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PRI Purchased By DynCorp; NCI Is Assured No Changes Will Be Made At Frederick

Program Resources Inc., the Annapolis based firm which has held the contract to manage the Frederick Cancer Research Facility for NCI since 1982, has been sold to DynCorp, of Reston, VA. DynCorp officials said that no personnel changes would be made at FCRF and that all PRI employees including Director of Frederick Operations Raymond Gilden would continue in their present positions.

(Continued to page 2)

In Brief

ONS Forms Six New Special Interest Groups; Four Named To Michigan Breast Cancer Center

ONCOLOGY NURSING Society has formed six new special interest groups to respond to specialized needs of its members. The groups and their coordinators are: Chemotherapy, Sara Carter, Evangelical Community Hospital, Lewisburg, PA; Nurse Specialist, Rebecca Crane, Harbor-UCLA Medical Center, Torrance, CA; Biotherapy, Jackie Dillman, Hoag Cancer Center, Newport Beach, CA; Ambulatory/Office Nursing, Mary Hartman, Cigna Health Plan, Phoenix, AZ; Bone Marrow Transplant, Terry Wikle, Shands Hospital, Univ. of Florida, Gainesville, FL; and Ethics, Gloria Felde, Fred Hutchinson Cancer Research Center, Seattle, WA. . . . **MICHIGAN STATE** Univ. has appointed four of its researchers to leadership positions in the university's newly formed Comprehensive Breast Cancer Center: Nikolay Dimitrov is deputy director, Justin McCormick is associate director for cancer prevention, Janet Osuch is associate director for clinical programs and Barbara Given is associate director for lifelong care. The center director is Marie Swanson. . . . **EVERETT KOOP,** former U.S. Surgeon General, will address the World Conference on Lung Health, to be held May 20-24 in Boston. Contact American Lung Assn., 212/315-8700 for registration information. . . . **INTERNATIONAL UNION** Against Cancer is urging its member organizations and other health related groups to contact their national representatives to the General Agreement on Tariffs and Trade organization, in Geneva, to register their opinions on the Thailand trade case, in which the U.S. Cigarette Export Assn. has charged that Thailand unfairly discriminates against the import of U.S. cigarettes (**The Cancer Letter,** March 30). GATT should "give pre-eminent consideration to the health implications of tobacco export, over and above the trade criteria," UICC said. The GATT decision could affect the the way virtually all cigarettes are sold throughout the world, UICC said.

PRI Purchased By DynCorp; NCI Assured Of No Changes At FCRF

(Continued from page 1)

The current PRI contract for management and operations, negotiated after recompetition in 1987, extends through September, 1994. The original negotiated amount was for just under $1 billion for seven years, but that total is certain to be exceeded as NCI and other NIH activities there continue to expand. As NCI starts receiving more construction money, some of it will be used for renovation and new facilities at Frederick, further adding to the contract total.

Werner Kirsten, who is NCI associate director and director of FCRF, and Ronald Defilice, chief of the FCRF Contracts Section of NCI's Research Contracts Branch, participated in discussions between PRI and DynCorp which led to the sale. NCI needed assurances that no changes would be made which could affect operations.

NCI has for the most part been more than satisfied with PRI's performance and was especially concerned about Gilden's role with DynCorp. It is unlikely NCI would have approved transferring the contract to DynCorp if Gilden had not been retained as director of operations.

The contract is the largest ever awarded by NIH. The negotiated amount for FY 1990 is $121 million. Under the "award fee" system which has been used since NCI took over much of the Army biological warfare base in 1972, PRI has been making about $2 million a year as its profit on the contract. Under an agreement with PRI's FCRF employees made prior to the award of the current contract, the company has split the award fee with employees.

Gilden told **The Cancer Letter** that DynCorp has assured him there will be no changes in commitments to employees, including the 50-50 division of the award fee.

"They have told me that it is up to me to continue running things the way we have been doing," Gilden said. "I feel very comfortable with the situation."

