a new prevention division ran into opposition from NCI staff and ran up against the Administration's personnel ceiling. There are no slots available to staff a new division, other than staff that would move with the existing programs.

As it stands now, the plan Upton will present to the Board probably will be limited to the reorganized DCCR, which would be renamed something like the Div. of Cancer Resources, Centers, & Community Programs. To follow through on Upton's commitment to increase the emphasis on prevention, and in lieu of a new, separate division, prevention activities might be lifted higher than the branch level in DCRCCP, perhaps under an associate director for prevention.

Meanwhile, the search committee which is looking for a director for DCRCCP has turned up 30 candidates from inside and outside the government. Thomas King, director of the Div. of Extramural Activities who is chairman of the search committee, said that more than 50 names had been submitted and that 30 were determined to be viable prospects. Names are still coming in.

Included among the 30 are several directors of cancer centers, most of whom were recommended by other center directors. The job is perceived by some as being the most challenging and interesting (as well as most difficult) of any in the Cancer Program, and one of the most powerful. The DCRCCP director will have under his wing all the cancer control programs with their $60 million budget; the $63 million centers program; the $17 million organ sites program; the $35 million manpower training programs; and the $17 million construction program.

The division director thus would be involved in a wide variety of activities—basic and clinical research in the organ site programs; cancer control demonstrations such as the Clinical Oncology, Community Based and Breast Cancer Detection programs; the comprehensive and specialized cancer centers and the variety of issues they are presenting; rehabilitation research; and the vitally important clinical education, research career and fellowship and training programs.

The search committee probably will choose the five it considers the best prospects and present them to Upton for his final selection.

UPTON REPORTEDLY LEAVING NCI AT END OF YEAR; HE SAYS HE'S STILL UNDECIDED

Arthur Upton has things on his mind these days in addition to NCI's reorganization and who will head the new division—he will have to decide soon the direction his own career will take.

There are those who think they have reason to believe he has already made up his mind to take the offer tendered by New York Univ., to head its Institute of Environmental Medicine. Upton will leave the government for that position at the end of the year, they say.

Upton told ***The Cancer Letter*** this week, however, that he still has not made a final decision to leave NCI.

HEW Secretary Patricia Harris reportedly asked Upton to delay any announcement that he was leaving until she has had an opportunity to line up a successor. Presumably the identity of the new director would be revealed simultaneously with Upton's announcement, and the new director would take over immediately upon Upton's departure.

HARRIS TELLS ETHICS BOARD TO TAKE UP COMPENSATION ISSUE; HSA EXEMPTION OK'D

The HEW Ethics Advisory Board will be asked by Secretary Patricia Harris to study the issue of compensation for patients injured while participating in clinical research. The Board had been scheduled to discuss at its September meeting whether it would take on that question (***The Cancer Letter***, Sept. 7); it was dropped from the agenda when Harris sent word that she was planning to assign the issue to the Board.

The Board, which usually meets monthly, is presently working on questions involved in disclosure of research information. That study should be wrapped up at the January meeting, with the compensation issue not coming up before February at the earliest.

Charles McCarthy, EAB staff director, said that the question could require six months or more to resolve, depending on the Board's directions to the staff on how much information to be compiled. "This is a very complex issue and could take six months or more," McCarthy said. "I expect we will hear from 100 or more witnesses." All organizations with an interest in the problem will have an opportunity to be heard, he said.

APPROPRIATIONS

The Senate insisted on its language regarding the abortion issue when the FY 1980 HEW appropriations bill reached the floor this week. The perennial confrontation with the House thus once again will delay HEW funding past the start of the fiscal year, Oct. 1.

A continuing resolution, providing interim funding for the department's programs, including $1 billion for NCI, has been hung up in the House over

• Adopt generic policies for carcinogens that would clarify the basis for their regulatory actions and expedite the process of making regulatory decisions.

• Adopt procedures for taking interim regulatory actions before initiating the usually time consuming task of establishing permanent standards and regulations, if permitted to do so under the applicable statute.

