THE CANCER LETTER

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Vol. 5 No. 9

March 2, 1979

Subscription $125.00 per year

BROADER CHEMICAL DISTRIBUTION BY NCI AWAITS HEW BUREAUCRACY; RECIPIENTS MAY HAVE TO PAY

Distribution of reference chemicals by NCI to investigators other than contractors and government agencies is probably at least six months away; it could be longer, if the HEW bureaucracy moves as sluggishly as it is frequently capable of doing.

The renewal of the National Cancer Act last year included an amendment adding chemicals to biological materials as items which NCI would be permitted to offer to scientists to help them carry out cancer-related

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In Brief

ACS MASSACHUSETTS DIV. OFFERS $1,500 GRANTS TO IMPROVE COMMUNITY HOSPITAL CANCER CARE

ACS MASSACHUSETTS Div. has established a unique program to help community hospitals improve cancer care. The division's Clinical Projects Grants Program provides up to $1,500 each for such projects as retrospective studies, development of teaching materials, studies involving new techniques of treatment and care. The grants are available to Massachusetts physicians, nurses, social workers and other health professionals involved in cancer management or education. . . . **NATHANIEL YOUNG**, chief of the Viral Oncology & Molecular Pathology Section of NCI's Div. of Cancer Biology & Diagnosis, was drowned last month while on vacation in the British Virgin Islands. He was 41. . . . **BRUCE AMES**, whose in vitro carcinogenesis testing system was a major contribution in the field of environmental carcinogenesis, was inadvertently omitted from the list of National Cancer Advisory Board members who meet the requirements of the Cancer Act amendment as one who is "knowledgeable in the environmental causes of cancer." So make it four of the present NCAB members who could be considered in the mandate calling for five environmental carcinogenesis experts on the Board. . . . **JOHN HELLER**, director of NCI from 1948 to 1960, has been inducted into the South Carolina Hall of Fame (for South Carolina natives). Heller has also been director of Memorial Sloan-Kettering Cancer Center and now is a special consultant to NCI on international activities. . . . **MORTIMER ELKIND**, Argonne National Laboratory, received the 28th annual E.W. Bertner Memorial Award during M.D. Anderson's annual symposium on cancer research. **CRAIG SPELLMAN**, Univ. of New Mexico, received the 8th annual Wilson S. Stone Memorial Award during the symposium. . . . **KENNEDY HEARING** on the cancer program is scheduled for two days next week, March 5 and 7, starting at 9:30 a.m. both days in the Senate's Dirksen Bldg, room 4232. . . . **PRESIDENT'S CANCER** Panel meeting March 8, scheduled to start at 9:30 a.m., has been moved to 10 a.m. HEW Secretary Joseph Califano will be speaking at 9 a.m. that day in the NIH Clinical Center auditorium. His topic: the NIH budget.

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TOSCA DRIES UP SOURCES OF MANY CHEMICALS; MORE PRESSURE ON NCI

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research. The fact that some investigators could get chemicals free from NCI while others could not was confusing and irritating, to say the least.

It also threw up a serious roadblock for some researchers. All too often NCI would have the only supply of a compound, unless the investigator was willing and able to pay for a production run by the manufacturer; the cost can be prohibitive.

NCI contractors did not have that problem. A quirk in the law permitted them to receive the chemicals, even if their use for them had no relation to their contract supported work. Grantees could not legally be supplied with free chemicals even when they were necessary to conduct the research for which their grants were awarded.

The amendment changed all that, or will when it is implemented. NCI will be permitted to distribute chemicals to anyone who can demonstrate a valid scientific use for them.

It is possible, however, that NCI will be required to charge for the chemicals (and possibly also the biological materials—viruses, research animals). The amendment to the Act includes a provision giving the HEW secretary the option of making such charges.

The amendment actually places the distribution authority in the hands of the secretary, rather than NCI or NIH. To implement the change, NCI had to prepare a statement of delegation of authority for Secretary Joseph Califano. That was done, and it went up through NIH, assistant secretary for health and other intervening levels. But Califano decided that chemical distribution should be included in a package with other delegations of authority in the legislation, which included other biomedical and mental health authorizations.

