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## HOUSE APPROPRIATIONS COMMITTEE APPROVES $1.221 BIL. BUDGET FOR NCI IN FISCAL 1986; NIH GETS $5.247 BIL.

The House Appropriations Committee has approved a $1.221 billion budget for NCI for fiscal 1986. The bill, which appropriates $5.247 billion for NIH as a whole, should go to the House floor for

(Continued to page 2)

*In Brief*

### STEPHEN SCHIMPFF ACCEPTS NEW POSITION OF EXECUTIVE VICE PRESIDENT OF UNIV. OF MARYLAND MEDICAL SYSTEM

**STEPHEN SCHIMPFF,** director of the Univ. of Maryland Cancer Center, has accepted the newly created position of executive vice president of the university's medical system. Schimpff's duties will include management of the internal activities of the cancer center, the Univ. of Maryland Hospital, its Shock Trauma Center, and Montbello Rehabilitation Center. He will remain on the faculty as a professor of medicine, pharmacology and oncology and will continue to interact with the cancer center as leader of the research program of infectious complications in patients with cancer. Nicholas Bachur, deputy director for laboratory research at the cancer center and a professor of medicine, pharmacology and oncology at the university's medical school, has been named acting director. Bauchur joined the university last July after 22 years at NCI.... **WARNER GREENE,** a senior investigator in NCI's Metabolism Branch, has received the Washington Academy of Sciences Award in biological sciences for his work in immunology and oncology.... **GLEN JOURNEAY,** an Austin family physician, has received the Univ. of Texas M.D. Anderson Hospital and Tumor Institute 1985 Family Practice Award for Excellence in Oncology. ... **JOSEPH PAINTER,** Univ. of Texas System Cancer Center vice president for physician referal development and extramural programs, has been chosen to serve on the new Texas Cancer Council.... **ONCOLOGY NURSING** Foundation Scholarship applications are available for registered nurses pursuing bachelor of science degrees in nursing during the 1986-87 academic year. Ten $1,000 awards are available; five sponsored by the foundation and pharmaceutical manufacturer Lederle, the remaining five by the foundation and Burroughs Wellcome. The application deadline is Jan. 15, 1986. Applications may be obtained from the Oncology Nursing Foundation, 3111 Banksville Rd., Suite 200, Pittsburgh, PA. 15216.... **HILARY KOPROWSKI,** Wistar Institute director, has received the Philadelphia Cancer Club and Philadelphia Cancer Coordinating Association's Philadelphia Cancer Research Award.... **CORRECTION:** Virgil Loeb is a professor of clinical medicine at Washington Univ., not president of the Univ. of Texas Medical Branch at Galveston (The Cancer Letter, Sept. 27). William Levin is president of the Univ. of Texas branch.

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## )USE NAMES CONFEREES FOR UPCOMING )NFERENCE ON NCI REAUTHORIZATION

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)nsideration this week. The Senate Labor-HHS )propriations Subcommittee gave NCI $1.217 billion its markup of the FY 1986 budget, a $56.7 million crease over 1985 (The Cancer Letter, Sept. 27).

House and Senate leaders have still not held a *nference on NIH reauthorization measures, however,* ongressional sources expect the two chambers to eet on the bill within the next two weeks. Last eek the House appointed its conferees for the ouse-Senate conference. They are: Reps. John ingell (D-Mich.), Henry Waxman (D-Calif.), James cheuer (D-NY), James Broyhill (R-NC), and Edward ladigan (R-Ill.).

Senate conferees are Sens. Orrin Hatch (R-Utah), dward Kennedy (D-Mass.), Don Nickles (R-Okla.), Dan )uayle (R-Ind.) and Spark Matsunaga (D-Hawaii).

Both the House and Senate bills would establish a

## TWO NEW ORGAN SYSTEMS WORKING GROUPS TO BE CONSIDERED AT NCAB MEETING

The addition of two new organ systems working groups will go before the National Cancer Advisory Board for consideration at its Oct. 7-8 meeting. The two new organ systems under consideration for inclusion in NCI's Organ Systems Program are central nervous system tumors and cancers of the upper aerodigestive system, Jerome Yates, Div. of Cancer Prevention & Control associate director for Centers and Community Oncology, told the division's Board of Scientific Counselors at its recent meeting.

