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P.O. Box 2370 Reston, Virginia 22090 Telephone 703-620-4646

NCAB Committee Approves Staff Plan For New Comprehensive Cancer Center Grant Mechanism

"One possible solution is to require that the recognition as a comprehensive cancer center be an integral part of the peer review process, i.e., a center should apply for 'comprehensive cancer center core support' and be reviewed according to guidelines and review criteria specifically for comprehensive centers." With that recommendation, drafted by an NCI staff

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In Brief

FDA's Tabor To Head Biological Carcinogenesis In DCE; Steve Larson To Leave NIH For Memorial

EDWARD TABOR, director of FDA's Div. of Anti-infective Products in the Center for Drugs & Biologics, will be the associate director for biological carcinogenesis in NCI's Div. of Cancer Etiology. DCE Director Richard Adamson has been trying for months to fill the position he considers one of the most important at NCI. It includes six major intramural labs, an extramural branch, and the division's AIDS research activities. Tabor, 41, is an MD (Columbia P&S, 1973) who has published 97 articles in refereed journals and holds seven patents in non-A, non-B hepatitis. . . . **NIH IS** losing another of its top people. **Steven Larson**, chief of the Nuclear Medicine Dept. at the NIH Clinical Center, will leave June 15 to become chief of nuclear medicine in the Dept. of Medical Imaging at Memorial Sloan-Kettering Cancer Center. Larson's five years at NIH was marked by development of strong monoclonal antibody and PET imaging programs. . . . **STEPHEN CARTER** has been named senior vice president for pharmaceutical and developmental medicine of Bristol-Myers. The company is looking for a new vice president for anticancer drugs, the job Carter has held since joining the firm from his previous position as director of the Northern California Cancer Program. . . . **ST. JUDE** Children's Research Hospital has named two new department chairmen--**James Ihle** will head the Dept. of Biochemistry, and **Peter Doherty** will be chairmen of the Dept. of Immunology. Ihle is principal research scientist at Frederick Cancer Research Facility, and Doherty is head of the Dept. of Experimental Pathology at the John Curtin School of Medical Research in Canberra City, Australia. . . . **KAREN HASSEY** has been appointed editor of "ONS News," the newsletter published by the Oncology Nursing Society. She is a lecturer in oncology at Massachusetts General Hospital Institute of Health Professions.

Comprehensive Recognition Depends On Grant Peer Review In Staff Plan

(Continued from page 1)
committee and received enthusiastically by the National Cancer Advisory Board Centers Committee, a major new element has been added to discussions on the content, shape and direction of NCI's Cancer Centers Program.

If approved by the full Board and implemented by NCI, that recommendation would for the first time require that a center's recognition as a comprehensive cancer center be approved through the regular peer review process. It would, also for the first time, provide financial rewards for that recognition, although it would be money that would be required to carry out activities necessary to meet the definition of "comprehensive."

Recognition of cancer centers as comprehensive was a carefully watched process during the 1970s, when most of the country's major cancer centers vied for what was perceived then as prestigious imprimatur of NCI. Only 21 centers were so recognized, one of them eventually closing up to leave 20 which still have that status.

No additional money accompanied that recognition, which was given after a review by NCI staff and an NCAB committee. It was felt then that the prestige would help the center recruit top scientists and also in attracting patients and donors. That probably happened in most cases, but NCI and the NCAB from the start expected more of the comprehensive centers, made more demands on them, most of the time without adding any money. The popularity of the comprehensive label waned, and the recognition process has been dormant for nearly 10 years. Many centers executives have felt that whatever prestige and rewards did accrue with the recognition was not worth the trouble.

The Univ. of Arizona Cancer Center revived the issue last year by indicating that it was ready to be reviewed for recognition as a comprehensive center. That prompted NCI Director Vincent DeVita to suggest that the entire centers program should be subjected to a searching look, including whether the comprehensive designation was something that was worth keeping. If so, DeVita asked, should the characteristics established in the 1970s defining a comprehensive center be modified?

The NCAB Centers Committee, chaired by John Durant, has discussed those questions, and late last year, NCI sent out a letter to about 5,500 individuals soliciting comments on the comprehensive question and other issues facing the centers program. Ninety five responses came in, some of them representing members of professional societies and other organizations.

Meanwhile, an NCI staff committee was established to draft a definition of a comprehensive cancer center. The committee was chaired by Judith Whalen, who is executive secretary of the NCAB Centers Committee. Each division was represented--Brian Kimes, of the Div. of Cancer Biology & Diagnosis; David Longfellow, Div. of Cancer Etiology; Lucius Sinks, Div. of Cancer Prevention & Control; John Abrell and Bill Wells, Div. of Extramural Acitivities; and Michael Friedman, Div. of Cancer Treatment. Eleanor Nealon, of the Office of Cancer Communications, was also a member.