NCI had to work up a package with all the other agencies involved, and that will soon be on its way. "Hopefully, we will be ready to go in six months," an NCI staff member said. If Califano decides to pick up the option to charge for chemicals, that probably would delay implementation for additional months.

NCI's Div. of Cancer Cause & Prevention maintains a repository of about 350 compounds, managed by IIT Research Institute in Chicago under contract with the division. The contractor maintains the central holding facility, checks on the long term stability of each compound, and makes shipments on order from NCI. Express delivery services are used; none are ever sent through the mail.

Nine contractors supply compounds to DCCP for its intramural research. Two produce polycyclic metabolites and seven provide most of the other compounds through basic ordering agreements. Surplus chemicals left over from the Carcinogenesis Testing Program go into the repository. It is from this pool that compounds are made available to non-NCI investigators.

The nine contractors plus the IITRI contract will cost NCI from $2.5 to 3 million this year. No breakdown has been made on the cost of supplying chemicals to non-NCI investigators. Compounds used in the Carcinogenesis Testing Program are purchased independently by that program and the cost is not included in the $2.5-3 million cited above. Those figures do not include the value of surplus chemicals donated by the testing program.

The distribution program originally was established to make available exotic, rare compounds that could not be obtained anywhere else.

However, the Toxic Substances Control Act and the devastating experience involving the small subcontractor in Virginia who produced kepone has dried up many sources of the more common chemicals. It is too costly and risky, as perceived by some manufacturers, to produce toxic chemicals anywhere but in their own plants, and that requires production in major quantities. This has resulted in some NCI contractors requesting the more common chemicals from the repository. But NCI in general will provide compounds only in quantities needed for analytical standards and not in amounts required for a bioassay.

David Longfellow, program director of DCCP's Chemical Resources Section, said he was trying to develop a mechanism through which non-NCI investigators could purchase compounds directly from the manufacturers under NCI's basic ordering agreements.

Longfellow's section also attempts to locate sources from little known firms around the world, to help investigators obtain hard to find chemicals.

Longfellow said the format for requesting chemicals from the repository probably will be the same as it is for contractors and investigators in other government agencies. The request must include the name of the compound, of course; how much is needed (for some, the quantity is restricted, while for most up to 100 milligrams will be provided); a short description of the project and why the chemical is needed; an acknowledgement that the compound requested is a hazardous substance, which must be cosigned by the institution's safety officer; and the major source of support for the project.

When HEW does give NCI permission to proceed with distribution of chemicals to those who have not been able to get them, it will be widely advertised, Longfellow said.

DCCP Director Gregory O'Conor said he has initiated a study to determine all resources the division has available for cancer research which is or will be offered to all investigators. The study will attempt to develop cost estimates and will be presented to the division's Board of Scientific Counselors.

NEW BREAST CANCER TASK FORCE FOILED BY SNOW IN RFP-RFA IDEA GENERATION

The Breast Cancer Task Force, meeting for the first time under a non-NCI staff member as chairman and with a new role as an advisory group without contract review responsibilities, was "snowed out" of of the first big job it faces in that role–generation of ideas for grant RFAs and program announcements and contract RFPs.

One of the snowstorms that nearly paralyzed Washington D.C. last month cut short the task force sessions in which ideas for new projects were to be discussed. Jane Taylor, BCTF executive secretary, said an effort would be made to schedule another meeting for RFP-RFA-program announcement generation in the spring, probably early May.

The BCTF is located within the Div. of Cancer Biology & Diagnosis. Composed of both NCI staff members and nongovernment scientists, it was responsible for initiating programs in basic and clinical research and for reviewing contract proposals. The contract mechanism was the only one available to the BCTF, except for a brief and not very satisfactory fling with Cancer Research Emphasis Grants. Nathaniel Berlin, then DCBD director, and subsequently Pietro Gullino, chief of DCBD's Laboratory of Pathophysiology, served as chairmen of the task force.

