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House-Senate Conferees Approve $6 Million Centers Amendment To Supplemental Appropriations Bill

A House and Senate appropriations committee conference has passed an amendment to the fiscal 1986 supplemental appropriations bill that will provide an additional $6 million

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In Brief

Hisserich Named USC Assistant VP, Replaced By Rideout At Cancer Center; DeVita Assures Groups

JOHN HISSERICH, deputy director of the Univ. of Southern California Cancer Center, will become assistant vice president for health affairs July 1. He will be replaced by Phyllis Rideout, who will hold the position of administrative director of the center. Rideout has been a program administrator for the center for three years. Hisserich will continue to be responsible for some cancer center community activities. . . . **"AS ALWAYS**, nothing will be done without a full and frank discussion," NCI Director Vincent DeVita, referring to proposed changes in the clinical cooperative groups, said at the recent meeting of the Div. of Cancer Treatment Board of Scientific Counselors. "The debate we have had so far has been highly useful. Something will emerge that we can all agree on." DeVita was director of DCT when a similar lengthy debate resulted in some changes in 1980. Those discussions "had a very good effect last time. That's why we kept them going for two years," he said. . . . **RICHARD ADAMSON**, director of the Div. of Cancer Etiology, recently accompanied former DCE advisors Gilbert Omenn and Curtis Harris on a site vist of the division's contractors in China. NCI assisted research there includes studies on mycotoxins, lung cancer in women and the role of viruses in cervical cancer, liver cancer and leukemia in that country. Some NCI advisors have worried about how effectively those contracts are being performed by the Chinese. "The discussions were open, frank, friendly and stimulating," Adamson said. "From what we could ascertain, the contracts and research are being carried out in an excellent scientific and administrative manner". . . . **NCI'S OFFICE** of Cancer Communications is recruiting a new chief of the Reports & Inquiries Branch to replace Robert Hadsell, who leaves next month to become director of public information at Fox Chase Cancer Center. It's a GS-14 position; those interested should contact OCC Director Paul Van Nevel, 301-496-6631.

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Centers Amendment To Go To Full House And Senate Floors This Week

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to fund cancer centers. Offered by Rep. Silvio Conte (R-MA), the amendment was originally rejected by the Senate, but the House-Senate conference committee accepted the resolution in a meeting last week. The supplemental appropriations bill is expected to go before the full House and Senate sometime this week.

The amendment states that the peer review process should be used in awarding the $6 million to centers.

Only six of the 10 cancer centers whose core grants were recompeted in the current fiscal year have been assured of funding--Jackson Laboratory, Albert Einstein, Univ. of Rochester, Dana-Farber, Johns Hopkins and Northern California Cancer Program. Those all had priority scores up to 178, when the money budgeted for cancer center support grants ran out. One new center at the Univ. of Utah will be funded, and another at the Univ. of Kentucky was approved but did not make the 178 payline. A center planning grant for a consortium of minority medical schools will be funded.

Funding for four other centers over that score appeared unlikely unless more money became available--Vermont Regional Cancer Center, Fels Research Institute, Ohio State Univ. Comprehensive Cancer Center and Georgetown Univ. Vincent Lombardi Cancer Research Center.

NCI Director Vincent DeVita told the National Cancer Advisory Board that a reprogramming request for $5.1 million was being prepared that would fund three of the four unfunded renewals--Fels, Vermont and Ohio State. The recommended budgets for the three reportedly would total somewhat under $4 million (**The Cancer Letter**, June 6).

The only hope for the two centers, Lombardi and Kentucky, appears to be the passage by the full Congress of the supplemental appropriations measure.

The conferees also approved an amendment offered by the Senate that will make funds available for fiscal 1986 and hereafter to NIH's Clinical Center to pay nurses at the rates of pay and with the options and benefits afforded nurses by the Veterans Administration. If passed by the full Congress, the move is expected to aid recruitment and retention of all nurses at the Clinical Center. NCI Director DeVita recently won another victory in aiding recruitment of oncology nurses at the center through an agreement that registered nurses hired for the cancer units may be hired into the PHS Commissioned Corps. The Senate's amendment will extend to all nurses at the center, not just oncology nurses and will allow those oncology nurses not eligible for the commissioned corps due to age or other eligibility criteria, to receive the more competitive salary and benefit structure offered by the VA.