NCI sponsored conferences on the two organ systems earlier in the year resulted in formal recommendations for the establishment of the two new working groups.

Results of the conferences and their reports were presented to the DCPC board for informational purposes only. In order to initiate a new Organ Systems working group, NCI convenes a consultant

"There's no question that head and neck cancer is almost a prototype of multi-disciplinary care as now evolved," he said. Loeb compared the need for a multi-disciplinary approach to the establishment more than 10 years ago of the leukemia task force. A focus for head and neck cancer is "essential or terribly important," even if it is confined to diagnosis and treatment, he said. Whether a new system or task force is created is arguable, he added, but a new focus is required.

Although questioning the inclusion of malignant melanoma and thyroid cancer, Ultmann appeared to favor the new system, noting that head and neck surgeons are already communicating with radiotherapists. "Something is happening in larger centers," he said. "The whole idea of neoadjuvant therapy will be tested in this area more than in any other field" in coming years.

A two day conference held in July on upper aerodigestive cancers concluded that "there is a desperate need for a coordinated multidisciplinary approach in cancer of the upper aerodigestive tract in order to sustain what early steps have been taken." The conference report notes that surgery has been the standard treatment for most upper aerodigestive cancers, and that radiation therapy has played a major role as a curative modality in less advanced cancer and as an important adjunctive treatment in advanced cases. More recently, chemotherapy has been utilized in an adjunctive role in the treatment of advanced cancers, it says.

The conference report specifically notes that "the addition of planned adjunctive irradiation therapy in the treatment of advanced cancers is considered by some as standard therapy, and yet there are few objective data to support this." In addition, "the random, off protocol use of chemotherapy has become widespread," it reports. "This has resulted in increased overall health care costs, prolongation of already lengthy treatment, and exposure of patients to undue morbidity."

"A coordinated multidisciplinary approach to cancer of the upper aerodigestive tract is lacking, and the field has suffered accordingly," the report maintains. "Ten years ago such a plan could not have been conceived, but, because of the recent development of specialized, sophisticated research techniques and technolopgy, as well as improvements in clinical care, such a program is now possible."

Resources for basic research in head and neck neoplasia are currently available at only a limited number of institutions, it says.

For example, techniques now available that may prove useful in the identification of early or premalignant lesions "are not being fully exploited due to lack of interaction between basic scientists and clinicians," the report says.

It specifically notes that "measurements of DNA 06-methyl-guanine adducts in exfoliated buccal cells could provide a useful measure of the susceptibility of individuals to the development of cancer, and could thereby identify a 'high risk' group which could be followed more closely."

The report also cites a need for collaborative efforts in tumor imaging, such as research on the development of non radioactive antibody chelate conjugates, hematoporphyrin-associated tumor flourescence, and application of laser technology.

Treatment related problems requiring clinical and immunological study are:

1. The importance of either resecting or irradiating regional lymphatics as it relates to promotion or inhibition of tumor growth and dissemination;

2. Methods of prevention of distant metastases and second primary cancers;

3. Prediction of chemo and radiosensitivity, as well as steroid hormone sensitivity of tumors so that mutilating and/or crippling surgical resection could be avoided by pre treatment patient selection;

4. Needed improvement in clinical staging;

4. Improved detection of microscopic residual disease at sites of primary tumor resection or in clinically negative regional lymph nodes that would allow more selective or timely therapeutic intervention.

Preclinical research activities needed include initiatives in chemotherapy, steroid therapy, immunotherapy, early detection of cancer, antibody recognition of tumor specific antigens, and epidemiological studies.

The addition of an organ system working group for central nervous system tumors was recommended in a report from a similar conference convened by NCI last April. Conference participants unanimously supported the establishment of a working group dealing with central nervous system cancer. Asserting that "progress in controlling and curing brain cancer has lagged far behind many other cancers," the conference report contends, "the morbidity in brain tumors at all ages exceeds that of any other cancer."

Limited resources are "currently being directed toward brain tumor research," it says. Consequently technology, which now exists in cytogenetics, oncogenes, molecular genetics, monoclonal antibodies, drug development and overcoming cellular resistance, and other research areas, has been minimally exploited in relation to brain tumors."