The staff committee's suggestion that comprehensive recognition be handled as a new type of cancer center grant could lead to a historic development in the National Cancer Program. Despite the enthusiasm with which it was received by the NCAB committee members when it was presented this week at the committee's meeting in Chicago, it will probably generate considerable controversy.

The issue, along with others the centers program is facing, will be the subject of a two day workshop, July 21-22, at the Capitol Hilton Hotel in Washington DC. The workshop will be open to anyone who wants to attend (see below for contact person).

The staff's recommendation focuses on issues raised by DeVita repeatedly over the last few years, that comprehensive centers should be more actively involved in regional activities aimed at cancer problems in their areas; that they should be responsive to national priorities, particularly in clinical trials participation; and that they should be involved in cancer control research.

The staff recommendation, after relating the history of the centers program, follows:

This brief legislative history indicates that: (1) Congress generally has been pleased with the excellence of the Cancer Centers Program as it has developed, but (2) Congress has always intended these centers to function broadly with national as well as regional responsibilities.

The National Cancer Institute agrees that the centers program is a successful and important national resource in the war on

cancer and has taken steps in the past to assure quality comparable to other program components in the context of a limited budget. While the centers have been successful in addressing a major part of their task to this point in their development, the language of the Cancer Act and subsequent congressional intent indicates that it is necessary to broaden the scope of the national cancer effort by expanding the Cancer Centers Program in areas of clinical trial and cancer control research, regional physician education, and outreach programs. Although all these areas have not been the predominant focus of the NCI guidelines, nor the focus of the peer review evaluations, they are squarely in the congressional intent and lay at the heart of the concept of comprehensiveness. The issue of the precise role centers should play in the National Cancer Program in part revolves around this concept of comprehensiveness.

For these reasons, the NCAB and NCI seek to more closely define the characteristics of a comprehensive cancer center and establish guidelines regarding peer review evaluation and funding for comprehensive cancer centers as well as other cancer center designations.

Proposed Definition of an NCI Comprehensive Cancer Center

It is apparent that no single institution has or is likely to assemble the expertise necessary to mount programs in basic, clinical and applied research in all fields of interest in all cancer types. A key emphasis of the early congressional language was that the special competence of each individual center should be developed. Therefore, it is appropriate to assume that comprehensiveness will include the capability to conduct fundamental research and apply that research to the areas of the center's special competence according to the particular type of tumors studied and the geographic locale and the unique patient populations available. A comprehensive cancer center should be a major national source of the best new ideas in laboratory, clinical and cancer control research. A comprehensive cancer center should be a community of investigators with a distinct focus on local and national cancer problems of major importance. It should make maximal use of the scientific resources at its disposal and take optimal advantage of local resources and local problems in developing research strategies. In addition to its established role as a source of high quality investigator initiated research, comprehensive cancer centers should play a vital role through the definition, creation and implementation of clinical trials, cancer prevention and control, public and professional education, and information services which are both regional and national in scope. In addition to scientific excellence and leadership, some other essential characteristics of a comprehensive cancer center include:

1. **Basic laboratory research.** A critical mass of integrated personnel, laboratory facilities, and financial support for basic research is essential. The center should promote interdisciplinary interactions between scientists engaged in cancer research, including critical interactions between basic scientists and clinical scientists. Research activities should be of high quality (as judged by peer review) and focused on substantial cancer problems of regional and national importance. Participation in national collaborative research to address a particular high priority research problem on a broader scale should be possible when the opportunity is presented and the process for determining priorities is appropriate.

2. **Basic/clinical research linkage (technology transfer).** A center should be an environment which facilitates the transfer of exciting laboratory discoveries into innovative clinical treatment and prevention trials. Further, once a unique opportunity is identified, a distinguishing feature of comprehensive cancer centers is the ability to stimulate interactions either as basic/clinical collaborative research within the center or as collaborative research between elements of the center and other organizations, e.g., research institutions or the biotechnology industry.

3. **Clinical research.** A clinical research program utilizing patient resources of the institution and its region is essential. Ideally, such studies involve relevant center laboratories as well. A center should be a major source of innovative clinical studies which can later be exported, e.g., to clinical cooperative groups or into general medical practice. The center should function as a vital component of the National Cancer Program. Centers should participate in national clinical trials when high priority is established by a mutually satisfactory mechanism and when better competing hypotheses are not available. Although a center may not be able to participate in every trial so identified, it is expected that every center will contribute significantly to the National Cancer Program as a whole.