In offering the amendment to the Senate, Sen. Mark Hatfield (R-Ore.) said, "We have had difficulty in staffing the NIH area of hospital care because we have not been able to maintain a comparability or competitive situation with the recruitment of nurses in other medical centers in this area."

Hatfield said the amendment is intended to achieve adequate staffing and afford appropriate occupancy rates at the Clinical Center. "We also wish to improve the recruitment and retention at NIH of nursing staff with specialized skills, to ensure continuation of critical research programs."

He cited a turnover rate ranging from 18 to 27 percent at the center over the past five years.

NIH does not have the flexibility to offer the same pay and scheduling incentives offered by area hospitals, he said.

According to Hatfield, "NIH is limited to offering a nurse with two or three years experience a starting salary of $10.05 per hour," compared to a starting salary of $11.16 per hour by other area hospitals. Federal employees only received a 4 percent pay raise in fiscal 1984, making the positions even less competitive than area hospitals that offer substantial pay raises.

"NIH cannot fully utilize clinical research opportunities at the NIH Clinical Center without adequate nursing personnel," he said. "Such nursing shortages have an impact on all areas of clinical cancer research in particular, especially protocols that require highly specialized skills."

Hatfield specifically cited research on interleuken-2 and LAK cell therapy in experimental treatment for kidney cancer and melanoma. "In addition, there are shortages in intensive care and in areas with complicated protocols involving the use of monoclonal antibodies for treatment of large bowel and breast cancer as well as for AIDS research."

"Helping Smokers Quit" Program Launched By NCI and Pharmacists

NCI has joined forces with the American Pharmaceutical Assn. in launching a new campaign designed to enlist the aid of pharmacists in helping people to quit smoking. Entitled "Helping Smokers Quit," the program focuses attention on smoking and drug interactions. Pharmacists are asked to respond to patients' questions about these interactions, to deliver a brief and simple stop smoking message, and to provide a free packet of take home smoking cessation materials. The program is patterned after similar programs used by physicians and dentists.

Speaking at a press conference held in Washington to announce the new program, Joseph Cullen, deputy director of NCI's Div. of Cancer Prevention & Control, said that "the potential health effects of smoking and drug interactions present a tailor-made opportunity for pharmacists to engage the smoker in a nonthreatening discussion of the facts." More than 200 million people go to a pharmacy per week, he said, adding, "the equivalent of the U.S. population goes through a pharmacy every week."

Noting that pharmacists have the potential to be powerful agents for smoking cessation, Cullen cited a recent survey of U.S. households that found pharmacists were regarded "second only to physicians" as the most reliable source of health information.

"The potential impact of working with physicians, dentists and pharmacists is enormous," he said. "If only 10 percent of U.S. physicians provided two or three minutes of counseling to all their patients who smoked, and were successful with only one of every 20 patients...the yield of ex-smokers would be about 1.25 million a year, or more than 10 million in a decade."

Pharmacists may even have some advantages over physicians in educating and counseling patients and patrons because of their more frequent interactions with smokers, and the informal setting that may be more conducive to routine conversation and recommendations.

APhA President John Schlegel told the press conference that "of all health professionals, pharmacists see more patients than any other member of the health care team." Surveys have shown "that nearly all people who smoke recognize the harmful effects of their habit," he said. "But they may not know that cigarette smoke interacts with some drugs to decrease their effectiveness or to multiply the health risks."

Surgeon General C. Everett Koop told the press conference that "over the past two years, physicians, dentists, pharmacists, nurses and other health professionals have united in the effort to achieve a smoke free society by the Year 2000."

"The verdict [against cigarette smoking] is rendered again: cigarette smoking in combination with certain medications may alter their therapeutic effects."

Discussing the well publicized sharp increase in smokers' risk of serious cardiovascular side effects from use of oral contraceptives, Schlegel said pharmacists should urge patients using oral contraceptives to quit smoking or to select an alternative form of contraception.

"For a number of other drugs, the interaction with smoking is not dangerous per se but may inhibit full therapeutic responses, requiring larger or more frequent doses of the drug or a switch to other medications," he said. "The most clinically important of such adverse interactions that are currently known occur between tobacco smoke and the bronchodilator theophylline; certain anti-anginal drugs; and certain painkillers."

