THE CANCER LETTER
RESEARCH EDUCATION CONTROL

Vol. 3 No. 15
April 15, 1977

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Subscription $100 per year

FDA PROMISES NO MORE IND DISRUPTIONS WITHOUT "VERY VALID REASONS," NEARS AGREEMENT WITH NCI

NCI and the Food & Drug Administration are "working up to a memo of understanding" which executives of both agencies hope will end the problems of the last year and a half, when FDA nearly halted new clinical research with anticancer drugs on two occasions.

Div. of Cancer Treatment Director Vincent DeVita and Richard Crout, director of FDA's Bureau of Drugs, agreed at a meeting of the DCT Board of Scientific Counselors that a solution to the problem is in sight.

The key (to resolving the problem) depends on their acceptance of our master plan," DeVita said. "The question is how we monitor clinical trials. We have revamped our drug distribution system, restaffed the Cancer Therapy Evaluation Program, are preparing new support con-

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In Brief

RECOMPETITION OF FREDERICK CONTRACT FLOPS, AS OTHERS LEAVE THE FIELD TO LITTON-BIONETICS

NO ONE wanted to take on Litton Bionetics in the recompetition of the contract for operation of the Frederick Cancer Research Center, *The Cancer Letter* has learned. LBI submitted the only proposal when other prospective bidders decided that it (a) wasn't worth the trouble and expense of drawing up their proposals or (b) they didn't have much chance of taking it away from LBI anyway. NCI executives were disappointed, now will have to negotiate the new five-year contract with LBI in the driver's seat. . . . AMERICAN CANCER Society is funding 18 grants involving recombinant DNA research. Six more applications in that area are being reviewed. All meet the new NIH safety standards for research with DNA recombinants, according to the new ACS senior vice president for research, Frank Rauscher. . . . RICHARD PREHN, Jackson Laboratory, answering the question, "Do you have any guess on when the cancer problem will be solved?" responded, "Sometime between next September and 100 years from now" . . . . RESEARCHERS SUPPORTED by NIH receive such support for an average of about five years, reports Thomas King, director of NCI's Div. of Cancer Research Resources & Centers. . . . WILLIAM TERRY, who as director of NCI's Immunology Program has resisted the temptation to oversell his discipline, was introduced at the ACS Science Writers Seminar as "that nabob of negativism." Terry said he would rather be known as that "master of moderation" or "captain of caution". . . . TO THE contention that increased funds for cancer research since 1971 were provided at the expense of other biomedical research, Rauscher said he once asked the White House if there would be any guarantee that that extra money would have gone to other diseases. "The answer was no," Rauscher said.

FDA STILL CONSIDERING REQUIRING INDs FOR NEW DRUG COMBINATION PROTOCOLS

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tracts, and have submitted our master plan to FDA. We have made significant progress."

Crout acknowledged that the problems began when FDA revamped its approach to the regulation of clinical trials as the result of congressional pressures, following disclosure of some mismanaged drug development efforts by the Dept. of Defense. Congress insisted that regulation of drug development by the federal government should be as stringent as that by private industry, Crout said. Applied to NCI, that ended the relationship which recognized that without the profit motive FDA did not need to monitor the research so closely, and that no one knew more about anticancer drug development and testing than NCI.

There was another factor, Crout admitted. "Some people new to their jobs were involved—Commissioner Schmidt, me, Dr. DeVita." One new FDA staff member Crout did not mention was R.S.K. Young, group leader for oncology in Crout's bureau. It was Young who held up INDs for eight drugs on one occasion and nine on another, decisions bitterly attacked by investigators who felt Young lacked the experience and background to challenge their protocols and their judgment. In every case, Young's objections were proven groundless and the INDs released, yet he was backed up at the time by Crout and the FDA commissioner.

The real trouble with the INDs, Crout said, was lack of documentation on how the research process was going. "The image was one of restricting INDs, when in fact it was a question of the system. It was regrettable that it came at a time when communications between NCI and FDA were not good."