2. Although cancer risk assessment among federal agencies is now consistent in many respects, the Interagency Regulatory Liaison Group agencies should increase their efforts to ensure coordination at all appropriate stages in the regulation of cancer causing substances. However, there appears to be no compelling reason to centralize the performance of risk assessments or to adopt uniform priorities for all regulatory agencies.

3. The policies and procedures now employed by the regulatory agencies are not well understood. Foremost is public misunderstanding about the inference of human risk drawn from conventional procedures for carcinogenicity testing in animals. The scientific basis and support among experts for animal testing is often not recognized by the public, and though not unanimous, there is a considerable consensus among experts about the validity of conventional test procedures and the criteria for evaluating them. The IRLG agencies, NCI, NIEHS, and other agencies should undertake efforts to dispel public misunderstanding about the use of laboratory animals to determine potential carcinogenicity. In particular, the following points, which are widely supported in the scientific community, should be explained:

• Carcinogenesis is a specific biological phenomenon; most substances are not capable of causing cancer, even when tested at high doses.

• Laboratory animals, such as mice, rats, and hamsters, are appropriate test species.

• Conventional animal test procedures in which high doses (including a maximum tolerated dose) are administered, possibly by a route different than the expected human route, are scientifically valid for assessing human risk.

• The occurrence of benign tumors must be considered an indication of carcinogenicity.

• There is no currently accepted method for determining a threshold or "safe" level of human exposure to a carcinogen.

• Methods now available to estimate human risk quantitatively provide only an approximation of the actual risk.

In supporting the position on animal tests, the committee report said:

Long term animal bioassays are very important in evaluating the carcinogenicity of a substance. Often the test data require independent evaluation, and in some cases, the data were found to be inadequate or incomplete. These long term bioassays are costly as well as time consuming, and they require scientific expertise and special facilities. The number of chemicals that need to be tested is large because many already in commerce have not been tested or they were inadequately tested, and the number of chemicals is increasing.

In regulatory proceedings, in the courts, and among the public, disputes have recurred over the established basis for determining carcinogenicity. Despite agreement among many scientific experts, the following assumptions have been repeatedly (and unsuccessfully) challenged:

—Adequately designed and conducted tests in laboratory animals, e.g., mice, rates, and hamsters, are relevant to a determination of whether a substance is carcinogenic.

—The generally accepted test protocols in which high doses of a test substance are administered to animals, sometimes by a route different than the expected human route of exposure, are valid and relevant to a determination of whether a substance may cause a cancer.

—Benign tumors are significant as an indication of potential carcinogenicity.

Although certain individuals take exception to these points, numerous expert groups endorse them. The dispute in formal proceedings and elsewhere has led to skepticism and confusion for a segment of the public.

The report discussed regulatory priorities and actions:

A substantial number of carcinogens have been identified. As other chemicals already in commerce and new chemicals are tested, some will probably be found carcinogenic. Past regulation of carcinogens has included only a small proportion of those already identified because agency resources were limited, and in general a case by case approach to regulation is extremely time consuming.

The need for each agency to set priorities is clear, even though many actions are dictated by outside factors. Court orders, legislatively mandated deadlines or other legislative provisions, and even some industry decisions constrain an agency's flexibility in setting priorities. To some extent agencies have set priorities on the basis of a number of factors:

• The degree to which there is evidence that a substance is carcinogenic.

• The degree of exposure or special vulnerability in a population at risk.

• Indications of the degree of risk.

• Other kinds of risk associated with exposure.

• Availability of substitutes.

• Availability of engineering or technological controls to reduce exposure.

• The ease of implementation and enforcement.

But the process will likely remain complex, involving outside constraints and the exercise of considerable judgment on many factors, few of which are not plagued with uncertainties.

Toxic substance control laws provide for different types of action—interim actions, actions to deal with emergencies or imminent hazards, labeling or other forms of notice, mandated standards and regulations to restrict use or exposures, and compliance and enforcement actions. These laws also prescribe the public health, environmental, economic, technological, and other factors to be considered in choosing among options and in reaching a decision about how extensive and stringent the action will be. They also vary in their relative emphasis on economic factors and on whether and how the costs and benefits of alternative control approaches should be weighed. The laws also vary explicitly and implicitly in the placement of the burden of proof between government and outside parties.