Smokers taking theophylline should be monitored carefully and may need larger doses, although dose reductions can be made eventually if they stop smoking.

Patients taking propranolol and nifedipine for angina pectoris should be informed that smoking will inhibit full therapeutic response to these drugs.

Finally, heavy smokers taking propoxhyphene, pentazocine, and phenylbutazone should be told that they may obtain better relief with larger doses or with other pain killers, he said.

There is enough evidence of interaction to warrant caution to patients for various other drugs, including certain antidepressants and tranquilizers, heparin, furosemide and vitamin B_{12} and vitamin C.

"Our message to pharmacists is that they should counsel patients who smoke and take any of these drugs, and to notify the prescribing health professional if inadequate responses occur with normal doses," he said. "Larger doses may be acceptable for some drugs, but it clearly is in the patient's

best interest to quit smoking."

In a four week pilot test of the program in 17 Los Angeles and Baltimore pharmacies, cooperating pharmacists were able to participate with little or no interference in their schedules. They generally approved of the kit of program materials and reported that patients who were interested in quitting had also responded favorably. Their support for the program concept was still strong after completion of the four week test period.

NCI and APhA have also collaborated with PHARMEX, a manufacturer of warning labels for prescription medications, to produce a new label for use by pharmacists in support of the program. It reads: "Caution: Cigarette smoking may alter the effects of this medication. Consult your pharmacist."

APhA is also working with the National Association of Chain Drug Stores to promote the "Helping Smokers Quit" program in their members' pharmacies. It is also starting a direct mail promotional campaign to all APhA members and all U.S. pharmacies to encourage ordering of the free materials.

The "Helping Smokers Quit" kit includes a pharmacist's guide with clinical information on smoking-drug interactions and helpful hints on counseling patients who smoke; two posters and a counter card to prompt interested patients to ask their pharmacists about the program; and enough take home self-help materials for 25 patients. Kits are available free of charge to all pharmacists by writing: HELPING SMOKERS QUIT KIT --Box RX, Office of Cancer Communications, NCI, Building 31, Room 10A18, Bethesda, Md. 20892.

NCI and APhA are promoting the program through public service advertisements and editorial coverage in pharmacy publications, direct mailing of a promotional flyer to all APhA and Student APhA members and to all U.S. pharmacies, direct promotion to chain drug store executives, exhibits at meetings of pharmacy organizations, and special promotions by Student APhA chapters.

Asked if the campaign and APhA's efforts to stop cigarette sales at pharmacies could result in a loss of customers, Schlegel said, "our experience is quite the contrary" because customers identify the pharmacy more as a health care center. He also noted that cigarettes provide relatively low margins for pharmacies, and that the use of the shelf space for other products could increase a pharmacy's returns.

$1.4 Million Methylene Chloride Mortality Study OK'd By DCE Board

NCI's Div. of Cancer Etiology Board of Scientific Counselors has approved a concept for a four year $1.4 million mortality study of workers exposed to methylene chloride. Proposed first year funding for the competitive award is $600,000.

A retrospective cohort mortality study of 10,000 male and female workers employed in industries that either produce or use methylene chloride is planned. Companies that have already agreed to participate in the study include methylene chloride producers, spray paint and paint stripper users, and manufacturers of textile fibers, plastic film, photographic film, and polycarbonate resins. The multi-industry approach provides a range of exposure levels that is needed to establish a dose gradient. It also provides differing concomitant exposures at each plant, reducing the likelihood of a spurious association with methylene chloride due to a confounding chemical.

Candidate companies have been identified from directories of chemical producers, other industrial directories, trade associations, and from customer lists of the methylene chloride producers and distributors. NCI has had discussions with more than 50 companies and unions about the planned study. A feasibility study conducted by DCE included visits to seven companies to evaluate availability of records and exposure potential. From the visits, NCI concluded that a study is indeed feasible and that it could now assemble a cohort of 6,000 workers from 10 companies. NCI is continuing its search for users and producers through contacts with regulatory agencies, distributors, unions and trade associations in order to expand the cohort and to identify workers with the heaviest exposures.

With a cohort size of 10,000 workers and an average followup period of 20 years, the study would be able to detect minimum odds ratios of 1.4 for lung cancer, 2.2 for leukemia, and 3.1 for liver cancer.