The situation is "now better," Crout continued. "We have elevated the discussion. It is not a problem of staff but of the system. . . . You will see improvements in NCI's handling of data review, and their description of it. You'll see detailed descriptions of drug development, review, written input, as the result of some pressures we've exerted. It's not as easy as you would think. The Cancer Program comes under pressure to get drugs into medical care as soon as possible. . . . The history at NCI is to get anticancer drugs into medical care while they are still investigational. Those are technically, at least, investigational drugs. NCI should be monitoring them. Every physician using them should be followed, but it has not been done."

Crout promised that FDA will not interrupt any more INDs or protocols because of procedural matters. "If we run into monitoring or communications problems, we hope to elevate those problems to us [meaning himself and DeVita] and not take it out on the IND. If we do interrupt you, you can be sure it will be for reasons of toxicity, or pure science. Disruptions will not happen unless there is a very valid reason, and after high level communication between NCI and DCT."

Crout said FDA has not determined yet on a policy for requiring new INDs for each new drug combination. "We've got to figure out how to apply this to cancer. We don't have the ground rules yet. I realize that just discussing the subject may raise some hackles, cause some paranoia."

"I've got lots of hackles but no paranoia," commented Board member James Holland. He pointed out that some cancer patients get drugs for concomitant therapy that could conceivably change the metabolism of anticancer drugs. "You can't regulate those. What could come out of regulation that could conceivably make all possible combinations subject to new INDs? Use of drug combinations in man is best handled by the experienced physician. You could interrupt cancer clinical research with a stroke of the pen."

Crout answered that FDA has not applied that policy with drug combinations in other disease areas although requiring INDs in some cases. "I don't feel we would in cancer, either."

One ground rule might be, Crout said, "that if you add something intended to change the metabolism of drugs, for instance an enzyme inhibitor, something that would alter dosage relationships, then we need a fair amount of preclinical testing."

Holland said that "known active anticancer compounds can be put together for a direct attack on the tumor, not a biochemical attempt to alter metabolism."

Board member Harris Busch noted that "FDA is uncomfortable with this problem. There has been a huge amount of public pressure on them. None of the drugs we employ are of low toxicity. The dilemma can be resolved only by continued interaction between the two agencies. But requirements for a federal agency should not be the same as for manufacturers. It is commendable that you have continued interaction, that it is not a death struggle."

Crout picked up on one argument presented by NCI and investigators, that cancer drug development should have a special status with FDA because the disease is predominantly and rapidly fatal.

"We're not impressed at FDA that cancer drugs, as drugs, are different," Crout said. "Toxicity arises in other areas, where drugs are used in very sick people. But cancer drug development is different, with NCI's involvement. The fact that it is a closed medical group testing drugs is unique."

Board member Donald Morton said he was "surprised that you don't think cancer is different. Cancer is such a common disease and is uniformly fatal. The life expectancy of most cancer patients is three to six months."

"I didn't say it is not unusual, but it is not unique,"

Crout answered. He mentioned advanced renal disease and rheumatoid arthritis as examples.

"Those aren't fatal," Morton said. "Cancer is. The Cancer Institute is a federal agency trying to develop drugs to solve a problem. The reason NCI is doing it is because private industry is not interested. It is not appropriate to deprive us of those drugs because of rules developed for industry."

"We've tried not to," Crout said. "We didn't enforce the letter of the law. But we're vulnerable to criticism, why we're not enforcing the law. We need ground rules, that are known and are public."

"Then let us request that whatever you work out, it doesn't limit freedom to use drugs in small, limited trials by knowledgeable investigators. Otherwise, you could inhibit clinical investigation," Morton said.

"The unique aspect of cancer drug development is that investigational drugs, properly in the interest of medical care and in the interest of the Cancer Program, do get into medical care earlier than other drugs," Crout said. "That means data from the earliest phase I and phase II trials must be well put together, analyzed and reviewed, to permit earlier decisions (on when to move them into more widespread use). NCI is responding, seeing to it that early monitoring, gathering, analyzing is very good.