Other key employees in addition to Gilden who will remain include Walter Urba, director of chemical services; Eric Sansone, director of the environmental controls and research program; Larry Arthur, director of AIDS vaccine development; Wayne Rhoderick, head of facilities maintenance and engineering; Michael Collins, director of the laboratory animal sciences program; Charles Crum, director of the advanced scientific computer laboratory (NCI's supercomputer); Thomas Compton, head of contract administration; and Donald Fine, director of the research support program.

PRI had 1,171 employees at Frederick, all of whom are now working for DynCorp.

There are about 350 NIH employees at Frederick, most of them with NCI. The National Institute of Allergy & Infectious Diseases and National Institute of Neurological & Communicative Disorders & Stroke have smaller operations there.

PRI is a privately held company, owned entirely by Richard White and William Donlon which they started in 1973. The sale involved consulting agreements for the two, who will be available as needed by DynCorp. But DynCorp officials said they would not have an active management role.

White and Donlon said they had no business plans for themselves at present.

In addition to the FCRF contract, PRI has an operation in Research Triangle Park, NC, where it provides services to the National Institute of Environmental Health Sciences, Environmental Protection Agency, and other federal health science agencies.

DynCorp is a privately held company headed by Dan Bannister, president and chief executive officer. James Duggan, chief operating officer, is the company official to whom Gilden will report.

Most of DynCorp's revenue has been derived from military service and support contracts, but the company has initiated a policy of expanding into nondefense areas. Purchase of PRI follows its earlier acquisition of Bell Technical Operations, and other acquisitions are being sought.

With the FCRF operations contract expiring in 1994, along with the much smaller contracts for animal facilities, scientific library, and computer services, NCI probably will reach a decision on the shape of the recompetition by mid-1992. The facility now is absolutely vital to NCI, with most of the

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cancer and AIDS drug development work centered there, along with the supercomputer, the new intramural nutrition research laboratory, and any other new operations which may be developed.

There is no more space available at the main NIH campus, but a significant amount of undeveloped space remains at Frederick. The facilities there, and the contracts through which both scientific staff and support personnel are employed, help NCI deal with the limits on staff and support positions, permitting some growth that otherwise would not be possible.

Melanoma Vaccine Nearing Phase 3, Other Potential Therapies Discussed

A phase 3 trial may begin as soon as this summer for a therapeutic vaccine for malignant melanoma called theraccine, made by Ribi ImmunoChem Research Inc. of Hamilton, MT, according to Malcolm Mitchell, professor of medicine and microbiology at Univ. of Southern California.

Mitchell discussed his work with the drug at the American Cancer Society Science Writers Seminar, held in Daytona Beach, FL, recently. More than 50 science writers and 40 scientists attended the meeting, during which 30 papers were presented.

The vaccine is for patients who have had surgical removal of the primary tumor. The vaccine is made from two cell lines of melanoma. The melanoma cells are disrupted and just before injection, mixed with an immunological booster called Detox, containing detoxified endotoxin, cell wall skeletons from a strain of mycobacteria and squalene oil. Injections are made under the skin once a week for four weeks and a final injection is given on week six. Patients who respond are retreated with a single monthly booster injection and semiannual complete five-dose courses.

USC and the company have a research agreement to develop the therapy.

In phase 1 and 2 trials, Mitchell said, the investigators were able to demonstrate increased immunity to melanoma-associated antigens in 50 percent of the patients and partial or complete remission in 22 percent, or 16 of 73 patients. An additional 10 to 15 percent of patients have had some tumor shrinkage. There was no toxicity associated with treatment except swelling at the site of injection after many injections. Masses in the skin, lymph nodes, lungs and small intestine responded. The median duration of response in the phase 2 trial was 17 months. Mitchell noted that the median duration of survival in recurrent melanoma is usually 12 months. Six patients have lived two or more years after treatment. Four of these were maintained on theraccine only, while the other two received IL-2.