The contract will provide technical support to abstract occupational history data, perform vital status tracing, obtain death certificates, conduct industrial hygiene monitoring, develop historical exposure estimates, obtain pathology materials, conduct interviews, collect samples for biological monitoring, and provide data

management services.

Under the proposed study, work histories and demographic data will be obtained from company and union personnel records. All subjects will be traced to determine their current vital status. Death certificates will be obtained for the deceased to determine the underlying cause of death. Pathology reports will be obtained for lung and liver cancer cases to determine histologic subtypes and to identify those cancers that might represent metastases to the lung or liver. Estimates of historical and current workplace exposures to methylene chloride will be developed by job and calendar time for each plant in the study, requiring evaluation of the level, frequency, and duration of exposure and contact by inhalation and dermal exposure. It will incorporate historical monitoring data supplemented with information regarding historical manufacturing processes, engineering controls, and personal protection practices. In general, good quality industrial hygiene data are available since the 1970s at the plants, NCI says. Company and union personnel, including industrial hygienists, production staff and long-term employees will be consulted. Other chemical exposures will also be identified and historical exposures estimated if possible. NCI will independently conduct monitoring of methylene chloride and other solvents in all plants to standardize and supplement the company monitoring data.

NCI plans to determine the blood levels of carboxyhemoglobin for a sample of active non-smoking workers to evaluate the correlation between carboxyhemoglobin and environmental levels of methylene chloride in the workplace. Board member Donald Davies suggested that the division consider both carboxyhemoglobin measurements and blood levels of methylene chloride.

Board member Peter Magee suggested that blood levels of methylene chloride be studied in animals as well. DCE Director Richard Adamson said that if the National Toxicology Program won't conduct animal studies, "it's worthwhile for us to do it in a small group of animals."

Histories of tobacco and alcohol consumption and other pertinent risk factors will be obtained for the estimated 100 primary lung and liver cancer cases and controls selected randomly from the remainder of the exposed cohort. Cancer risk from methylene chloride exposure will be evaluated, and adjusted for cigarette smoking, if sufficient non-smoking cases occur. Smoking characteristics of the controls will be used to compare smoking habits among workers with different levels of exposure. If deaths from other cancer sites are excessive, the associations will also be evaluated with the case control approach.

A project committee, headed by NCI scientists and including representatives from companies and unions, will review and evaluate the protocol and monitor the study's progress. An advisory panel, including members of the DCE board and other scientists will be organized to provide advice and guidance to the NCI investigators, who will take the lead in designing and monitoring the study, in conducting the analyses and in preparing final reports.

"It's going to be a controversial study regardless of how this comes out," Adamson said. "We need your advice and help." The DCE director was alluding to criticism of NCI's formaldehyde study released this winter that found "little evidence" that formaldehyde is carcinogenic. The Formaldehyde Institute, an industry supported organization, helped NCI investigators and outside consultants write the report on the study (**The Cancer Letter,** March 7).

NCI officials will meet with representatives from the Environmental Protection Agency next month to discuss possible contributions to the study. EPA has already classified methylene chloride as a "probable human carcinogen," meaning there is sufficient evidence of carcinogenicity in animals, but inadequate epidemiologic data. The agency took action under the Toxic Substances Control Act making a formal commitment with a high priority to determine if any or all uses of methylene chloride pose a measurable risk to health.

NCI is also trying to obtain industrial hygiene monitoring data from the Occupational Safety and Health Administration, and has written FDA and the Consumer Product Safety Commission about involving them in the study in an effort to cut costs. FDA proposed a ban of methylene chloride as an ingredient in all cosmetic products in December of 1985, and the CPSC has recommended labelling changes to reduce exposure from paint strippers and spray paints, claiming that the lifetime cancer risk to consumers exposed to the chemical through paint stripping is "among the highest ever calculated for chemicals from consumer products."

Other concepts approved by the DCE Board are:

Interdisciplinary prospective study of infection with human papillomavirus. First year funding for the three year competitive award is expected to be $325,000, with the total award amount projected to be $675,000.

NCI proposes to utilize a pre-paid health plan population or other populations involved in routine screening in order to prospectively study the risk associated with HPV infection in a stable patient population. Over a one year period, cervical scrapes will be obtained from approximately 20,000 women receiving routine Pap smears, with no past history of cervical dysplasia or neoplasia. The cervical scrapes will be stored frozen while followup of the cohort proceeds.