"The intent of the pressures exerted by FDA isn't because we're playing cops and robbers, or that we don't trust you, but because we want to speed up this documentation," Crout continued. "I realize there is a fine line between interfering with you and turning it into practicality."

Board member Charles Heidelberger commented, "There are a few small time operators in universities who make their own decisions. What chance do such groups have, if they do their own careful preclinical work and toxicology, to get into phase I and II trials?"

"Very good," Crout said. "It is a fairly common attitude that dealing with FDA is one of the modern world's worst pains in the neck, along with committee review and the Internal Revenue Service. But you will find that dealing with us is tolerable."

"You have to consider that for many cancer patients, no known treatment is effective, and there are no commercial drugs for them," Holland said. "Safety considerations for a pain in the neck pill should not apply."

"We agree with you," Crout answered. "I hope it's working that way."

Holland returned to the question of combinations. He proposed that "use of anticancer drugs in combination, each of which has been studied clinically and preclinically and each of which has been shown to be active against cancer shall be construed as a medical investigation rather than use of a new drug."

"What does that mean?" Crout asked.

"That FDA does not have the authority to regulate it," Holland said.

"We can't have a standard that says FDA doesn't have regulatory authority," Crout said. "It is not our intent to regulate innovative, small trials. Our philosophy is, go ahead with your plans. Pretend that people at FDA are not wholly lacking in common sense. I know that may be hard to do, at times."

"We think the cancer patient population is unique," DeVita insisted. "We think that toxicity information can be obtained in trials with patients rather than animals, and that this treatment should not be kept from patients that are so seriously ill that 90% will be dead in a year.

"It is important for you to recognize that cancer patients are different in order for us to reach an agreement," DeVita told Crout.

"It is an invitation to trouble in recognizing the uniqueness of cancer patients," Crout responded. "We have to deal with such things as laetrile. It is not necessary to acknowledge that to reach an agreement, and I would prefer not to, for political reasons."

DeVita asked for and obtained the Board's approval of his plan to issue an RFP for a clinical monitoring contract, should an agreement with FDA make it necessary to conduct on site monitoring of data collection. DeVita said there are a number of private firms in that business, using nurses to do the monitoring. He estimated it would cost about $100,000 for the first year.

DeVita said the precise scope of the monitoring contract was difficult to define at this point. "It is clear that the degree of monitoring of Cooperative Group studies will be quite different from that required for phase I and other contract activities," he said.

The contract probably will include data collection by mail, the preparation of summary reports, and statistical analyses.

SEARCH COMMITTEE SUBMITS CHOICES FOR NCI DIRECTOR TO CALIFANO

The search committee for a new NCI director has completed its job and submitted its recommendations to HEW Secretary Joseph Califano. It is up to Califano now either to select from the search committee's list (probably of three prospects) and submit his recommendation to President Carter, or to merely forward the list without his choice indicated.

Members of the search committee are sworn to secrecy, and apparently only committee members and Califano know at this point who is on the list. One committee member told ***The Cancer Letter*** he was "reasonably pleased" with the recommendations and confirmed that "more than one" name went to Califano.

The Cancer Letter reported (April 1) that the list might include Baruj Benaceraff, Harvard molecular immunologist, as well as Arnold Brown, William Shingleton and Vincent DeVita, the latter three fam-

iliar figures in the Cancer Program.

"If Benacerraf was intended as being at the top of your list, that was not correct," the search committee member said. "He was originally suggested as a prospect, but we learned he had other commitments. Some (members of the committee) continued to feel that he might be persuaded to take the job. But he was not at the top of the list." ***The Cancer Letter*** learned from another source that Benacerraf was on the list that went to Califano.

Additional names fueled the rumor mill at NIH, stimulated by the appearances before the search committee of NCI Acting Director Guy Newell and each of the NCI division directors. Newell himself was considered a prospect, his star rising after impressive performances before the House and Senate appropriations subcommittees.