Then came NCI's reorganization, in which program operations were separated from review responsibilities. Task force contracts are now being reviewed by committees under direction of the Div. of Extramural Activities. The task force now will have program advisory responsibility for a number of grants in the breast cancer research area; those will be reviewed by the appropriate NIH study sections.

The new chairman is Eugene DeSombre, of Ben May Laboratory at the Univ. of Chicago.

"Where are we going now with the task force?" DCBD Director Alan Rabson asked, and then proceeded to answer in a discussion with BCTF members. "Our division is committed to a major program in breast cancer research. We do recognize the importance of the multidisciplinary approach that you brought to the program in the past and we hope to continue it."

The task force's efforts will cut across NCI division lines, Rabson indicated. "I have the assurance of all other division directors that the task force will be looked upon as a resource for all of them. You will be involved in many of their programs. Dr. Upton looks on the task force as his advisory committee. Your advice will go across division lines to the NCI director."

Rabson said that BCTF contracts in FY 1979 will total $6.8 million. New and competing renewal grants in breast cancer research will be assigned to the division as they are funded. "If breast cancer grants are of high quality and get good priority scores, it will increase the total NCI commitment to breast cancer research," Rabson said.

Many BCTF research contracts in general will be phased out, in line with NCI's goal of reducing the number of those contracts and switching the money to grant support.

Not all research contracts will be dropped, however.

"In the application of new research findings to the clinical setting we expect to decide in each case the optimal mechanism, either grant or contract," Rabson said, "limiting the use of RFPs and contracts to projects which require considerable direction or control or acquisition projects–resource contracts, such as those associated with biologic markers programs, and the tumor bank. We are making plans to assess the status and future potential of program areas with workshops, discussions, RFAs (requests for grant applications), and program announcements (a general statement of NCI's interest in a specific area)."

Rabson said NCI is planning a consensus meeting on the role of receptors in the management of breast cancer, and the task force will be actively involved in that meeting.

"The task force should be recognized by NCI as the major focus for breast cancer projects in the institute. I can assure you of that," Rabson said. "You will have the opportunity for input and consultation with programs in the other divisions, to coordinate a uniform approach to problems of breast cancer.

"It is essential that the task force and breast cancer program continue to have a budget. I assure you that you will have that.

"The interdisciplinary nature of breast cancer research requires that NCI project review committees for new and continuing contract programs be constituted as multidisciplinary groups. We expect the review division under Dr. (Thomas) King, DEA director, and Dr. (David) Joftes, chief of the Review & Referral Branch, will be cooperative and helpful and will be responsive to these suggestions. As in NIH review in general, we can make suggestions to them (on the makeup of review committees), but the autonomy of the review branch will be preserved. I expect them to be cooperative and helpful."

DeSombre reviewed the history of the task force and discussed its new role. "Although the role has been modified and its method of operation will be different than has been our experience in the past, we will have if anything a greater responsibility, and, I believe, a greater flexibility to meet this responsibility."

DeSombre noted that under Gullino, "we initiated RFPs, wrote them, review the proposals and monitored the contracts. We saw the generation of a very effective thrust in breast cancer, and identified people to carry out the programs. . . . The RFPs generated a

large number of proposals, and there was tremendous competition for the contracts. Among the accomplishments were the development of multidisciplinary groups studying breast cancer, a major asset, and the translation of basic discoveries to clinical settings.

"We have now completely separated the initiation of programs from review. We will be responsible for the initiation phase. It may not be as efficient, but in the long run, it is a very logical progression of events in the history of the task force."

In the past, the task force's contract programs "were a separate entity from other NCI studies," DeSombre said. "Now, the Breast Cancer Task Force will be the major focus of breast cancer studies in NCI. With our broadened responsibility, we will have to evaluate the overall impact of studies in breast cancer, look at the grants program to see what is being done by various investigators and on the basis of that, use the monies that are available to encourage new aspects into the whole program.

"Our flexibility is increased," DeSombre continued. "Before, we had only the contract mechanism. Now we are not forced to generate basic research with contracts. Now we can use the grant mechanism to elicit proposals in new areas we feel are best supported by grants."