Patients who responded generated cytotoxic T cells, those who did not generate such cells never responded.

The phase 3 trial, to be carried out by the Southwest Oncology Group, will involve treatment of patients with primary early melanoma who have had their primary tumors removed. The study, which has not yet been approved, will propose treating more than 400 patients. Two thirds will receive the theraccine and one third will act as control.

Mitchell and the firm are now beginning to produce synthetic proteins characteristic of melanoma cells by recombinant DNA technology in an attempt to make a synthetic theraccine within the next five years. In the process, Mitchell said, the investigators will learn which antigens are most important in causing rejection of human melanomas.

One 80 year old patient with melanoma of the eye was treated with theraccine and in six weeks his tumor shrunk from 4 mm to 2 mm.

USC and UCLA plan to collaborate on a study to treat patients with primary eye melanomas.

Mitchell and his collaborators also have developed a program of low dose IL-2 preceded by low dose cyclophosphamide. One third the usual therapeutic dose of cyclophosphamide is used to inhibit suppressor T cells, which allows IL-2 to stimulate only T helper and T killer cells. Three days after the cyclophosphamide injection, 15 minute infusions of IL-2 five days a week for two weeks are given. This schedule is administered two more times with a week's rest in between. In 39 patients, there was a 28 percent response rate, including two complete remissions, eight partial remissions, one minor response and eight other minor or mixed responses.

The median duration of response was nine months. The treatment was given on an outpatient basis, but two patients were hospitalized overnight for minor dehydration. One patient went off study because of an unusual blindness which resolved after the IL-2 was stopped.

Sites of response included skin, lung and lymph node, and two of 10 patients with liver metastases had a complete remission and two had a partial remission.

Mitchell is now planning to combine the two approaches, the theraccine and low dose IL-2.

Neither the theraccine nor the IL-2 were able to prevent brain metastasis. Four or five patients who were cured of disease everywhere else relapsed in the brain, and most of the patients have eventually died

as a result of their brain involvement.

A separate, local treatment strategy to prevent brain metastases is needed, Mitchell said, since about 80 percent of melanoma patients have brain metastasis at autopsy, but only 20 percent have symptoms.

Chemotherapy, Heat, Radiation Combinations

Combinations of cisplatin, hyperthermia and radiation has achieved complete remissions in more than 50 percent of patients with advanced, unresectable superficial malignancies in a study conducted by Terrence Herman, chief of the radiation therapy department at Dana-Farber Cancer Institute and associate professor at Harvard Medical School.

Forty patients have completed treatment in a phase 2 trial to determine the maximum tolerable dose of cisplatin. After two-thirds of the cisplatin dose was delivered, hyperthermia was given for 60 minutes, with 43 degrees Celsius the target minimum tumor temperature. Following hyperthermia, 400 cGy of radiation was delivered.

The types of tumors treated were breast and head and neck.

Bone marrow suppression was dose limiting in patients who had been heavily pretreated with chemotherapy and chest wall radiation. Nausea and vomiting were relatively mild.

Twenty-one patients (52 percent) had a complete remission and 19 patients (48 percent) had a partial remission. Complete remission correlated with small tumor burdens. The tolerable dose of cisplatin in untreated patients was 50 mg/m^2 weekly for six weeks and 30 mg/m^2 in heavily pretreated patients.

Herman called the responses "gratifying." However, he said a randomized trial is needed to determine whether the responses with the combination of cisplatin, hyperthermia and radiation are an improvement over responses from hyperthermia and radiation alone.

He said he is planning a study to add etanidazole to the regimen, because preclinical results indicate that the addition of the agent "would be reasonable" due to its hypoxic cell cytotoxic selectivity.

Liposome Therapy For Bone Cancer

Eugenie Kleinerman, associate professor of cell biology and pediatrics at Univ. of Texas M.D. Anderson Cancer Center, reported on her work over the last eight years on activating the body's immune system to eradicate residual micrometastases in the lungs of osteosarcoma patients.