Alan Rabson, director of the Div. of Biology & Diagnosis, was thought to be a solid prospect. His credentials as a scientist and administrator are flawless, and he rates very high with the scientists in NCI's intramural programs. He also would be an articulate and effective spokesman for the Cancer Program.

William Terry, director of NCI's Immunology Program, also made the rumor list. Terry is another highly respected scientist-administrator who can present his case well before lay and professional audiences.

NEW ACS GRANTS TO FUND "CRITICAL, URGENT" RESEARCH IN THREE MONTHS

A new grant program that will provide awards up to $50,000 "to provide more rapid funding for a variety of critical and urgent needs in scientific investigations related to cancer" has been established by the American Cancer Society.

ACS has allocated $5.6 million for the new mechanism, called Research Development Program Grants. Frank Rauscher, ACS senior vice president for research, said the program was designed to "get something going fast when new opportunities surface."

Other ACS programs—Research and Clinical Investigation Grants, Institutional Grants, and Grants for Support of Research Personnel—now require eight to nine months to go through the normal review process. The review cycle for NCI grants and contracts now can take from 12 to 16 months. The new ACS program, by making use of ad hoc reviewers, will permit grants to be processed and awarded within three months, Rauscher said.

ACS said in describing the Research Development Program that it "believes that new and unpredictable needs and opportunities in research and technology transfer do occur," but that current mechanisms and time constraints do not allow funding fast enough for many of them.

"This mechanism is an opportunity to provide additional funds for cancer research and its success will depend on the willingness of ad hoc reviewers to serve on an as necessary basic," ACS said. "It will also depend on the understanding of applicants that this is a special program and mechanism for special purposes."

An important innovation is flexibility without set and restricting rules. However, ACS intends that most awards will not exceed $15,000 and that virtually all will be for less than $50,000, none of which will exceed 12 months except under unusual circumstances.

The grants will be awarded to institutions located within the U.S., including the territories and Puerto Rico. Grants will not be made to individual investigators.

Examples of activities and urgent needs eligible for consideration include:

- Unique research opportunities which cannot and should not wait for funding by current lengthy mechanisms.
- Unanticipated requirements for reagents, drugs, blood components, equipment, travel.
- Program coordination, especially those involving clinical trials and the dissemination of research results to community hospitals.
- Program integration among the ACS and other organizations, such as cancer centers, PSROs, HMOs, state health associations.

Each grant application will be reviewed by an appropriate ad hoc advisory committee composed entirely of qualified non-ACS peer scientists. These committees will evaluate the scientific merit of the application; the relevance, need, priority and relative probability of the project's contribution to "people benefit;" the qualifications, experience and productivity of the investigators, actual or potential; the facilities available; the promise of the research as related to the control of cancer or the benefit to be gained by the patient with cancer; and the reasons why this rapid mechanism of funding is required.

Since applications will be accepted at any time, there will be no deadlines for receipt of applications.

Applications (original plus six copies) with sufficient information for review of merit, urgency need and priority, should be sent to Rauscher, ACS, 777 Third Ave., NYC 10017.

Money allocated for the new program is new money and will not come out of the existing ACS research budget of $34 million.

Rauscher said the ad hoc reviewers will have to be prepared to go to New York on two-three days notice, if the goal of a fast review and award process is to be met. He has lined up 104 scientists who have agreed to that requirement; most are located along the East Coast, to permit quicker travel to New York and to hold down travel costs.

Some review will be conducted by phone or mail, "but I like the give and take across the table, and we'll have meetings whenever it is appropriate," Rauscher said.

"This program will provide the seed money, for 12 or maybe 18 months, to get someone going," Rauscher continued. "That will give him time then to prepare to come back to us, or to go to NCI, for a regular grant. We want to keep this money turning over constantly."

Rauscher has put together another new grant program which ACS will announce shortly, the Junior Faculty Research Awards. These will be available to students who have finished their predoctoral studies and have not accumulated enough experience to compete for regular research support. The new program will provide support for two-three years, to help provide them with that experience.