The report also cites "problems and needs unique to central nervous system tumors which current mechanisms have been unable to address adequately." A coordinated, multidisciplinary approach to neuro-oncology is lacking and "progress in this

field has suffered accordingly," it maintains. For example, "existing research leads indicating multidisciplinary approaches to the solution of important basic and clinical neuro-oncological problems remain unexploited because there is no specific mechanism to facilitate interaction among the various clinical and laboratory scientists," it says.

Clinical needs identified in the report include more clinical and basic research on low grade brain tumors; coordination and accessibility of information, possibly through a computerized "bulletin board" for CNS tumors; extension of diagnostic neuropathologic expertise and identification of new pathologic diagnostic techniques such as monoclonal antibodies for CNS tumors; and neuroimaging, including its use to resolve basic research questions.

The report also asserts that communication, collaboration and even coordination of research activities between clinical and pre clinical investigators is inadequate. "As an example, the need to improve such activities between the two pediatric cooperative groups, Pediatric Oncology Group and the Children's Cancer Study Group, Brain Tumor Cooperative Group, other cooperative groups and major program project awardees, was noted by the conferees." The report also notes that there is "inadequate interaction, exchange of information and regular liaison among individuals, organizations, groups and societies."

In addition, the report cites the need for multidisciplinary planning and implementation in basic and clinical research in neurotoxicology. Surgical and radiation therapy research is "also lagging in progress which only further research can improve," it reports. The mechanism of metastasis to the CNS must also be addressed, the report says, adding that "the lack and/or need for information in this area could be resolved through the development and implementation of multidisciplinary research initiatives."

The report also asserts that progress in basic research on CNS tumors "is lagging because this field lacks the support of central reference laboratories and a mechanism for creating and promoting the use of shared resources." Specific needs in laboratory science are identified in the areas of epidemiology, tumorigenesis, oncogene expression, available technology, immunodiagnosis, immunosuppression, therapeutic modalities, and pharmacology.

"In broad terms, there is a need to stimulate investigator inititated research efforts targeted toward tumors of the central nervous system," the report advises. "There is also a need to encourage accomplished investigators to study these cancers."

## CRICO-PHARYNGEAL MYOTOMY's EFFICACY TO BE ASSESSED IN TWO YEAR RTOG TRIAL

The use of Crico-Pharyngeal Myotomy in patients undergoing surgical resection for supraglottic and laryngeal carcinomas will be studied in a randomized trial to be carried out by the Radiotherapy Oncology Group under a concept approved by NCI's Division of Cancer Prevention and Control's Board of Scientific Counselors.

One of the main goals of the project is to determine the efficacy of the procedure in improving swallowing. "There are no firm end data demonstrating the benefit of Crico-Pharyngeal Myotomy in patients undergoing head and neck surgery," the concept states. "The biases of the surgeon appear to determine whether or not this operation is carried out. The efficacy of this surgery in improving swallowing remains to be demonstrated."

The project will also employ standardized measures of speech and swallowing during patient followup. According to the concept, "surgeons have not employed standardized measures of voice and swallowing for following the sequelae of primary cancer treatment. The use of standardized measures would be beneficial in assessing treatment morbidity in patients with head and neck cancer."

The randomized trial would assess the relative benefits of the surgery by comparing patients undergoing the procedure with those who do not. The project, which is expected to last two years, will enroll approximately 200 patients per year. Total annual funding of $190,000 will be provided through a grant supplement to the Radiotherapy Oncology Group. The division chose the group because of its access to a large number of patients with head and neck cancers.

Board members voted six to one in favor of the concept, with board member Jerome DeCosse opposing the project. Warning that the project would be "walking into a jurisdictional dispute," DeCosse asserted that it would be hard to randomize patients into such a trial because physicians "either believe or don't believe" in the efficacy of the procedure.

Board member John Ultmann recommended that the project involve surgeons directly instead of the RTOG. DCPC's Centers and Community Oncology head Jerome Yates reported, however, that RTOG was the only organized group with the numbers of patients needed to address the question. Yates also said that head and neck surgeons have indicated a willingness to participate in the trial and randomize patients for the procedure, and have agreed on technical aspects of the surgery. "There is no science for the operation," he said, and "very meager literature."