The study population will be observed over two years, as the women obtain their usual continuing care (including repeat Pap smears).

Women who develop cervical atypia, dysplasia, or neoplasia during followup will be compared to matched controls. Their baseline cervical scrapes will be thawed and assayed for type-specific HPV infection, as will scrapes from the time of diagnosis, using recently developed DNA hybridization techniques. Chart review, a questionnaire, and blood-drawing will also be performed to obtain data on other cervical cancer risk factors.

In addition to this case-control comparison, a 1,000 woman subset of the original cohort will be tested at intake for HPV status, then followed prospectively to study the incidence and determinations of type-specific HPV infection. Moreover, in collaboration with intramural laboratory scientists, notably Peter Howley, additional biological specimens will be obtained for more detailed studies. The project is expected to generate much needed data regarding the etiologic and clinical significance of type-specific HPV infection.

The specific objectives of the project are: 1. To estimate the prevalence, incidence and determinations of type-specific HPV infection among women receiving routine Pap smear screening; 2. To estimate the incidence rates of cervical intraepithelial neoplasia by prior and concurrent type-specific HPV infection status; 3. To evaluate whether cervical cancer risk factors (e.g., smoking, oral contraceptives use, diet) modify the incidence rate of cervical disease related to HPV infection; and 4. To evaluate the progression of cervical disease according to HPV type and other risk factors.

Solid tumor chromosome analysis of persons at high risk of cancer. NCI plans to award a five year competitive contract with proposed first year funding of approximately $65,403. The contract is currently held by Health Research Inc., Roswell Park Memorial Institute.

The objective of the contract is to determine whether the solid tumors that are components of the genetic and familial syndrome under study in the division's Clinical Epidemiology Branch, or that are of interest because they develop in response to known environmental carcinogens, have cytogenetic abnormalities that may be important in tumor etiology and pathogenesis. DCE efforts have focused primarily on the study of adenocarcinomas of the kidney, breast and colon, sarcomas of soft tissue and bone, basal cell carcinomas of skin, and mesotheliomas. In selected instances, tumors that are components of other genetic or familial syndromes predisposing to cancer have also been studied. The finding of non-chromosome changes in any of these tumor types raises the possibility that the involved chromosome region contains a gene(s) relevant to the development of the specific cancer. The techniques of molecular biology can then be utilized to study these regions further in the hope of elucidating mechanisms of carcinogenesis.

When patients in DCE's epidemiologic studies of cancer are scheduled for surgery, arrangements will be made to procure sterile, fresh pieces of solid tumor. Specimens will be minced and enzymatically disaggregated, placed in specially-prepared sterile culture media and shipped to the laboratory for analysis. When specimens are large, a piece from each will be frozen and stored with the corresponding non-tumor tissue for possible future molecular studies. At the laboratory, the tumor cells will be cultured for up to seven days and, on occasion, be inoculated into nude mice. The cells will then be harvested, slides made and stained to reveal chromosome bands, and the karyotype will then be determined.

Structural abnormalities are considered to be clonal if multiple cells manifest the same change. When possible, a peripheral blood karyotype will be done on each tumor patient to be sure that any cytogenetic changes seen in the tumor are not constitutional. Several procedural modifications instituted during the present contract to improve the yield of analyzable metaphases will be continued. These include: use of fungicides in the shipping medium to prevent microbial contamination, avoiding collection of tumor tissues adjacent to necrotic areas, encouragement of submission of large tumor samples, and implementation of improved techniques for short-term cell culture and for separation of tumor cells.

To date, the lab has received 234 tumor specimens. Although the yield of analyzable metaphases averaged 50 percent overall, improvements in the specimen collection and culturing techniques have raised the yield to 74 percent for the last full contract year. Of the tumor cells successfully karyotyped, 55 percent had clonal changes, 30 percent had non-clonal changes, and 15 percent had a euploid karyotype.

The contract will be used as a resource for the branch's studies of the clinical epidemiology of human cancers. The investigations are multidisciplinary, employing clinical observations to identify high risk groups of patients, epidemiologic approaches to quantify their cancer risk, and laboratory studies to identify biologic mechanisms of their predisposition to cancer. The patients are studied as human models of susceptibility to cancer to identify the action of cancer genes and interacting environmental carcinogens.