CLEARINGHOUSE FINDS FIVE COMPOUNDS ARE POTENTIAL HUMAN CARCINOGENS

The Clearinghouse on Environmental Carcinogens Data Evaluation/Risk Assessment Subgroup, considering bioassay reports on 19 compounds, concluded that five of them were carcinogenic with potential risk for humans. One other was determined to be a carcinogen in animals but no statement was made on possible human risk; test results were inconclusive on two others, and one was recommended for retesting; and 11 were found not carcinogenic.

The five compounds which were potential human carcinogens:

Azobenzine, an agricultural chemical used extensively against ticks and mites. Subgroup Chairman Arnold Brown agreed that the compound was carcinogenic in rats. He said the bioassay was properly designed and conducted, and he concluded that azobenzine was a potential carcinogenic risk to humans. Subgroup member Louise Strong agreed that the study was straightforward, and the report was approved unanimously.

2,4,5-trimethylaniline, a component mixture of aramatic amines used in red dye No. 1 which has been banned as a food additive by FDA. Brown said the compound was carcinogenic in both sexes of rats and in female mice. This study also was well designed and conducted, Brown said, and the compound was a possible human carcinogen. Clearinghouse member Verne Ray said the results were sufficiently significant to obviate any experimental shortcomings. The motion to accept the report was unanimously approved by the Subgroup.

2,4-diaminotoluene, used extensively in hair dyes. Subgroup member Henry Pitot said the compound was carcinogenic in both sexes of rats and in female mice. Increased incidences of hemangiomas were also observed in male mice, but were not statistically significant. Several other tumor types were seen but were not significant. Because of the wide variety of neoplasms associated with the treated animals, Pitot said the compound was a potent carcinogen and was a potential risk to humans. Subgroup member Michael Shimkin emphasized the potential hepatonephrotic hazard of the compound and pointed out the increased incidence of lung tumors in treated animals. The report was approved without objection.

Dimethyl terephthalate, a basic monomer widely used in the manufacture of synthetic fibers. Regulatory action against this compound would have a significant impact on that industry.

Clearinghouse member William Lijinsky said the compound was not carcinogenic in either sex of rats or female mice but in male mice, it induced a statistically significant incidence of lung tumors. He concluded that it could be considered as posing some carcinogenic risk to humans. Subgroup member Joseph Highland agreed, but Shimkin questioned the significance of the lung tumors since an elevated incidence was seen in only one sex. The motion to accept the report was approved without objection.

N-nitrosodiphenylamine, a vulcanization accelerator used by the rubber industry, as a chemical intermediate in manufacture of dyes and pharmaceuticals. Highland agreed the compound was carcinogenic in rats but not in mice. There were no outstanding experimental shortcomings, and the compound may be a potential human carcinogen, Highland said.

Pitot questioned whether the bladder tumors in the rats were related to the presence of calculi. NCI pathologists responded that no calculi were reported by the examining pathologist and, at this point, there was no way of determining if they were specifically sought. Highland argued that since a carcinogenic effect was demonstrated, the report should stand on its own even though the mechanism by which bladder tumors were induced is unknown.

Lijinsky said the compound is a classical, non-biologically active nitrosamine. He suggested that the test compound may have nitrosated an amine present in the food which resulted in the formation of a carcinogenic nitrosamine whose target organ was the bladder. Because of that possibility, Lijinsky urged caution in the interpretation of the results of the study for man. He recommended the compound be retested using a diet free of nitrosatable amines in the diet. The motion was approved unanimously.

The compound which the bioassay found was carcinogenic in rats and mice but on which no statement was made concerning a threat to humans was 2,4,6-trichlorophenol, a fungicide and wood preservative.

Butylated hydroxytoluene (BHT), used extensively as a food preservative and in cosmetics, was recommended for retest by the subgroup. Highland questioned the significance of the increased incidence of lung tumors observed in the low dose treated female mice. He wondered if the lung tumors in the high dose treated females might become statistically significant when compared with historical controls. He pointed out other studies, referenced in the report, indicating that BHT may induce lung tumors. Given the data from this bioassay and other studies, Highland expressed concern that the conclusionary statement in the report, that BHT was not carcinogenic in rats and mice, was worded too strongly. Finally, Highland noted that almost nine million pounds of BHT were produced in 1976 for use in foods. Because of the large exposure, he emphasized the need to gain the best possible understanding of the significance of the bioassay data.