SACCHARIN FLAP SPLITS SCIENTISTS; ACS PROPOSES DELANEY MODIFICATION

The growing controversy over the Food & Drug Administration's proposal to ban saccharin because it apparently caused bladder cancers in test animals has divided the cancer research community just as it has nearly every other group with assorted interests in the problem.

Science writers participating in the annual seminar conducted for them by the American Cancer Society last week rarely missed an opportunity to question scientists on the program about saccharin. They appeared to be more or less equally divided on the question of whether or not saccharin should be banned or at least more tightly controlled.

The scientists generally agreed that FDA had no choice in proposing the ban, under the requirements of the Delaney Amendment. But they disagreed over whether or not the animal tests offered conclusive tests of saccharin's carcinogenicity for humans.

ACS issued a statement of its position on the controversy, suggesting that the Delaney Amendment should be modified to take into account such issues as risk-benefit and cost-benefit, and calling for Congress to consider legislation that would exempt saccharin from the Delaney Amendment. The complete statement follows:

"It is clear that the Food & Drug Administration acted properly under the Delaney Amendment to the Food, Drug & Cosmetic Act in banning saccharin. If a food additive induces cancer in animals or in man, under appropriate tests, the law demands that it must be banned.

"The Delaney principle is basically sound. The American Cancer Society wants to reduce exposure to all identifiable carcinogens whenever feasible.

"But as a major voluntary health agency whose primary responsibility is cancer, the American Cancer Society is vitally concerned with the general health and wellbeing of the public. Saccharin is of great value in dietetic foods, used to help control diabetes and obesity, which afflicts tens of millions of Americans and pose more immediate danger than the possible carcinogenicity of saccharin. Banning saccharin may cause great harm to many citizens while protecting a theoretical few.

"The Delaney Amendment has served the public well. But as more sophisticated and quantitative technology becomes available, issues of dosage, cost-benefit, risk-benefit, and the predictability of animal data to potential impact in people must be further and better evaluated.

"All the evidence for and against saccharin should be further studied by independent scientists so that a course of action could be determined which would be of greatest benefit to the public. Although there is no evidence that saccharin causes human cancer, the Society's Dept. of Epidemiology & Statistics will be investigating this most important aspect of the problem.

"In addition, saccharin requires special review by Congress, to determine if it should be exempt from the Delaney Amendment because of its importance at the present time in medical and health matters."

Congress has already come up with an armload of its own proposals for dealing with the problem, ranging from outright repeal of the Delaney Amendment to legislation that would require animal tests conducted under the terms of the amendment to be "more relevant" to humans in dosage administration. The "800 cans of diet soft drinks a day for your lifetime" picture has outraged members of Congress in direct proportion to the same outrage it produces in their constituents.

One congressman, Henry Waxman (D.-Calif.), indignantly demanded to know why the government proposes to ban an alleged carcinogen with no proven threat to humans, such as saccharin, while it does nothing about a much more powerful and proven carcinogen such as cigarettes.

Waxman should direct that question to his colleagues. Congress created the Delaney Amendment. And it is Congress that has consistently failed to give FDA or any other regulatory agency any authority over cigarettes.

Here are some of the saccharin-inspired bills introduced in Congress:

HR 5050, by Mickey Edwards (R.-Okla.), to provide that FDA can ban only those food additives found to induce cancer when ingested in an amount reasonably anticipated to be consumed in man.

HR 5138, by Bob Krueger (D.-Texas), to provide the HEW secretary with greater latitude in regulating food additives found to induce cancer in man or animal.

HR 5140, by James Martin (R.-N.C.), to provide for the evaluation of the risks and benefits of food additives and to permit the continued use of saccharin until an evaluation is completed.

HR 5062, by William Ketchum (R.-Calif.), to amend the Food, Drug & Cosmetic Act respecting the treatment of saccharin as a food additive.

HR 5156, by James Jones (D.-Okla.), to require appropriate tests before a food additive may be banned as inducing cancer in man or animal, and to permit the marketing of such an additive with appropriate warning label.