Some laws—for example, sections of the Federal Food, Drug, & Cosmetic Act, the Clean Air Act, and the Occupational Safety & Health Act give clear direction on the factors to be considered in reaching decisions. Others are less specific and permit considerable flexibility. All this diversity has been criticized and has led to some public misunderstanding. But, it remains to be shown that these different approaches to regulation as dictated by various statutes are not justified by different circumstances, exposures, and classes of substances. Certainly no single specific approach is equally suitable for exposures to potential carcinogens in food, drugs, household

a rider in the bill on the size of the raise top government executives and members of Congress will receive. If Congress takes no action on the pay increase, it will automatically be 12% based on cost of living factors. A proposal to trim the increase to 7% was defeated last week. Another vote was scheduled for later this week on a 5% increase; if that fails HEW employees (and those of other departments still without appropriations) may have to skip a payday and payments for grants and contracts may be delayed.

HSA EXEMPTIONS

Renewal of the Health Planning Act was completed last week when both houses approved the conference report on the bill. The President is expected to sign it.

Cancer Program advocates and others interested in biomedical research were successful in gaining exemption from obtaining certificate of need approval from Health Systems Agencies for most federally supported research efforts. The original act had no such exemptions, which raised the prospect that local HSAs would have to approve most NIH grants and contracts. The delays and hassles that could have been created appeared to be unacceptable, and representatives of the American Cancer Society, Assn. of American Cancer Institutes and others succeeded in getting the two Health Subcommittees to exclude most research programs from the renewal legislation.

The exemption applies to research programs and facilities which are not expected to significantly impact on the delivery of health care in a specific area. It is still possible some construction and cancer control activities would require HSA approval.

Specifically, HSA review will not be required for NIH research grants and contracts which do not change the delivery of health services or distribution or extent of health resources available to persons within the health service area involved, other than those participating in the research. However, if the equipment or facilities provided by the grants or contracts are determined to have potential residual effect after the research has been completed, those projects would require HSA review.

An example would be the contracts NCI will award this week for development of neutron radiotherapy facilities. Those facilities will be used in clinical trials; if the trials are successful, the impact on delivery of health services in those communities would be substantial. HSA review of the contracts apparently will be required.

If neutron radiotherapy does turn out to be significantly better than conventional radiation, the impact will be felt everywhere. Pressures will increase at every institution where cancer is treated to put in neutron machines. This could lead to the most severe test yet of the ability of HSAs to respond to those pressures and do their job of planning the rational development and use of expensive health care facilities.

WHITE HOUSE GROUP TELLS REGULATORS TO IMPROVE ACTIONS ON CARCINOGENS

The Toxic Substances Strategy Committee of the White House Council on Environmental Quality has recommended that federal regulatory agencies take steps to improve their actions on carcinogens; that NCI and other agencies attempt to better educate the public on the use of animals in carcinogenic testing; that use of lab animals to assess the carcinogenicity of chemicals be continued; and that the burden of proof be placed on proponents of use of suspected carcinogens.

A press briefing has been scheduled for Sept. 28 by the White House Regulatory Council at which a "unified plan for identification and action against carcinogens" by all federal agencies will be unveiled.

The committee has released a draft report and stressed that its recommendations "do not necessarily represent the final views of the individual agencies participating in this effort."

Public comments are being solicted. Copies of the report may be obtained by writing: Toxic Substances Strategy Committee, Council on Environmental Quality, Executive Office of the President, 722 Jackson Place N.W., Washington D.C. 20006.

Comments on the findings and recommendations will be received until Oct. 15.

The chapter on "Cancers and Carcinogens: Prevention Policy" is only one of six dealing with toxic substances and their regulation by the government. Others discuss federal chemical information systems, treatment of confidential information, research activities that support regulation, response to chemical emergencies, regulatory programs and their coordination, and international issues.