Richard Griesemer, director of the Carcinogenesis Testing Program, said that the mean program-wide incidence of lung tumors in male historical controls was about 11.7% and in females about 4.4%. There is considerable variation around the mean for lung tumors, he said. Regarding significance of the response, Griesemer said that greater credence could have been given to the findings if the high dose treated female mice also had had a statistically significant increase in lung tumors. Without it, however, the possibility of a false positive in the low dose treated females was increased. It was pointed out that BHT appears to be a promoting agent in the experimental induction of liver and lung tumors.

Brown moved that in view of the widespread human exposure to BHT in foods, evidence of its hepatotoxicity, and a suggestion of its tumorigenic effect in the lung, the compound be considered for retest. The motion was accepted unanimously.

The subgroup found that the evidence against ethyl tellurac was not strong enough to warrant a conclusion that it was carcinogenic, as the report indicated. Strong commented that a dose related increase of mesotheliomas in rats was not statistically significant. She questioned if the finding was sufficient to call it "suggestive of carcinogenicity" as concluded in the report. An increase in the incidence of adenomas of the lacrimal gland was also found in mice, which was statistically significant when compared with historic controls. Strong said the findings probably were not adequate for basing a firm conclusion on carcinogenicity.

Shimkin emphasized that the major finding was benign tumors of the lacrimal gland in mice. Since the natural progression of this tumor type is unknown, he argued that it was not possible to draw any conclusion on the carcinogenicity of the compound. He recommended that a revised conclusion not include the term carcinogenic. It was agreed that the staff would revise the language in the report's conclusion to reflect the substance of the subgroup's discussion.

Compounds found not carcinogenic in the program were tetraethylthiram disulfide, 4-chloro-o-toluidine HCL, diazinon, calcium cyanamide, (2-chloroethyl) trimethylammonium chloride, methyl parathion, lead dimethyldithiocarbamate, sodium diethyldithiocarbamate, phthalic anhydride, phthalamide, and aldicarb.

NCI PROCEEDS WITH BLADDER CANCER STUDY; GROUP SAYS SACCHARINE 'SAFE'

An organization calling itself the "American Council on Science & Health" held a press conference this week in Washington D.C. to announce its conclusion "that the total evidence from numerous animal and human studies of saccharin indicates there is no known risk to the human population from the use of saccharin-containing foods in normal dietary amounts."

ACSH recommended that saccharin be recertified as a safe substance and should remain approved as a food additive for use in foods, beverages and drugs without the need for a special warning label.

Meanwhile, NCI is in the last eight weeks of data collection in its survey of bladder cancer patients to attempt to determine if there is any epidemiological evidence of association between that disease and artificial sweeteners. The survey, conducted by the Environmental Epidemiology Branch, will have 3,000 cases of bladder cancer and 6,000 controls. Robert Hoover, head of the Environmental Studies Section, is in charge of the survey.

The bladder cancer cases and controls are being collected from the nine geographical regions involved in the SEER program and from the entire state of New Jersey. The cancers will be cases newly diagnosed during 1978, and controls will be samples of the general population.

Interviews will be conducted with patients and family members to ascertain lifetime use of artificial sweeteners—cyclamates as well as saccharin—along with other relevant bladder cancer risk factors, such as smoking, occupation, drinking water, place of residence, use of hair dyes, and coffee drinking.

The Food & Drug Administration two years ago announced that studies had demonstrated saccharin was a carcinogen in animals and proposed that it be banned as a food additive. FDA had no choice; the Delaney amendment requires automatic bans of food additives found carcinogenic in animals.

The artificial sweetener industry and diabetic groups attacked the tests as not being conclusive, but FDA proceeded and came up with suggestions that perhaps saccharin could be permitted as a table top sweetener, purchased as either an over the counter drug or on prescription. Those were not acceptable solutions to the critics, who persuaded Congress to pass legislation which established an 18 month mora-

torium on any FDA action against saccharin.