S. 1034, by S.I. Hayakawa (R.-Calif.), to provide for a study of the effects of saccharin.

HR 5197, by Marilyn Lloyd (D.-Tenn.), to revise the standard for regulating food additives found to induce cancer in man or animal.

Several resolutions have been introduced "expressing the sense of Congress" that saccharin not be banned without prior specific congressional approval.

NCI has not taken any official position on the saccharin issue. Acting Director Guy Newell, asked to testify in Congress, said he felt FDA had no choice under the Delaney Amendment but to propose the ban. Newell also said he felt that since saccharin has had an 80-year history of use in foods without producing any epidemiological evidence that it causes cancer, it probably is not a health threat.

Newell and other NCI executives agree that since the use of saccharin, in diet food and drink as well as a table top sweetener, has increased heavily within the last 10-20 years, more studies are needed.

UICC ANNOUNCES FOUR GRANT PROGRAMS WILL BE CONTINUED IN 1977 - 1978

Four grant programs supported through the International Union Against Cancer (UICC) but funded by other organizations will be continued for 1977-78, UICC has announced.

The American Cancer Society Eleanor Roosevelt International Cancer Fellowship awards will be granted to experienced investigators who wish to broaden their experience by a period of study at a single institution in another country. Only those on the staff of universities, teaching hospitals, research labs or similar institutions are eligible. Deadline for applications is Sept. 1.

The Yamagiwa-Yoshida Memorial International Cancer Study Grants, funded by the Japan National Committee for UICC, are designed to enable investigators of any nationality to gain experience in or make comparative studies of special techniques in both the biological and clinical aspects of cancer research. They are available only for study outside the grantee's country of residence since they are intended to encourage international collaborative activities.

NCI's International Cancer Research Data Bank is supporting two programs through UICC. One is the International Cancer Research Technology Transfer Program which is designed to promote direct and rapid person to person transfer of information between investigators located in different countries who are working in basic, clinical or behavioral research related to cancer. Funds will permit investigators of any nationality (but not U.S. government employees) to visit research centers abroad for a period not exceeding 21 days.

ICRDB also supports an international cancer research workshop program. It provides up to $10,000 to cover costs of bringing together up to 12 investigators in the same field of basic, clinical or behavioral research for not more than four days.

Additional information and application forms may be obtained from UICC, Conseil-General 3, 1205 Geneva, Switzerland.

NCI GOOFS ON BIOASSAY CONTRACT NOTICE BUT STAYS WITH IMPROPER DEADLINE

NCI's contract with Microbiological Associates for support services in carcinogenesis bioassays expires June 30, and NCI contract officials are in the process of determining if it should be offered as a competitive RFP.

NCI is leaning in the direction of making the award a noncompetitive, sole source procurement from Microbiological Associates, for two reasons: The feeling that Micro is the only firm with the facilities and staff to handle the job; the government already has invested $580,000 in facilities at Micro.

Before a sole source procurement can be offered, however, government contract officers must ascertain whether or not any other organization exists capable of competing for the award. NCI submitted an announcement of the proposed RFP to the government publication, *Commerce Business Daily,* which published it April 1. The announcement reached ***The Cancer Letter*** too late for publishing in last week's issue.

If the announcement generates interest from firms qualified for the job, NCI will be obligated to make it a competitive procurement. Government regulations require that potential responders have 15 days from the date of publication to submit resumes detailing their qualifications.

To meet the time constraints imposed by the June 30 expiration of Micro's contract, NCI established April 11 as the deadline, four days short of the legal minimum. Failure to notify ***The Cancer Letter*** or any other non-government publication in time for publishing the notice prior to the deadline may have left some potential responders without any opportunity to submit resumes. Even those who saw it in the government publication may not have had sufficient time to develop their responses.

The Cancer Letter suggested that the April 11 deadline be relaxed, but NCI remained determined to stick with its schedule.