James Sontag, assistant to the director of the Div. of Cancer Cause & Prevention, is NCI's representative on the committee. Other agencies represented are the Dept. of Agriculture, Dept. of Commerce, Consumer Product Safety Commission, Environmental Protection Agency, Dept. of Energy, HEW (represented by Asst. Secretary for Health Julius Richmond), FDA, National Institute of Environmental Health Science, National Institute of Occupational Safety & Health, Dept. of Interior, National Science Foundation, Occupational Safety & Health Administration, Dept. of Transportation, Dept. of State, and the National Research Council.

The committee's recommendations on cancer prevention:

1. Agencies responsible for the regulation of potential carcinogens should continue to identify and evaluate ways to improve their programs. Streamlining regulatory procedures should be a major goal. Agencies should seek to place the burden of proof in areas of uncertainty on the proponents of the use or exposure to a substance. Specifically, the IRLG agencies, in conjunction with other agencies, should:

products, air, drinking water, and the workplace.

The report acknowledges that prevention should not be the only goal of cancer research.

Prevention deserves more emphasis, but improved methods of detection, diagnosis and treatment are also necessary. Further basic research on the causes and development of cancer is needed to improve means of predicting the carcinogenic potential of a substance, of understanding the contribution of lifestyle to cancers, of detecting and treating cancers, of intervening in the progression of cancers, and of understanding the human characteristics that permit cancers to grow in some individuals but not in others. A primary avenue for prevention is the regulation of potentially carcinogenic substances to reduce or eliminate human exposures.

The report erred in at least one instance, in commenting that "viruses have been implicated in only two kinds of cancer, both rare in the United States." Although it has not been established beyond doubt, viruses are implicated in cervical cancer, which is not rare in the U.S., and in liver cancer, which is uncommon in the U.S. but has much higher incidence in certain other countries.

The report commented on the "growing concern over toxic substances problems:"

Congress has enacted over two dozen regulatory statutes, covering the various means by which toxic chemicals can threaten human health and the environment. The laws are administered primarily by six agencies—EPA, OSHA, CPSC, FDA, Dept. of Agriculture and Dept. of Transportation. The existence of these laws reflects society's conclusion that the unregulated market does not adequately protect human health and the environment from potential hazards from chemical substances, especially when the hazards are subtle, chronic or delayed.

The Toxic Substances Strategy Committee has concluded that the basic approach and structure of these laws are sound. Particularly appropriate is their preventive approach. Prevention is the key to controlling diseases and environmental problems caused by toxic chemicals. Public health and the environment will be adequately protected from chemical hazards only with direct government action to regulate releases and exposures. Most of the statutes employ a precautionary principle, mandating action to limit exposure to a potentially hazardous substance when evidence of the hazard is convincingly suggestive, but not completely certain.

However, implementation of these laws has been slow. Measured against the need, the handful of chemicals regulated to date has been disappointingly small. Budgetary support for federal toxic substances control recently increased, especially for implementation of TSCA. Nevertheless, EPA's Office of Toxic Substances does not expect to catch up with the backlog of existing hazards for many years, and some new hazards may enter the market despite the screening process established under TSCA.

Despite these limitations, many past problems are being overcome, particularly in regard to interagency coordination. Many steps have recently been taken by individual agencies and interagency groups to increase the information base and to make better use of and disseminate available data, to coordinate the testing of chemicals, to increase the pace and consistency of risk assessment and of regulatory activities, to cooperate actively in chemical emergencies.

STUDY SHOWS YOUNG INVESTIGATORS MORE THAN HOLD THEIR OWN IN GRANT AWARDS

Not only are young investigators not discriminated against in the award of traditional (R01) research grants by NCI, but a recent survey indicates that they hold an advantage over their older colleagues in that regard.

John Kalberer, former NCI staff member who is now assistant director of the NIH Office for Medical Applications of Research, reported on his survey in an article which will appear in the October issue of the *Journal of NCI.*

Kalberer evaluated all new R01 applicants, totaling 1,611, considered by the National Cancer Advisory Board in the 1976 fiscal year. Of that number, 406 (25%) were submitted by applicants 35 years old or younger. Ages in that group ranged from 27 to 35. Older investigators, who submitted 1,205 applications, ranged in age from 36 to 84.