The moratorium will expire at the end of May, and bills have been introduced to extend it. Purpose of the moratorium was to permit NCI sufficient time to complete the epidemiological study.

That study, including the interviews and analysis, probably will not be completed for several more months after the moratorium expires.

Congress is planning new hearings on revision of the Delaney amendment and on food safety policy in general. FDA has indicated to Congress that it does not want to handle the saccharin and Delaney amendment issues separately from other considerations of food safety policy and will not take action against saccharin until the hearings have been completed.

The American Council on Science & Health claims to be an independent nonprofit organization funded by foundation grants and contributions from individuals, community and government agencies. It is "an independent association of scientists promoting rational evaluations of the relationships among chemicals, the environment, and human health."

Elizabeth Whelan, a research associate at Harvard School of Public Health, is executive director and a member of the Board of Directors. Other directors are Fredrick Stare, professor of nutrition at Harvard; Joseph Murphy, executive vice president of Continental Corp.; Thomas Jukes, professor of medical physics at the Univ. of California (Berkeley); and Norman Borlaug, with the International Maize & Wheat Improvement Center.

ACS STUDY SHOWS LOW TAR CIGARETTES CAUSE FEWER ABNORMALITIES IN LUNG

A new American Cancer Society study has shown that precancerous abnormalities in the bronchial tree occur far less often in males who smoke relatively low tar/nicotine cigarettes than in those who smoke cigarettes relatively high in tar and nicotine, and that among non-smokers studied they do not occur at all.

The findings, by Oscar Auerbach of the Veterans Administration Hospital in East Orange, N.J., and E. Cuyler Hammond and Lawrence Garfinkel of ACS, were published in the *New England Journal of Medicine.*

On the basis of their comparisons under the microscope of 24,475 tissue samples, from 445 men who died of causes other than cancer during the years 1955-60 and 1970-77, the authors comment that decreases in occurrence of carcinoma in situ between the two time periods "should presage a decline in lung cancer death rates of cigarette smokers at some future date."

LaSalle Lefall Jr., president of the American Cancer Society, said the study tends to confirm earlier conclusions that high tar/nicotine cigarettes are related to higher death rates from lung cancer.

He added that the findings may help to explain why, among younger males, there are indications that the nation's lung cancer death rate already may have started to taper off, although female lung cancer death rates remain spectacularly on the rise.

"If the public hadn't accepted the conclusions of earlier studies and demanded lower tar/nicotine cigarettes, such an optimistic report wouldn't have been possible today," Leffall said.

Leffall cautioned that "the nation's guard against cigarette health hazards must not be allowed to relax, because if it does relax, the good that has been accomplished will be undone."

He said that while findings of the new study suggest a way for smokers to reduce their lung cancer risk by switching to low tar/nicotine cigarettes if they find it impossible to quit entirely, the best way to escape the risk of lung cancer "is still not to smoke at all."

"There's no such thing as a threshold of safety," he said. "There is no safe cigarette. An estimated 80% of those who die from lung cancer have cigarette smoking histories. This year cigarette smoking is expected to cost nearly 100,000 American lives from lung cancer alone. Lung cancer continues to be the most preventable of all major cancers, because most lung cancer can be prevented by not smoking cigarettes."

The new research report focused only on precancerous changes in the bronchi, and did not investigate the effects of cigarettes, whether of high or low tar/nicotine content, on other forms of cancer, heart and circulatory disease or emphysema.

The ACS study supports the conclusion of the controversial report published last year by Gio Gori, former NCI Div. of Cancer Cause & Prevention deputy director and also former director of the institute's Smoking & Health Program. Gori wrote then that the lower levels of tar and nicotine in modern cigarettes made a pack of the average present brand no more hazardous than two cigarettes of the pre-1960 brands. Statistically, that would mean that a smoker would not incur an increased health hazard by using no more than a pack a day of the low tar and nicotine brands, Gori said.