Surgical resection and aggressive adjuvant chemotherapy have been able to achieve two year metastasis-free survival of about 66 percent in osteosarcoma patients. That leaves 30 to 40 percent of children with osteosarcoma who are still dying of pulmonary metastasis, Kleinerman said.

Kleinerman said a "striking feature" of the disease is that the majority of patients who fail chemotherapy will do so during the first year, implying that these patients have drug resistant tumor cells in their lungs. Different chemotherapy regimens appear to have little effect.

"Chemotherapy has taken us just about as far as we can go," Kleinerman said. "New forms of therapy are clearly needed."

Her work has focused on the use of muramyl tripeptide phosphatidylethanolamine (MTP-PE) to activate monocytes and macrophages to seek out and kill the pulmonary metastases. Liposomes are used to delivery the activating chemical to the monocytes and macrophages.

In a mouse study, complete eradication of pulmonary metastases was demonstrated following the injection of liposomal MTP-PE. The treatment was also found to be effective as a single agent in the treatment of spontaneous osteosarcoma in dogs.

A phase 1 human study has demonstrated that liposomal MTP-PE can be given safely intravenously with limited side effects (fever, chills, myalgias and fatigue), Kleinerman said. Patients' monocytes also showed activation to the tumor killing state.

Kleinerman has begun a phase two trial using liposomal MTP-PE for osteosarcoma patients who failed chemotherapy and developed pulmonary metastases. Treatment is given for three months. While it is too early to report results, she said she has observed pathologic changes in the lung tumors, indicating that the agent is biologically active. Fourteen patients have been enrolled in the study; nine have completed therapy.

Ultimately, Kleinerman said, the therapy would be used as an additional agent to chemotherapy and surgery for other tumors that metastasize to the lung, such as Ewing's sarcoma and colon cancer. It would not be useful as a single agent because of the large number of macrophages required to kill one tumor cell.

Oral Cavity Cancers

Dental and medical education is "preoccupied" with the identification of leukoplakia in an attempt to discover early oral cancers, to the detriment of the identification of mucosal erythroplasia, a condition that is far more dangerous, according to Arthur Mashberg, chief of oral and maxillofacial surgery and deputy chief of the cancer center at the Veterans Administration Medical Center in East Orange, NJ.

Mashberg's work has focused on the early diagnosis

of oral and pharyngeal cancers, of which there are about 27,000 new cases reported in the U.S. every year. Smokers and heavy drinkers are at a high risk for these cancers.

In countries where the predominant risk factors are smoking and alcohol, asymptomatic erythroplasia that persists for 14 days or more is the earliest visual sign of oral and pharyngeal carcinomas, Mashberg found.

These lesions should be biopsied, and should be considered invasive carcinoma "or at the very least, carcinoma in situ," unless proven otherwise by biopsy, he said. These early asymptomatic cancer have a long latent period, allowing for early detection in semi-annual or annual examinations. Mashberg said the findings were confirmed in a study he conducted in Turin, Italy.

Oral cancers less than 1 cm in diameter are easily curable, Mashberg said, but in most cases, at the time of diagnosis the cancers are well advanced. Five year survival is about 50 percent.

"It has been my impression that the primary concern of many clinicians is the management of symptomatic lesions showing the classical signs of induration, ulceration and bleeding, rather than the detection of early lesions," he said.

High risk sites that should be examined are the floor of the mouth, the lateral ventral tongue and the soft palate complex.

Mashberg said many of these lesions are not easily identifiable, but can be enhanced through use of toluidine blue, a dye that stains the lesions. His clinical studies show that it is useful particularly for ruling out false-negative clinical impressions, he said. He also suggested that the dye be used as a screening rinse in high risk patients. He said sensitivity and specificity are in the 90 percent range.

Mashberg said he has decreased diagnostic false positives which had been a problem in the use of the dye, by waiting 10 to 14 days to allow non-neoplastic lesions to resolve before a repeat stain and biopsy.