If the contract is recompeted, there is no way the contract award process could be completed by June 30. It would appear that NCI never had any intention of making this a competitive procurement.

Joe Federline, NCI's contracting officer for the

project, disagreed. He said that if the determination is made to go competitive, Micro's contract could be extended until the new one is awarded.

The Cancer Letter suggests that organizations which do not feel they were properly notified and which are interested in the contract should go ahead and submit their resumes to Federline, regardless of the deadline. His address is Carcinogenesis Contracts Section, NCI, Blair Bldg Rm B-16, Bethesda, Md. 20014. Refer to RFP NO1-CP-02119-57.

The fact that the 15 day minimum notice requirement was not met could open the way to legal action by those who feel they did not have a fair and reasonable opportunity to respond.

Following is the RFP announcement:

NCI needs a private laboratory logistically operated by a dependable contractor for the conduct of collaborative research programs emphasizing lifetime tumor induction studies in rodents and related studies for a three year period. This laboratory and its personnel must be available for immediate response capability to the requirement of NCI Carcinogenesis Program needs. This will involve contractor staff availability in Bethesda for scientific discussion with NCI staff on a 24-hour basis; as well as a capability for expeditious transfer of animal and cell culture lines between contractor and NCI labs with a minimal amount of associated trauma to animals and with adequate provision for protection of ongoing culture experiments.

The laboratory, with an area of approximately 22,700 square feet, will be used chiefly for long-term treatment, holding and observation of animals in carcinogenesis investigations emphasizing lifetime tumor induction in rodents and related activities. This animal facility must meet AALAS certification requirements for housing of mice (including athymic nude mice), rats, Syrian hamsters, guinea pigs and rabbits, and must satisfy NCI guidelines for safety of personnel handling chemical carcinogens to be administered to animals by skin painting, gavage, parenteral injection, or intratracheal instillation. The required facility shall provide approximately 30 rooms of animal holding space including space for surgery, autopsy, cage and bottle washing and shall be physically separate from any other program involving animals.

Immediately adjacent thereto approximately 20 rooms for supportive laboratory facilities, including laboratories for tissue culture, photography, biochemistry, histopathology and storage are also required. Laboratory will be directed by a full-time scientist holding PhD or comparable degree with experience in carcinogenesis studies and in management of a laboratory of this size. Senior staff must include at least part-time services of DVM with experience in laboratory animal science and one other full-time professional. These three professionals shall comprise approximately 5,000 man-hours of effort annually. In addition, approximately 12,000 man-hours of junior technical personnel with a BS degree or equivalent, 12,000 man-hours of technical support personnel and 1,500 man-hours of lab aid personnel shall be needed on an annual basis. It is estimated that the contract cost should be between $550,000 and $650,000 annually for three years. It should be noted that the government has invested $580,000 in a facility with Microbiological Associates in Bethesda, Md.

Taking this into consideration, interested parties shall indicate how they will compete on a cost basis so that government does not lose its investment. Also, seven copies of a resume of experience, capabilities and facilities, to perform these services, must be submitted.

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. Their addresses, all followed by NIH, Bethesda, Md. 20014, are:
Biology & Diagnosis Section — Landow Building
Viral Oncology & Field Studies Section — Landow Building
Control & Rehabilitation Section — Blair Building
Carcinogenesis Section — Blair Building
Treatment Section — Blair Building
Office of the Director Section — Blair Building
Deadline date shown for each listing is the final day for receipt of the completed proposal unless otherwise indicated.

RFP NCI-CP-VO-71020-54

Title: *Biomolecular relationship of herpesvirus and cancer*
Deadline: *June 1*

NCI is seeking organizations with the capability of developing suitable systems for producing sufficient quantities of nucleic acids of herpesviruses and the determination of the in vitro transforming potential of DNA fragments from these viruses. RFPs will be available for studies on the Epstein-Barr Virus (EBV).