Although Gori was careful to say that it was still safer not to smoke at all, he was roundly criticized by HEW Secretary Joseph Califano, NCI Director Arthur Upton and others. Gori enrolled in a master of public health program at Johns Hopkins shortly thereafter, although remaining on the NCI staff with the Smoking & Health Program. Upton and Gori agreed that his change of jobs had nothing to do with the controversy but rather was related to the appointment of Gregory O'Conor as DCCP director, with O'Conor preferring to select his own deputy.

Since Gori is protected by civil service, NCI will have to find a suitable position for him when he finishes his Hopkins studies in June.

RADIUM SOCIETY'S 61ST ANNUAL MEETING MARCH 4-8 IN LOS ANGELES

Frederick George III, professor of radiology and director of radiation medicine at the Univ. of Southern California School of Medicine, will discuss "Advances in the Management of Genito-Urinary Malignancies" in his presidential address at the 61st annual meeting of the American Radium Society.

The meeting will be held in Los Angeles Bonaventure Hotel March 4-8, with Alfred Ketcham presiding.

Oliver Beahrs, professor of surgery at Mayo, will present the Janeway Lecture on "The Treatment of Squamous Cell Epithelioma of the Anus" at 9 a.m. on March 8. The Resident's Award Essay will be given by Dennis Devereux, of the NCI Surgery Branch, on "Time on Wound Healing in the Rat" at 11:25 a.m. March 8.

Scientific sessions will include:

Recent developments in the interdisciplinary management of cancer of the breast; new modalities for local control in interdisciplinary cancer management; new developments in interdisciplinary management of head and neck cancer; interdisciplinary management of pediatric cancer; interdisciplinary management of urologic cancer; evaluation and treatment planning in interdisciplinary cancer management; interdisciplinary management of cancer of the rectum and anus; and radiation responses and reactions in interdisciplinary cancer management.

A panel discussion will be held on "Newer Techniques and Technology for Evaluation and Treatment Planning in Interdisciplinary Cancer Management.". A special symposium is scheduled on "The Interdisciplinary Management of Malignant Melanoma Emphasizing New Approaches."

Another special symposium will wind up the meeting, with the topic, "Care and Support of the Cancer Patient."

NCI CONTRACT AWARDS

Title: Clinical evaluation of immunodiagnostic tests for cancer
Contractor: Georgia State Univ., Atlanta, $75,720.

Title: Production and detection of antibodies to chemical carcinogens and other small molecules of interest in cancer research, continuation
Contractor: Brandeis Univ., $138,000.

Title: Endocrine rhythms in populations, supplemental agreement
Contractor: Univ. of Minnesota, $82,680.

Title: Investigational studies of gastrointestinal cancer, modification
Contractor: Mayo Foundation, $105,000.

RFPs AVAILABLE

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

RFP 223-79-2270

Title: *Detection of mycotoxins by immunological techniques: Preparation of three hydroxylated aflatoxin-protein conjugates*
Deadline: *Approximately April 1*

Suitable assay procedures for detection and quantitation of aflatoxins in biological fluids and times. Such procedures should be amenable for use on large numbers of samples, easily adaptable to automation, and should be extremely sensitive in order to be applicable to small size samples.

It is the desire of FDA to evaluate a series of aflatoxin derived antigens in the production of antibodies for use in a radio and/or enzyme immunoassay for aflatoxins. FDA has a requirement for a contractor to prepare and deliver the following: Three hydroxylated aflatoxin derivatives, (1) aflatoxin B2A, (2) aflatoxicol, and (3) a third to be determined later, to be derivatized with reagent from one to three carbon chain length. These derivatives will then be conjugated to bovine serum albumin and to an enzyme.

The contemplated period of performance is two years. The prospective contractor must include the following information in his proposal: 1. Detailed procedures for modification to its hydroxylated form. 2. Scientists involved must have proven prior experience in organic symthetic work. 3. The contractor's facilities must be adequate to handle toxic substances.