The federal government holds the patent for toluidine blue, but pharmaceutical development has been discouraged based, Mashberg said, on anecdotal information from clinicians using the dye inappropriately.

"Unless pharmaceutical development is forthcoming, an unusual opportunity for very early diagnosis of cancer of the oral cavity and upper aerodigestive tract will be lost," Mashberg said.

5-FU, Radiation For Esophageal Cancer

Lawrence Coia, of Fox Chase Cancer Center, reported the results of a phase 1/2 study of the primary treatment of esophageal cancer with a combination of 5-FU, mitomycin-C and radiation. He noted that esophageal cancer is not prevalent in the U.S., but it is one of the most lethal cancers, accounting for more deaths per year than the more common colorectal cancer.

Between 1980 and 1989, Coia has treated 90 patients at Fox Chase with the combined chemotherapy and radiation without surgery, with a median followup of 4 years.

Fifty-seven patients with stage 1 or 2 disease received definitive treatment, which consisted of radiation to 6,000 cGy in six to seven weeks and 5-FU as a continuous i.v. infusion for 96 hours, starting on days 2 and 29. Mitomycin-C was administered as a bolus injection on the second day. Thirty-three patients received palliative treatment, which consisted of 5,000 cGy of radiation plus chemotherapy for stage 3, 4 or otherwise advanced disease.

The overall median survival of stage 1 and 2 patients was 18 months, with three and five year actuarial survivals of 29 percent and 18 percent. The median disease specific survival was 20 months.

The median survival of patients with stage 3 disease was nine months and stage 4 disease, seven months. More than 70 percent of the advanced patients were relieved of swallowing problems and 60 percent were without dysphagia until death, with a median dysphagia-free duration of five months.

Severe toxicities were uncommon and were transient, Coia said.

"This combination is an effective and relatively well tolerated regimen in the treatment of esophageal cancer," Coia said. "It is a preferred alternative to esophagectomy or radiation alone as primary management of squamous cell cancer and represents an effective regimen in patients with adenocarcinoma as well."

The Eastern Cooperative Oncology Group is conducting a phase 3 trial using a similar regimen to Coia's, evaluating the combined modality regimen to radiation alone. Those results have not been published, but, Coia said, the preliminary results "substantiate our results in stage 1 patients."

He noted that, "Were this treatment regimen to be adopted and effectively applied in a country where esophageal cancer is much more frequent, such as China, the number of lives saved would potentially be very great."

Long Term Adjuvant Tamoxifen

Craig Jordan, director of the breast cancer program at Univ. of Wisconsin Clinical Cancer Center, discussed his center's study and advocacy of the long term use of tamoxifen as adjuvant therapy for breast cancer.

"We have advocated long term tamoxifen therapy, just like insulin for diabetics," Jordan said.

By the end of the century, over a quarter of a million women could be taking tamoxifen indefinitely, Jordan said, but now, most women who Jordan said should be getting tamoxifen are not.

"Tamoxifen has virtually no side effects," Jordan said. He backed up that statement with data from human and animal studies. While the levels of circulating estradiol in breast cancer patients taking tamoxifen are elevated three to four fold during tamoxifen therapy, Jordan said he believes estradiol does not eventually reverse effects of tamoxifen.

In a study of immune deficient mice, Jordan grew breast tumors in an estradiol environment equivalent to that found in premenopausal women taking tamoxifen. The tamoxifen inhibits estradiol-stimulated growth.

"Tamoxifen is therefore an appropriate therapy in premenopausal women as long as compliance is stressed and barrier contraception is practiced to prevent pregnancy," Jordan said.

Clinical studies of long term adjuvant tamoxifen therapy at Univ. of Wisconsin were begun in 1977 by Douglass Tormey. Results of randomized trials by the Eastern Cooperative Oncology Group will be published this year, Jordan said.

Some of the node positive patients in the Wisconsin study have received tamoxifen for more than a decade. The study found that the blood levels of tamoxifen remain stable for up to 10 years.