Patients in the trial will be assessed at three days, three weeks and three months postoperatively, with swallowing to be assessed by direct measures such as cineradiography, manometry and radioisotopes. Indirect measures of assessing swallowing include diet history and changes in nutritional status.

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## CANCER CONTROL SUPPLEMENT TO 1987 NHIS SURVEY TO INTERVIEW 52,000

Approximately 52,000 households will be surveyed to obtain information on public knowledge, attitudes and practices related to cancer risk factors and cancer screening under a concept approved by the Division of Cancer Prevention and Control's Board of Scientific Counselors.

The board unanimously approved an interagency agreement between NCI and the National Center for Health Statistics to include a cancer control supplement in the 1987 National Health Interview Survey. NCI expects the data collected to provide a comprehensive profile of cancer risk factors and screening.

The results will be used to estimate the prevalence of cancer risk factors in 1987, and to determine the extent to which some risk factors and selected behavior patterns such as screening practices are correlated within categories of socioeconomic status and health status. Data will also be obtained on the reasons why individuals did or did not change behavior associated with increased risk of cancer or take advantage of cancer screening programs.

The information "will lead to the refinement of DCPC cancer control efforts as well as pointing cut new areas for program interventions," the concept says. "The information will show that temporal changes in the prevalence of some cancer risk factors may be assessed by relating the data collected in the proposed supplement to previously collected survey data." It adds that other surveys "have not collected data on such a broad cancer control scope nor on as many individuals" as the NHIS survey.

Total costs for the program are expected to be $323,728 for fiscal 1986; $1.139 million for FY 1987, and $262,335 for FY 1988. The estimated cost per person of administering the 25 minute survey supplement is $33. The concept notes that "if NCI were to conduct its own survey of 6,000 persons with a questionnaire taking approximately one hour to administer face to face, it would likely cost on the order of $150 to $200 per person or $900,000 to $1,200,000."

NCI staff are expected to carry out the analysis of the data, which will be available on an edited datatape by mid summer to early fall of 1988.

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## CIGARETTE TAX EXTENSION APPROVED FOR 45 DAYS BY SENATE, HOUSE WAYS & MEANS

The Senate voted last week to extend the 16 cent federal tax on cigarettes for another 45 days. The Senate measure delays a final decision about the tax, which is scheduled to drop back down to 8 cents per pack Oct. 1 unless extended by Congress. The Senate Finance Committee had voted to maintain a permanent 16 cents per pack cigarette tax and to initiate taxes for smokeless tobacco, but added a tobacco price support bill sponsored by Sen. Jesse Helms (R-N.C.). Under the measure, snuff would be taxed at 24 cents a pound, and chewing tobacco at 8 cents a pound.

The House is expected to vote on a similar extension this week. The House Ways & Means Committee voted Sept. 27 to extend the cigarette tax for 45 days, as part of its emergency extension bill. While the measure does not address the issue of tobacco support, an earlier proposal by the committee would allocate 1 cent of the 16 cent cigarette tax to the existing tobacco support program. Congressional staff expect the issue to be addressed in a Senate-House conference on the reconcilliation legislation.

In a recently released report prepared for the House Ways & Means Committee, the Office of Technology Assessment estimates that the U.S. will spend between $12 billion and $35 billion to treat smoking related diseases in 1985. Its middle estimate is health care costs of about $22 billion, or 6% of all U.S. health care spending. "This amounts to about 72 cents for each pack of cigarettes sold in the U.S.," OTA says in the report on smoking related deaths and financial costs.

Estimated Medicare costs are $1.7 billion to $5.4 billion, while Medicaid costs amount to $0.3 to $1.1 billion. After subtracting the state share of medicaid costs and adding in other federal programs that provide health care to the elderly, the estimate is that the federal government pays between $2.1 billion and $6.6 billion for treating smoking related disease.

OTA's middle estimate is that the federal costs amount to about $4.2 billion in 1985 or about 14 cents for each pack of cigarettes.