Although the older investigators submitted 75% of the total number of new applications (renewals were excluded from the study), they received only 69% of the total dollars awarded.

Kalberer also compared recommendation and award rates for younger vs. older scientists competing for new R01 funds in 1973, 1975 and 1976 fiscal years. In 1973, 74% of new R01 grant applications submitted by young investigators 35 or younger were recommended, as were 54% for older scientists. In 1975, the recommendation rate was 80% for younger applicants and 62% for those over 35; corresponding rates in 1976 were 70% and 61%, respectively.

A similar pattern applied to award rates. In 1973, 56% of the recommended new R01 grant applications submitted by young investigators were funded but only 48% of the applications submitted by older investigators were funded. The 1975 funding rate for young investigators was 65% and for older applicants was 54%. In 1976, it was 53% for younger applicants and 42% for older.

Kalberer noted that the average amoung of dollars awarded to young investigators was significantly lower, by 15%, than the average dollar award to those over 35. "This is explained by the fact that young scientists are historically more modest in their budget requests, perhaps because they believe that it might be presumptuous to ask for more. Furthermore, young investigators tend to request less capital equipment, often a major cost item in large research budgets, possibly because they are unaware that such major pieces of equipment are allowable under an NIH grant."

Kalberer concluded that the "concerns expressed by members of the scientific community and others regarding inequitable funding for young investigators should be lessened by the results of this study. The peer review system at NCI and throughout NIH is

consistently providing a representative number of young scientists with funding support for outstanding research projects through the traditional research grants program. In addition to the fact that many of the institutes offer special programs designed specifically to encourage and support young investigators, the peer review system continues to supply an infusion of new blood through the regular grant award channels. The . . . study should quell further assertions that the peer review system favors the older investigator."