"We find no evidence to support the position that tamoxifen is metabolized to estrogens," Jordan said.

However, Jordan listed a few "unknowns" about tamoxifen:

--It is not known if there are harmful reproductive effects on premenopausal women taking tamoxifen.

--Women don't appear to get premature osteoporosis while on tamoxifen, but it is not certain whether they will get atherosclerosis.

--The action of estrogen stimulation in the uterus is not clear. One Swedish study found a higher incidence of endometrial cancer in patients taking tamoxifen (14 out of 1,000 patients), but this study has not been confirmed.

"The significance of (the Swedish findings) must be put into perspective," Jordan said. Breast cancer can be fatal, while endometrial carcinoma "has a good prognosis and careful monitoring of patients with routine gynecological examinations will avoid any problem. Clearly no patient should be denied tamoxifen therapy based upon a perceived risk of endometrial carcinoma" based on a single unconfirmed study.

Opposition To Adjuvant Therapy

Thomas Nealon, chairman of surgery, St. Vincent's Hospital and Medical Center, presented a paper opposing the use of adjuvant therapy for low risk breast cancers.

Nealon reported on treatment of breast cancer patients from 1977 to 1986 at St. Vincent's. The hospital does not give adjuvant therapy if the tumor has none of the following characteristics: degree of differentiation, lack of circumscription, lymphatic vessel permeation and blood vessel invasion.

There were 60 patients in this low risk group, ranging from age 37 to 90, with a mean age of 60. Two patients have died of breast cancer and there have been no recurrences in the other 58. The two patients who died had received radiotherapy and chemotherapy.

Nealon said he did not intend to discourage use of adjuvant therapy for many breast cancers. He said its use should be discouraged for the low risk node negative tumors.

Chemoprevention Of Lung Cancer

Scott Lippman, assistant professor of medicine, M.D. Anderson, discussed his work with retinoids and beta carotene to prevent malignancies of the upper aerodigestive tract and lung. These retinoids appear to reverse carcinogenesis.

A second goal of Lippman's work is to discover agents effective in preventing these cancers. He also said he is working to "validate biomarkers of intermediate endpoints of carcinogenesis so that chemoprevention trials can be designed more efficiently."

Lippman's randomized chemoprevention study involves two subject groups. One consists of patients with premalignant oral leukoplakia and the other, chronic heavy smokers at high risk of premalignant lung lesions.

In one study, the oral leukoplakia patients were given a three-month induction with high dose 13-cis-retinoic acid, a synthetic derivative of vitamin A. There was about a 60 to 70 percent response rate of the lesions in the first three months, Lippman said.

The goal of the study was to maintain remission of the premalignant lesions after clearing the lesions with the high dose retinoic acid.

The patients were then randomized to either a low maintenance dose of retinoic acid or beta carotene, for a nine-month period. Toxicity on the retinoic acid was significantly lower than during the induction period, Lippman said.

So far, 58 patients have been entered on the trial;

with the high dose retinoic acid.

The patients were then randomized to either a low maintenance dose of retinoic acid or beta carotene, for a nine-month period. Toxicity on the retinoic acid was significantly lower than during the induction period, Lippman said.

So far, 58 patients have been entered on the trial; the goal is between 60 to 60 patients, which will take another three to six months, Lippman said.

Lippman said about 60 percent of the patients on the retinoic acid arm have improved further, though there was one relapse. He said the beta carotene has been "ineffective in our study" because more than 50 percent of the patients on this arm have relapsed.

Some promising biomarkers that were found in this group included micronuclei, which was suppressed by retinoic acid in 86 percent of the patients, K1 keratin, involucrin and type 1 transflutaminase. It was feasible to evaluate all of the biomarkers in very small biopsy specimens, which minimized the impact of obtaining specimens from the relatively healthy subjects.