In recent years, research has focused on an array of genetic and familial syndromes that predispose to cancer, including the nevoid basal cell carcinoma syndrome that predisposes to skin and other cancers, familial polyposis coli and variants that predispose to colon cancer; hepatoblastoma; brain tumors; familial tumors of the kidney and colon and the cancer family syndrome of Li-Fraumeni.

In the future, NCI intends to continue to collect and karyotype tumors from families with hereditary cancer and cancer syndromes that are under investigation by program staff. In addition, tumor specimens will be obtained from patients in two cohort studies directed by CEB investigators. Both are prospective followup studies of second cancers: in the first study, those occurring among 1,500 pediatric tumor survivors at the Dana-Farber Cancer Institute and, in the second, those developing among 2,000 survivors of retinoblastoma at the Massachusetts Eye and Ear Hospital and New York Hospital. In these tumors, in addition to looking for cytogenetic features related to those found in the primary tumors, investigators will be seeking treatment-specific chromosome changes, analogous to the deletions of chromosomes 5 and 7 seen in acute non-lymphocytic

leukemias induced by chemotherapy. Whenever possible, normal tissue will be obtained from all studied tumor patients and stored for later use as constitutional controls. DCE anticipates that the cytogenetic changes found in these tumor studies will help to identify regions of the human genome that are important in tumorigenesis.

Leukemia and preleukemia following chemotherapy for breast cancer. The board's epidemiology subcommittee approved a concept for a two year competitive task order under a previously approved master agreement for record-linkage studies utilizing resources in population based tumor registries. Proposed first year funding for the award is $50,000, with the total project plan amount estimated to be $150,000.

The project's objectives are to determine in a population based study whether chemotherapy for breast cancer increases the risk of subsequent leukemia and preleukemic conditions, and to quantify and compare the leukemia risk for the two most frequently used alkylating agents, melphalan and cyclophosphamide. Leukemia risks associated with type of chemotherapy will be examined (adjuvant, primary or subsequent therapy). If sufficient data are available, the dose response relationship and the risk for the combined modality of radiotherapy and chemotherapy will be estimated, as will risk associated with age at treatment, i.e., premenopausal versus postmenopausal.

A record-linkage study is planned to identify cases of leukemia and preleukemia following breast cancer from population based cancer registries, after which detailed treatment information would be abstracted for each woman who developed a leukemic disorder and for an appropriate comparison group. Specifically, rosters of women diagnosed with histologically confirmed invasive breast cancer who were reported to a population based cancer registry would be linked to registry reports of second and third primary leukemias. All leukemic types except for chronic lymphocytic leukemia (CLL) and lymphosarcoma cell leukemia would be included. Rosters of breast cancer patients would also be linked to registry files containing cause of death information in order to identify women who died from a possible preleukemic condition. A preleukemia will be defined for the study as aplastic, sideroblastic, and other or unspecified anemias, myelofibrosis, and polycythemia vera. All preleukemias and leukemias will be verified using histopathologic materials and reclassified by the study hematopathologist before being accepted into the study. For each breast cancer patient who developed a leukemic condition, three breast cancer patients would be selected who did not develop a second primary cancer, and who had the same race, registry, age, and calendar year of breast cancer diagnosis. Women in the comparison group must survive at least as long as the interval between the breast cancer diagnosis for the case and the diagnosis of subsequent leukemia (or death due to preleukemia). The complete treatment history for each study subject, including adjuvant, primary and subsequent therapy, would be abstracted from registry files, hospital charts and physician records. Data would be collected on surgical procedures, chemotherapy (including drugs administered, dose per square meter or body surface area, and duration), radiotherapy (including dosimetry variables, such as field size, etc.) and hormonal therapy.

To maximize the number of subjects treated with chemotherapeutic agents, the study will focus on women who were diagnosed with breast caner in 1973 or later, and who survived at least 18 months after their breast cancer diagnosis. Approximately 80 additional cases of non-CLL leukemia and preleukemia following breast cancer would be studied, together with the Connecticut series, would bring the total case series to 100 (total study size + 400). It is estimated that approximately 75 percent of the cases will be ANLL or preleukemias. Data from the SEER program indicated that at least 62 potential cases could be made available from the five larger registries.