Food & Drug Administration
Attn: B.C. May
HFA-511
5600 Fishers Lane
Rockville, Md. 20857

RFP NCI-CM-97256

Title: *Preparation of radiolabeled materials*
Deadline: *Approximately April 11*

The objective of this project is obtaining radiolabeled compounds of high purity via synthesis, fermentation, etc., in 1 to 50 millicuries quantities. The major emphasis will be on the preparation of the de-

sired labeled compounds via synthetic procedures and will involve a wide variety of compounds, such as heterocyclic compounds, alkaloids, folic acids, alkylating agents, nucleosides, purines, pyrimidines, nitrosoureas, etc.

Compounds required may include one or more of the following radioactive elements: carbon, tritium, deuterium, sulfur, phosphorous, iodine, nitrogen, etc. Methods will be available for "cold runs" in many but not all instances. Many of the materials may be highly toxic and potentially carcinogenic, in addition to the hazard of radioactivity. Adequate containment and safety facilities must be available. All materials must be completely characterized and assayed as to identity, purity, and radiopurity. A well-instrumented analysis laboratory and adequate library facilities must be available.

The principal investigator must be trained in organic, medicinal, or radio-chemistry, preferably at the PhD level or equivalent, from an accredited school with extensive experience in radio-chemical synthesis. The principal investigator must be named and all technical personnel must be assigned to the project a minimum of 50% of the time, preferably 100% of the time. The contractor must furnish all equipment necessary to safely perform the work.

It is anticipated that the project will require a total of seven technical man-years of effort per year. The effort will be undertaken in two contracts of 3.5 technical man-years of effort each.

RFP NCI-CM-97255

Title: *Production of bulk chemicals and drugs*
Deadline: *Approximately April 16*

The objective of this project is the preparation by synthesis of quantities of bulk chemicals and drugs (1 gram to multikilogram) for use as potential anticancer agents. The major emphasis will be on the preparation of the desired material in multikilogram scale and will involve resynthesis and scale-up from the chemical literature. Methods will be available for small scale runs in many but not all instances. Process development for scale-up will be required.

The facilities must have the capacity for performing all types of chemical synthesis and must be able to demonstrate organization experience in this area. A variety of large scale and pilot plant facilities will be required. The minimum requirement is a well equipped pilot plant with equipment up to and including a 500 gallon glasslined reactor and necessary supporting equipment and facilities. All products must be completely assayed as to identity and purity.

A well instrumented analysis laboratory and adequate library facilities must be available. The principal investigator must be trained in organic or medicinal chemistry, preferably at the PhD level or equivalent, from an accredited school with extensive experience in chemical synthesis and process development. The principal investigator and the principal assistant must be named and assigned to the contract 100% of the time. All other technical personnel must be assigned to the project a minimum of 50% of the time, preferably 100% of the time. It is anticipated that the project will require a total of nine technical man-years of effort per year. The effort will be undertaken as a single contract.

Contracting Officer for above two RFPs: Jack Palmieri
Cancer Treatment
301-427-8125

RFP NO1-CN-95442-25

Title: *Identification of effective cancer control promotion approaches directed to the general public*
Deadline: *Approximately May 1*

NCI's Div. of Cancer Control & Rehabilitation intends to solicit contract proposals to identify and develop effective promotional approaches to be used in the transfer of cancer control information to the general public. To accomplish this the contractor will review, analyze and compile successful approaches used in selected health information promotions, examining these in relationship to consumer health behavior.

A main product of this study will be a practical, conveniently organized compendium of principles and guidelines to assist in the planning and implementing of cancer control information transfer strategies. The work required by this RFP is:

1. Compilation of a reference base of relevant knowledge, including literature in the areas of information diffusion and transfer and health behavior concepts. 2. Obtaining expert opinion on the process and results of a limited number of health-related promotion efforts. 3. Analysis of the approaches studied. 4. Development of content and format of a useful handbook embodying the study's conclusions and recommendations on promotion categories and resources.

Major factors in selecting contractors to conduct this study will be quality and creativity of design of approaches and format; experience and expertise in stated areas of principal investigator and staff.

Contract Specialist: James Prather
Control / Rehabilitation
301-427-7984

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.