The goal of the second study, with chronic heavy smokers, was to reverse premalignant head and neck lesions with retinoic acid in patients with bronchial metaplasia. About 50 percent of heavy smokers develop these lung lesions over time.

Clinical results from the double-blind study will not be available for two years, Lippman said.

Three other biomarkers were studied in this group: Ki-67, PCNA and polymerase-alpha. Preliminary data indicate that abnormally increased markers correlate directly with carcinogenic progression, Lippman said.

This appears to support the concept of "field cancerization," the concept that tobacco exposes a broad area to carcinogenic insult within affected aerodigestive sites.

"Preliminary results from our lung and upper aerodigestive tract chemoprevention program indicate that it may be possible to permanently reverse the multistep process of tobacco-related carcinogenesis in the aerodigestive tract, thereby halting the progression of premalignant tissue toward often fatal malignancy," Lippman concluded.

NIH Lifts Patient Restriction On Gene Modified TIL Study

NIH has lifted a restriction on the number of patients who may be treated with gene modified tumor infiltrating lymphocyte therapy, the therapy pioneered by NCI Surgery Branch Chief Steven Rosenberg and French Anderson of the National Heart, Lung & Blood Institute.

Originally, the study had approval to treat 10 patients. So far, six have received the treatment, and there have been no apparent side effects.

One patient with malignant melanoma has had a complete response after reinoculation with the marked TIL cells that had been harvested from his tumors and grown in culture with IL-2, NCI Director Samuel Broder told the President's Cancer Panel last week.

The goal of the study was to use a gene marker, the neomycin resistance gene, to trace TIL in the body to see if it targets the tumor and survives for any length of time.

The marked TILs have remained in the circulatory system of some patients for as long as 200 days and in all patients for many weeks. The cells have been found at the tumor site after two months. There has been an antitumor response in all six patients.

Some patients have been given three gene-altered TIL treatments, Broder said.

The next step is a TIL study that would include a gene for an antitumor substance such as tumor necrosis factor.

University Officials Recommend Conflict Of Interest Guidelines

A national panel of directors of major university based medical institutions has recommended general guidelines for conflicts of interest in research for academic health centers.

David Korn, dean of Stanford Univ. School of Medicine, was chairman of the panel. He is also chairman of the National Cancer Advisory Board.

The guidelines, formulated by a panel brought together by the Assn. of Academic Health Centers, begin with the overall principle that the first commitment of a faculty member, full time researcher, research fellow or student should be to the university.

"Other activities or commitments should be arranged so as not substantially to conflict with or dilute this commitment," the guidelines said. "It is inappropriate for faculty or academic staff member, without prior approval, to divert to other entities or institutions opportunities for research, education, clinical care, or financial support which otherwise might flow to the university."

Universities should develop clear policies that identify those activities that require prior approval or disclosure, such as consulting arrangements.

The panel's main recommendations follow:

--Faculty, researchers, staff and students should be required upon initial affiliation, and periodically therafter, to disclose significant financial, personal, or

professional relationships that raise a potential conflict of interest between their academic role and outside interests, as defined by university policies. Particular facts, or amounts must be determined by each university.

--Relationships that must be disclosed as to a faculty member, student or staff must also be disclosed if the person knew or should have known that a member of his or her immediate family had such a relationship.

--To encourage full disclosure of potential conflicts without unduly intruding on the privacy of university personnel or their families, disclosures should be treated confidentially and disclosed only to those persons or entities, and only to the extent, necessary to consider and resolve any conflicts.

--Significant financial, personal or professional relationships that raise a potential conflict of interest should be fully and accurately disclosed in all speeches, writings, advertising, public communications and collegial discussions relating to the sponsored research.

--Faculty and administrators should withdraw from all decisions affecting a compnay in which they or their family members have a substantial or professional interest.

--Where inventions affect important public interests, such as health care, the university has the responsibility to ensure dissemination of knowledge. Therefore, the university should either 1) retain ownership and the right to commercialize discoveries, or 2) ensure that the inventor has the ability and commitment to commercialize discoveries, or 3) retain "march-in" rights to push for commercialization if, after a defined period or set of events, the industrial sponsor has not diligently pursued commercialization.