In vitro evaluation of chemical candidates for in vivo testing. NCI expects to recompete two contracts currently held by Microbial Associates Inc. Proposed first year funding for the three-year resource contracts is $200,000 and $50,000. The two contracts (Ames Salmonella microsome plate assay and Mouse Lymphoma L5178Y TK+/- assay) were originally awarded in May 1984 and support NCI's selection process for carcinogenicity testing in the National Toxicology Program.

Each contract would be expected to report on 35 to 35 compounds per year, with approximately a third of the compounds supplied requiring an additional assay before a final report on the compound is written.

The proposed workscopes for the renewed contracts will be similar to those presently in effect. Each compound will be tested in up to five tester strains of Salmonella typhimurium both with and without S9 metabolic activation. Each test will have five dose levels determined by prior range finding tests, and will incorporate designated positive as well as solvent or negative controls. In the mouse lymphoma assay, five doses selected on the basis of cytotoxicity will be tested both with and without metabolic activation. Appropriate positive and solvent or negative controls will also be included in each assay.

Test compounds are normally procured through another contract and aliquot portions will then be supplied to the labs conducting the assays. Chemicals are acquired by the repository on an as needed basis and in sufficient quantity (usually 30 grams) to permit the repository to retain a like or greater amount for future reference or to resupply the labs if additional compound is required for retest.

To eliminate any laboratory bias, each individual chemical shipment sent to the laboratories is identified only by a code number assigned by the repository and is accompanied with instructions as to the correct solvent to use. The labs coordinate their purchase of solvents other than water so that they use the identical supplier batch as designated by lot number. Each chemical shipped is accompanied by a sealed envelope addressed to the lab's safety officer, containing the available information on toxicity, neutralization, clean-up procedures, etc., to be opened only in the event of an accident with the particular compound. When the test is completed, if the envelope has not been opened, it is returned unopened to the project officer. Each laboratory shall prepare a report on each compound, combining a brief narrative and tabular results.

The board also approved a five-year noncompetitive contract with the National Academy of Sciences for epidemiological studies of cancer among A-bomb survivors in Hiroshima and Nagasaki, Japan. Considered the most important single source of information on cancer risk in human populations following exposure to ionizing radiation, the mortality surveillance program involves 94,000 atomic bomb survivors and another 26,000 nonexposed residents of the two cities.

A study of human health consequences of Polybrominated Biphenyls (PBB's) contamination of farms in Michigan. NCI will provide approximately $70,000 in first year funding out of a total of $145,000 for a noncompetitive three year study of more than 3,750 Michigan residents highly exposed to PBB when approximately 600 Michigan farms were contaminated in the summer of 1973. Other agencies involved

in the study are the Centers for Disease Control, the National Institute of Environmental Health Sciences, FDA, and the Environmental Protection Agency. The study will provide long term health followup of exposed persons. The comparison cohort consists of Iowa farm residents with no PBB exposure.

Development of a pre-1979 National Death Index. The board approved a concept for a five year non-competitive resource contract to compile retrospective mortality data from state rosters in order to create a pre-1979 death index by the Association for Vital Records and Health Statistics and individual states. DCE plans to provide first year funding of $250,000, with other sources, including the Department of Energy and possibly the Agency for Toxic Substances and Disease Registry, providing $350,000 the first year.

A concept for a two year competitive task order for studies of cancer in workers exposed to electric and magnetic fields was deferred by the board because of concerns that the proposed study lacked sufficient power to answer the questions posed. The proposed study cohort involved 5,300 male workers at the Ontario Hydro power utility company, a group the board believed was worth studying, but too small by itself to provide a definitive answer to the question of increased risk of leukemia and brain cancer.

A concept for genetic factors in patients at high risk of cancer--genetic markers for linkage analysis was tabled for revision by the board.

The board disapproved a concept for case control studies of risk factors for pancreatic cancer on the advise of its Epidemiology Subcommittee, which believed the workscope of the contract was already covered both by ongoing extramural and intramural research.

Tomasi Named Roswell Park Director

Thomas Tomasi has been named director of Roswell Park Memorial Institute, Gov. Mario Cuomo and New York State Health Commissioner David Axelrod announced last week. Gerald Murphy, who had been director of RPMI for 15 years, resigned last July. John Wright has been acting director since Murphy's resignation.