NCI ADVISORY GROUP, OTHER CANCER MEETINGS FOR OCTOBER, NOVEMBER

National Cancer Advisory Board Subcommittee on Centers—Oct. 2, NIH Bldg 31 Rm 6, 1-6 p.m., open.
NCAB Subcommittee on Organ Sites—Oct. 2, NIH Bldg 31 Rm 7, 7:30 p.m., closed.
National Cancer Advisory Board—Oct. 3-5, NIH Bldg 31 Rm 6, open Oct. 3, 1–5 p.m.; Oct. 5, 9 a.m.—adjournment; closed all day Oct. 4.
NCAB Subcommittee on Centers—Oct. 3, NIH Bldg 31 Rm 9, 7:30 p.m., closed.
NCAB Subcommittee on Environmental Carcinogenesis—Oct. 3, NIH Bldg 31 Rm 7A24, 7:30 p.m., open.
NCAB Subcommittee on Special Actions—Oct. 3, closed.
NCAB Subcommittee on Construction—Oct. 3, NIH Bldg 31 Rm 7, 7:30 p.m., closed.
Tumor Progression Symposium—Oct. 3-5, Pick Congress Hotel, Chicago, sponsored by ITR Biomedical Research of Univ. of Illinois and American Cancer Society.
IXth International Symposium on Comparative Research on Leukemia & Related Diseases—Oct. 3-6, Pitsunda, USSR.
1st International Congress on Hormones & Cancer—Oct. 4-6, Universita Cattolica del Sacro Cuore, Rome.
1st International Congress on the Ultrasonic Examination of the Breast—Oct. 8-9, Franklin Hotel, Philadelphia.
FDA Oncologic Drugs Advisory Committee—Oct. 11-12, Parklawn Bldg, Rockville, Md., Rm G, 9 a.m. both days, open.
Future of Cancer Research & Cancer Care—Oct. 12, Boston Faneuil Hall, dedication of the Hubert H. Humphrey Cancer Research Center of Boston Univ., 2:30 p.m., open.
President's Cancer Panel—Oct. 15, NIH Bldg 31 Rm 11A10, 2–5 p.m., open.
EORTC Symposium on Advances in Cancer Chemotherapy—Oct. 18-20, Institut Jules Bordet, Brussels.
American Society of Therapeutic Radiology—Oct. 23-27, New Orleans Marriott, annual meeting.
Importance of Subsets of Normal & Tumor Cell Population in the Management of Cancer—Oct. 24, Roswell Park continuing education in oncology.
National Capital Area Branch of American Assn. for Laboratory Animal Science—Oct. 25-26, Hunt Valley Inn, Md., 9th annual seminar.
Total Perenteral Nutrition—Oct. 26-27, Detroit Plaza Hotel, sponsored by Wayne State Univ. School of Medicine.
Bioethical Issues in Medical Care—Oct. 26-28, Hyatt Regency Hotel, Lexington, Ky., sponsored by Ephraim McDowell Community Cancer Network.
Cancer Control Grant Review Committee—Oct. 28-30, NIH Bldg 31 Rm 8, open Oct. 28 3–3:30 p.m.
Div. of Cancer Treatment Board of Scientific Counselors—Oct. 29-30, NIH Bldg 31 Rm 4, 8:30 a.m., both days, all open.
3rd Annual Cancer Symposium—Oct. 31-Nov. 2, Holiday Inn at the Embarcadero, San Diego, sponsored by Scripps Memorial Hospital Cancer Center.
Clinical Cancer Education Committee—Nov. 7-8, NIH Bldg 31 Rm 10, open Nov. 7, 8:30–9:30 a.m.
Cancer Special Program Advisory Committee—NIH Bldg 31 Rm 8, open Nov. 8, 9–10 a.m.
Molecular Actions & Targets for Cancer Chemotherapeutic Agents—Nov. 8-9, Sheraton Park Plaza Hotel, New Haven, Conn., 2nd annual Bristol-Myers Symposium.
Tumors Involving the Skin—Nov. 8, Roswell Park continuing education in oncology.
Status of the Curability of Childhood Cancers—Nov. 8-9, M.D. Anderson 24th annual Clinical Conference.
Div. of Cancer Biology & Diagnosis Board of Scientific Counselors—Nov. 16-17, NIH Bldg 31 Rm 11A10, open Nov. 16 9 a.m.–5 p.m., review of Laboratory of Pathophysiology.
Symposium on Diagnosis & Treatment of Bone Tumors—Nov. 17-18, Memorial Sloan-Kettering Cancer Center, physicians only. Contact A.G. Huvos, Symposium Coordinator, Memorial Hospital, New York 10021.
National Cancer Advisory Board—Nov. 26-28, NIH, annual program review.
Clearinghouse Chemical Selection Subgroup—Dec. 3, NIH.
4th annual Asian Cancer Congress—Dec. 4-8, Bombay. Contact Charles Sherman, Dept. of Surgery, Univ. of Rochester Medical Center, Rochester, N.Y. 14642.
Pacific Endocurietherapy Society—Dec. 5-7, Mazatlan.

NCI CONTRACT AWARDS

Title: Prototype comprehensive network demonstration project in breast cancer, one year renewals
Contractors: Univ. of Vermont School of Medicine, $93,176; Dartmouth College, $83,297; New England Medical Center Hospital, $149,989; Wilmington Medical Center, $107,052; Univ. of Alabama, $28,621; Research Foundation, State Univ. of New York, $98,370.

Title: Psychological aspects of breast cancer, four month extension
Contractor: SRI International, Menlo Park, Calif., $100,087.

Title: Intrapleural BCG after primary surgery for lung cancer
Contractor: Albany Medical College, $279,650.

Title: Cancer Control program for clinical cooperative groups, five month extension
Contractor: American College of Radiology, Chicago, $277,905.

Title: Breast Cancer Detection Demonstration Project, 18-month extension
Contractor: Cancer Research Center, Columbia, Mo., $430,666.

Title: Cancer incidence in the South Pacific
Contractor: Univ. of Southern California, $130,142.

The Cancer Letter _Editor Jerry D. Boyd
Published fifty times a year by The Cancer Letter, Inc., P.O. Box 2370, Reston, Virginia 22090. Also publisher of The Clinical Cancer Letter.