The estimated loss of productivity from smoking related disease ranges between $27 and $61 billion, with a middle estimate of $43 billion. According to the report, "the middle estimate amounts to about $1.45 for each pack of cigarettes sold."

The total of smoking related health care costs and lost productivity costs amounts to between $39 and $96 billion, with a middle estimate of $65 billion, OTA says. The middle estimate equals $2.17 per pack of cigarettes.

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OTA's analysis doesn't discuss in detail all the effects that smoking has on the economy or all government programs. Only the mortality toll of smoking and its effects on direct medical care spending and the indirect costs of lost productivity were estimated.

The report notes that "reduction or elimination of smoking would improve health and extend longevity, but it may not lead to savings in health care costs" and could lead to future increases in total medical spending. It continues, however, that "even if reduced smoking leads to increased costs in future years, it will also lead to improved health and additional years of life for thousands currently dying of smoking related disease. Relatively modest expenditures might lead to large improvements in longevity and thus represent cost effective ways of improving health and preventing premature death."

OTA focused on the three major categories of smoking related disease - cancers, cardiovascular disease, and respiratory system disease.

The estimates for cancer related deaths include only the cancer sites most clearly associated with smoking: respiratory system; lip, oral cavity and pharynx; esophagus; pancreas and bladder. Overall, about 32% of all cancer deaths in 1982 are attributed to smoking, compared to 30% in 1978. OTA says the increasing toll "is the direct result of the large increases in the prevalence of smoking that occurred during the 1940s, 1950s and the first half of the 1960s."

About 40% of cancer mortality in men is related to smoking, and about 18% of female cancer mortality. The report also cites "significant age differences in the attributable risks for cancer." Half of male cancer deaths under the age of 65 are related to smoking, compared to 41% of male cancer deaths over age 65. Similarly, for women, 23% of deaths under age 65 and 15% of those over 65 are attributed to smoking.

OTA's middle estimates for smoking related deaths in 1982 are 139,000 deaths from cancer, 123,000 from cardiovascular disease, and 52,000 deaths from chronic obstructive lung disease, totaling 314,000 deaths from the three causes.

Smoking is responsible for 32% of cancer deaths, 13% of cardiovascular deaths, 88% of chronic obstructive lung disease deaths and 16% of deaths from all causes, OTA estimates. The estimated smoking related toll from these three causes ranges from a minimum of 186,000 deaths to 398,000 deaths. "This tends to understate the toll of smoking because other causes of death and illness, such as ulcers or perinatal problems due to smoking during pregnancy, have been excluded from this analysis," OTA emphasizes.

## CLINICAL NUTRITION ACADEMIC AWARD CONCEPT APPROVED BY DCPC COUNSELORS

A new Clinical Nutrition Academic Award approved by the Division of Cancer Prevention and Control's Board of Scientific Counselors recently would provide up to $40,000 a year in salary for five years, fringe benefits, curriculum development and actual indirect costs for MDs or PhDs involved in research, teaching and clinical aspects of nutrition.

To date, six institutes are participating in the new award: NCI, the National Heart, Lung & Blood Institute, the National Institute of Arthritis, Diabetes, & Digestive & Kidney Diseases, the National Institute of Child Health & Human Development, the National Institute on Aging, and the National Institute of Neurological & Communicative Disorders & Stroke.

The number of awards made each year will depend upon the merit of the applications received and the availability of funds. DCPC Director Peter Greenwald told the board, however, that two awards will probably be funded in the first cycle. The five year awards will be non re newable.

The award is intended to provide a stimulus for the development and coordination of a clinical nutrition curriculum in schools of medicine and osteopathy. The awards provide support to individual faculty members with strong backgrounds in nutrition science, research and its applications to clinical medicine for the development and implementation of a clinical nutrition curriculum in the schools.

According to the concept, "ideal candidates" would be "either physicians well versed in the clinical application of basic nutrition research or doctorates established in basic nutrition research, yet knowledgable in its clinical application."