Tomasi currently directs the Univ. of New Mexico Cancer Center in Albuquerque. He also holds appointments as professor and chairman of the department of cell biology at the university.

From 1965 through 1973, Tomasi was professor of medicine and director of the Division of Immunology & Rheumatic Diseases at the State Univ. of Buffalo School of Medicine. He left Buffalo to become chairman of the Dept. of Immunology at the Mayo Clinic.

Tomasi was nominated for the directorship of RPMI by the blue ribbon search committee appointed by Axelrod last October. More than 50 potential candidates were evaluated.

NCI Advisory Group, Other Cancer Meetings For July, August, Future

Immunology Vaccines: New Concepts and Developments --July 14-17, Hyatt Regency Hotel, Buffalo. 10th International Convocation. Contact Ernest Witebsky Center for Immunology, Rm 210 - Sherman Hall, State Univ. of NY (Buffalo), NY 14214.

Clinical Applications of Monoclonal Antibody Immunoconjugates for the Therapy of Cancer--July 14, NIH Lister Hill Auditorium. Contact Carol Kirby, NCI, Biological Response Modifiers Program, Frederick Cancer Research Facility, Bldg 567 Rm 138, Frederick, MD 21701, phone 301-695-1418.

Clinical Cancer Program Project Review Committee--July 17-18, Bethesda Hyatt Regency, open July 17 8:30-9 a.m.

Cancer Center Support Review Committee--July 31-Aug. 1, Holiday Inn Crown Plaza, Rockville, MD. Open July 31, 8:30-9:30 a.m.

Cancer Preclinical Program Project Review Committee--July 31-Aug. 1, Linden Hill Hotel, Bethesda, open July 31 8:30-9:15 a.m.

Early Treatment of Breast Cancer--Aug. 1, Marriott West Hotel, Denver. 40th annual Rocky Mountain Cancer Conference. Contact Jiri Tvrdik, RN, Professional Education Director, American Cancer Society, Colorado Div., 2255 S. Oneida, Denver 80224, phone 303-758-2030.

Cancer Therapeutics Program Project Review Committee--Aug.7-8, NIH Blg 31 Rm 6, open Aug. 7 8:30-9 a.m.

International Society for Experimental Hematology--Aug. 10-14, Hyatt Regency, Buffalo. 15th annual meeting. Contact Dr. Michael McGarry, Roswell Park Memorial Institute, 666 Elm St., Buffalo, NY 14263, phone 716-592-9348.

New Advances in Internal Medicine: Clinical Applications--Aug. 17-22, Hyatt Regency, Monterey, CA. Contact Office of Continuing Medical Education, Univ. of California (Davis) School of Medicine, 2701 Stockton Blvd., Sacramento 95817, phone 916-453-5390.

14th International Cancer Congress--Aug. 21-27, Budapest. Contact Congress Bureau MOTESZ, PO Box 32, H-1361 Budapest, Hungary.

FUTURE MEETINGS

Breast Issues, 1986--Sept. 30-Oct. 3, Marriott Mark Resort, Vail, CO. Contact Joan Camp, 8200 E. Belleview, Suite 218, Englewood, CO 80111, phone 303- 788-6966.

Platelet Transfusion Therapy--Oct. 6-8, NIH Warren Magnuson Clinical Center, Bethesda. NIH Consensus Development Conference--indications, available products, risks, future research. Contact Sharon Feldman, Prospect Associates, Suite 500, 1801 Rockville Pike, Rockville, MD 20852, phone 301-468-6555.

9th Annual San Antonio Breast Cancer Symposium--Oct. 31-Nov. 1. Contact Terri Coltman, RN, Symposium Coordinator, 4450 Medical Dr., San Antonio, TX 78229.

Gastroenterology Update: 1987--Jan. 24-31, 1987, Vail, CO. Contact Jeanne Ryan, Office of Continuing Education, Johns Hopkins Medical Institutions, 720 Rutland Ave., Turner 22, Baltimore 21205, phone 301-955-6046; or Marsha Bukofzer, Continuing Medical Education, Presbyterian Hospital, Northeast 13 at Lincoln, Oklahoma City 73104, phone 405-271-6447.

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