RFP NCI-CP-VO-71021-54

Title: *Biomolecular relationship of herpesvirus and cancer*
Deadline: *June 1*

NCI is seeking organizations with the capability of developing suitable systems for producing sufficient quantities of nucleic acids of herpesviruses and the determination of the in vitro transforming potential of DNA fragments from these viruses. RFPs will be available for studies on the herpesviruses Saimiri (HVS).

RFP NCI-CP-VO-71022-54

Title: *Biomolecular relationship of herpesvirus and cancer*
Deadline: *June 1*

NCI is seeking organizations with the capability of

developing suitable systems for producing sufficient quantities of nucleic acids of herpesviruses and the determination of the in vitro transforming potential of DNA fragments from this viruses. RFPs will be available for studies on the Herpes Simplex Virus (HSV).

RFP NCI-CP-VO-71023-54

Title: *Biomolecular relationship of herpesvirus and cancer*
Deadline: *June 1*

NCI is seeking organizations with the capability of developing suitable systems for producing sufficient quantities of nucleic acids of herpesviruses and the determination of the in vitro transforming potential of DNA fragments from these viruses. RFPs will be available on the Cytomeglovirus (CMV).

Contract Specialist for above 4 RFPs: J. Thomas Lewin
Viral Oncology & Field Studies
301-496-1781

RFP NCI-CM-87156-18

Title: *Preclinical canine bone marrow transplantation*
Deadline: *Approximately May 20*

The Experimental Hematology Section with the Clinical Oncology Program, Div. of Cancer Treatment, NCI, is seeking an organization qualified to support services for the development of techniques for hematological reconstitution of patients receiving ablative regimens for the treatment of cancer by autologous stem cell infusions. The required techniques will be developed through utilization of canine models.

These services will include providing courier services for daily pickup and delivery of blood samples, weekly meetings with Experimental Hematology Section staff, granulocyte collection from intravenous shunted dogs by Aminco cell separator, irradiation of dogs for dose establishment for infusion, and maintain and provide daily care, treatment and medical support for dogs under study.

The offeror must be located in close proximity to NIH and turnaround time must be within one hour because of need of fresh samples for experiments at NCI.

It is anticipated that the project will require 6¾ technical and support man-years of effort per year.

Contract Specialist: Helen Lee
Cancer Treatment
301-427-7460

RFP 210-77-0049-0000

Title: *Carcinogenicity of antimony and thallium*
Deadline: *Approximately May 26*

Determining inhalation exposure in animals the carcinogenicity of thallic oxide an antimony ore concentrate, and antimony trioxide.

Contracting Officer
National Institute for Occupational
Safety & Health
5600 Fishers Lane
Rockville, MD 20857

CONTRACT AWARDS

Title: Prostate transplant model: A system for studying neoplasia
Contractor: State of West Virginia, $25,000.

Title: Development and application of N-nitroso compounds and their precursors in the environment
Contractor: British Food Manufacturing Industries Research Assn., $24,716.

Title: Computer-aided prediction of metabolites for carcinogenicity studies
Contractor: Univ. of California (Santa Cruz), $56,328.

Title: Carcinogenesis in organ culture of trachea and bronchi
Contractor: State Univ. of New York (Albany), $258,770.

Title: Characterization and study of the transport systems from normal and neoplastic cells
Contractor: Univ. of Rochester, $59,475.

Title: Classification of non-Hodgkin's lymphomas
Contractor: New England Medical Center Hospitals, $37,679.

Title: Continue clinical staging system for multiple myeloma
Contractor: Univ. of Arizona, $40,888.

Title: Adjuvant trials in resectable non-oat lung cancer
Contractor: Mayo Foundation, $558,003.

Title: Continue adjuvant trials in osteogenic sarcoma
Contractor: Mayo Foundation, $50,000.

Title: Adjuvant chemotherapy in non-oat cell carcinoma of the lung
Contractor: Vanderbilt Univ., $350,890.

Title: National Cancer consultative programs for hospitals
Contractor: American College of Surgeons, Chicago, $214,172.

The Cancer Letter—*Editor* JERRY D. BOYD

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