Review for the award will include assessment of both the sponsoring institution and the proposed awardee. Candidates must have competence in clinical nutrition research and a major career interest in improving the teaching of nutrition. In addition, the candidate "must be recognized for his/her teaching ability by the institution, independent of rank, and have the commitment of the institution's curriculum committee for developing or improving the teaching of clinical nutrition," it says. The institution "must have a strong well established research program in the candidate's area of interest in nutrition, and must present a plan for continued commitment to this research as well as to the development or improvement of the clinical nutrition education program." The candidate must hold an academic appointment at the sponsoring institution at the time of application, and have demonstrated a high potential for nutrition research and/or

clinical nutrition practice, as well as an interest in the development and implementation of a high quality nutrition curriculum within the institution.

The candidate must also establish a general research plan for the period of the award, as well as a plan to evaluate the outcome of all efforts toward curriculum development associated with the award. Candidates must be a U.S. citizen, national or permanent resident.

MD candidates should be trained in one of the relevant clinical specialties such as internal medicine, pediatrics and surgery, as well as have some background in nutritional biochemistry, molecular biology, physiology, genetics, immunology, nutrition, endocrinology, etc. MDs must also have interest in research, and experience in translating research into clinical practice. PhD candidates should have received training in the basic sciences such as nutritional biochemistry, physiology, pharmacology, etc. and have some background in clinical nutrition research. Candidates will be required to spend at least 50% of the time during the project period in curriculum development and teaching responsibilities and the other 50% conducting nutrition research.

The award is intended to attract outstanding students and promising young clinicians and scientists who can effectively serve the research, teaching and clinical aspects of nutrition, and to encourage the development and coordination of a high quality clinical nutrition curriculum through a Nutrition Curriculum Advisory Committee. It is also intended to encourage the improvement of clinical nutrition curriculum in medical and osteopathic schoools where it already exists; to develop established faculty who have a major commitment to and possess educational skills for teaching clinical nutrition; and develop promising faculty whose interest and training are in clinical nutrition research, teaching and practice.

In addition, the award is intended to facilitate the interchange of information and educational ideas and methods applicable to teaching clinical nutrition among awardees and institutions, and to develop at the grantee institution the ability to maintain and strengthen with local funds the established nutrition curriculum, subsequent to the award.

The concept notes that "at present, research, teaching and clinical responsibilities in clinical nutrition are rarely coordinated into one definable program. Authority for the teaching of nutrition is often not centralized within the administrative structure of U.S. medical schools, therefore faculty responsibility is often diffuse and the success of any program often depends heavily on individual initiative."

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## NCI SUGGESTS 75 RESEARCH TOPICS FOR SMALL BUSINESS CONTRACT PROPOSALS

NCI expects to make the largest number of Small Business Innovation Research Phase 1 awards of any institute within NIH, according to HHS' latest solicition for SBIR contract proposals. NCI expects to award about 80 SBIR Phase 1 awards, at an average dollar amount of $50,000.

Under the SBIR program, Phase 1 is to establish the technical merit and feasibility of proposed research or R&D efforts and to determine the quality of performance of the small business awardee organization prior to providing further federal support in Phase 2. Only Phase 1 awardees are eligible to apply for Phase 2 funding following the expiration of the Phase 1 contract. Those awards may not normally exceed $500,000 or a two year period

HHS' SBIR solicitation book lists specific areas for research proposals sought by PHS agencies, including various NIH institutes, the Health Care Financing Administration, and the Centers for Disease Control.

NCI lists 75 suggested topics for SBIR contract proposals in the solicitation. They are:

1. Assay(s) to detect Epstein-Barr virus antigens in histologically prepared tissue
2. Assays for expression of oncogenes in fixed tissues
3. Development of methods for biochemical monitoring in epidemiologic studies
4. Inexpensive device to measure radon daughter products in the environment
5. Transformed lumphocyte cultures from persons with or predisposed to cancer
6. Specific antibodies to human and animal polymavirus tumor anitgens
7. Laboratory tests for human papillomavirus
8. Monoclonal and polyclonal antibodies specific for HTLV antigens
9. Molecular probes for oncogene sequences
10. Development of monoclonal antibodies for carcinogen- nucleic acid adducts
11. Synthesis of isolation of labeled and unlabeled compounds for chemoprevention
12. Development of frozen embryo bank
13. Immunologic reagents and enzyme immunoassays for substances in biological specimens
14. Production of transgenic mice
15. Development of pharmacological supplements to traditional smoking cessation methods
16. Improvement of existing or development of new smoking validation methods
17. Evaluation of interactive computer simulation in pain management by physicians and nurses
18. Breast prostheses which compensate for minimal breast surgery and/or effects of radiation therapy
19. Refinement of prosthetic materials and devices for head and neck cancer patients