The ownership of patents, allocation of revenues, copyright and other intellectual property interests should be made clear in standing university policies or in contracts.

Copies of the report, "Conflicts of Interest in Academic Health Centers," are available for $17, including shipping, from Assn. of Academic Health Centers, 1400 16th St. NW, Suite 410, Washington, D.C. 20036, phone 202/265-7514.

RFPs Available

Requests for proposals described here pertain to contracts planned for award by the National Cancer Institute unless otherwise noted. NCI listings will show the phone number of the Contracting Officer or Contract Specialist who will respond to questions. Address requests for NCI RFPs, citing the RFP number, to the individual named, the Executive Plaza South room number shown, National Cancer Institute, Bethesda MD 20892. Proposals may be hand delivered to the Executive Plaza South Building, 6130 Executive Blvd., Rockville MD. RFP announcements from other agencies will include the complete mailing address at the end of each.

RFP NCI-CO-03888
Title: Booklet Printing
Deadline: Approximately May 25

Single award for a fixed price contract for delivery 60 days after award of contract. Production area, assumed 125 mile radius of zero milestone, Columbia, MD. Bidders outside area must furnish documentation of their ability to meet schedule. Inspection of source materials will be from May 9-10, 8 a.m.-5 p.m., at NIH Bldg. 31 Rm 10A30, 9000 Rockville Pike, Bethesda, MD. For an appointment contact Erin Lange one week prior to source review. 10,000 copies of 8 1/2 x 11 inch booklet with separate cover. 70 text pages plus 10 perforated tear-out appendix pages of tear-out mailback index cards and 10 cover stock tabbed divider pages. Printed with seven PMS inks (417, 3262, 542, 257, 1785, 136, black) plus matte varnish on cover. Operations include spiral binding, trim, printing, packaging, mailing and f.o.b. destination to Columbia, MD. Contractor furnish paper. Quality attributes level 2 for printing and finishing. Bid request on company letterhead. Telephone, telegraph, fax request not acceptable.
Contract Specialist: Erin Lange
RCB Executive Plaza South Rm 608B
301/496-8628

RFAs Available

RFA CA-90-14
Title: Cancer prevention and clinical research in underserved populations.
Letter of Intent Receipt Date: May 15
Application Receipt Date: Aug. 8

The Special Populations Studies Branch of NCI's Div. of Cancer Prevention & Control announces the availability of an RFA on the above subject. Awards will not be made to foreign institutions.

NCI invites grant applications from investigators interested in conducting a coordinated and systematic program in cancer prevention and clinical research for underserved populations. The term underserved populations refers to those population segments that may experience, or are known to experience, higher than average U.S. general population cancer rates and are underserved in terms of access to quality comprehensive cancer prevention, screening and early detection, and treatment services.

The goal of the cancer control and prevention research program for underserved populations is to provide a mechanism to allow the implementation of a systematic and coordinated research effort to reduce cancer incidence, mortality and to improve survival rates in underserved low income high risk populations. By rapid dissemination of state of the art cancer prevention and control technology a significant effect can be achieved in reducing cancer mortality in minority and underserved patients through increased accrual to clinical trials and participation in screening and early detection programs.

Underserved populations may include, but are not limited to, groups with concentrations of individuals with low income, Blacks, Hispanics, Asian refugees, American Indians, elderly, Hawaiian natives and Alaskan natives. They may also include communities where comprehensive cancer services are unavailable whether the communities are in urban centers or in rural areas. Consideration should be given to adequate representation of women. Requests for copies of the RFA should be addressed to Chief, Special Populations Studies Branch, Div. of Cancer Prevention & Control, NCI, Executive Plaza North Rm 240, 9000 Rockville Pike, Bethesda, MD 20892-4200, phone 301/496-8589.