20. Software for developing community oncology cancer registries database

21. Development of specific test kits for monitoring dietary staus and/or compliance

22. Cancer control resources

23. Personal computer based information systems for cancer control.

24. Cancer control models for local area planning

25. Dietary assessment systems

26. Chemopreventive agent synthesis and/or formulation of new or innovative compounds

27. In vitro and in vivo screening systems to identify new chemopreventive agents

28. Intermediate endpoint markers of cancer

29. Data management systems for monitoring preclinical and clinical progress of studies

30. Identification, characterization, and evaluation of literature in the area of chemoprevention

31. Rapid diagnostic tests for the diagnosis of infections in cancer patients

32. Development of animal model to study systemic fungal infections in immunocompromised hosts

33. Improved techniques for the cloning of human tumor cells in tissue culture systems

34. Production of human cell lines corresponding to unique stages in tissue maturation

35. Production of human tumor cell lines that can be propagated in defined media

36. Monoclonal antibody development for clinically relevant research

37. Monoclonal antibody (MoAb) conjugates for therapy and diagnosis

38. Production of immunoaugmentive agents

39. Production of liposomes with biologicals and medicinals for therapy

40. Nucleic acid probes and molecular characterization of tumor and control tissues

41. Development of methodologies to rapidly evaluate long stretches of chromosomal DNA

42. Development of a data base on unproved methods of cancer treatment

43. Development of computer software implementing advanced statistical methodology

44. Development of a mathematical-statistical library for APL

45. Development of a algorithm to predict the cost of cancer clinical research

46. Communication and information systems for multi center cancer clinical trials

47. Bulk production of Erwinia L-Asparaginase for clinical use

48. Development and production of pharmaceutical dosage forms of new antitumor agents

49. Novel approaches to the isolation and purification of anticancer agents from natural sources

50. Development of data bank on medicinal plants and their uses

51. Development and characterization of oncogene related products for therapy

52. Production of human retroviruses and their structural components for vaccine production

53. Radiopharmaceuticals for employment with single photon emission computed tomography

54. Development of emulsified lipoid contrast media for selective opacification of the liver

54. Development of temperature standards for hyperthermia

55. Systems for portal films for x-rays from a high energy linear accelerator

56. Cloned DNA fragments marking polymorphisms on the long arm of human chromosome 11

57. Development of a tissue bank for pediatric tumor specimens

58. Development of laser treatment control devices

59. Contrast agents for nuclear magnetic resonance (NMR)

60. Development of small cyclotron for isotope production

61. Diagnostic imaging instrument development

62. Development and testing of radioprotective compounds

63. Development and refinement of technique for interstitial hyperthermia

64. Computer controlled multi-leafed collimators for radiation treatment accelerator

65. Animal models for studying late radiation effects on normal tissues

66. Production of tumor cell lines sensitive to specific cytokines

67. Production of detoxified endotoxin

68. (a) Synthesis of polynucleotides - small and medium size; (b) Synthesis of polypeptides - small and medium size; and (c) Synthesis of analogs of clinically active anticancer agents

69. Drug cross resistance patterns in human tumor cell lines

70. Interactive statistical software for state of the art methodoology in cancer clinical trials

71. Development of portable and extended version of modeling laboratory (MLAB)

72. Chemical synthesis of radiolabeled antitumor agents

73. In vitro antineoplastic drug toxicity characterization

74. Modification of the NCI drug information system software for a 32 bit environment

75. Isolation of anticancer agents from marine organisms and blue green algae

The above numbers do not correspond to the NCI listing in the solicitation book. In the HHS book, NCI topics start at the number 14 and end at 89.

To obtain a copy of the HHS solicitation for SBIR contract proposals, contact: Lily Engstrom, SBIR Program Coordinator, NIH, Building 31, Room 1B54, Bethesda, Md. 20892, 301-496-1968.

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