4. **Cancer prevention and control research applications.** Cancer control is the reduction of cancer incidence, morbidity, and mortality through an orderly sequence from research on broad, systematic application of the research results. Cancer control research may be considered to progress along an orderly sequence of five phases: (1) hypothesis development; (2) methods development; (3) controlled intervention trials; (4) defined population studies; and (5) demonstration and implementation studies. The congressional legislation creating the centers program indicated that centers should identify local/regional needs and resources for cancer control; develop cancer control plans; and implement those plans.

The national plan which encompasses the goals for the Year 2000 only provides a broad umbrella for the development of this kind of regional plan. The center's plans may relate to any or all phases of cancer prevention and control research, but there must be a clear provision for moving toward the demonstration phase when it is feasible and opportune either through the center itself or other regional health organizations and agencies. Involvement in cancer control on a regional and national basis, if funds were available, would be a requirement in competing renewal applications.

5. **Education, training and providing updates on current technology.** It is essential that the center be a focal point for continuing education for research and allied health professionals locally and within the region. In addition, the center should offer training in state of the art technology (procedures or instrumentation) to the extent of its capabilities. An important part of this educational effort would be to establish programs to train new investigators in cancer control research, now in critically short supply.

6. **Information services.** The comprehensive center should have an established patient education program and the ability to provide patients and their families with up to date information on local as well as national resources that may be needed. In addition, the center should participate in a Cancer Information Service in the area, giving accurate information on cancer prevention, diagnosis, treatment and rehabilitation to patients, the public, and health professionals. Through the CIS (or center staff) each center should heighten public awareness of the importance of participation in prospectively designed clinical trials.

Funding mechanisms. It is well recognized that the traditional cancer center support grant (core grant) has been focused specifically to provide support for salaries of select cancer center staff; for certain shared core research facilities; for the administration of the cancer center; and limited support for new investigators. As such, this funding provides a small portion (generally 5-10 percent) of the total support for the cancer center which also depends upon traditional research project grants, program project grants, cancer prevention and control grants, training grants, education grants, research contracts, state funds, institutional funds, industrial support, and private donations. While traditional funding mechanisms have generally served the program well, the expanded scope and requirements of the comprehensive cancer center will necessitate an expanded work scope, a broader peer review evaluation, and increased funding.

One possible solution is to require that the recognition as a comprehensive center be an integral part of the peer review process, i.e., a center should apply for "comprehensive core support" and be reviewed according to guidelines and review criteria specifically for comprehensive centers. The NCAB would no longer have the responsibility of recognizing a center as comprehensive after a core grant is awarded. Comprehensive cancer centers would be funded through a P60 grant, a mechanism used to support comprehensive centers in other institutes at NIH. A P60 grant is defined as:

To support a multipurpose unit designed to bring together into a common focus divergent but related facilities within a given community. It may be based in a university or may involve other locally available resources, such as hospitals, computer facilities, regional centers, and primate colonies. It may include specialized centers, program projects, and projects as integral components. Regardless of the facilities available to a program, it usually includes the following objectives: To foster biomedical research and development both at the fundamental and clinical levels; to initiate and expand community education, screening and counseling programs; and to educate medical and allied health professionals concerning the problems of diagnosis and treatment of a specific disease.

Using this alternative mechanism would

allow these comprehensive cancer centers to be clearly distinguished from other cancer center designations. The more comprehensive peer review requirements as well as the increased funding would be concentrated in this P60 grant pool. Other cancer centers programs such as the Laboratory Cancer Research Centers, the Clinical Cancer Research Centers or the Consortium Cancer Centers could continue to be funded through the traditional P30 mechanism.

The P30, center core grant, supports shared resources and facilities for categorical research by a number of investigators from different disciplines who provide a multidisciplinary approach to a joint research effort or from the same discipline who focus on a common research problem. The core grant, though funded independently of the center's component projects or program projects, relates integratively to them. This support, by providing more accessible resources, is expected to assure a greater productivity than from the separate projects and program projects.

In order for a program to compete for recognition as a comprehensive cancer center, it would have to have a previously funded P30 grant. In addition, it would have to document a minimum peer reviewed support base in areas of clinical trial research, cancer control, training, or information and communications. Although peer reviewed funding in each of these areas would not be required, the total for all areas should reach the minimum requirements. Failure to successfully compete for P60 support would not result in automatic consideration for P30 support and reapplication would be necessary.

Planning grants (P20) should be considered for reinstatement on a controlled basis. These grants would be used solely to develop the capabilities of an incipient cancer center to support an underserved population, with the goal of developing a center capable of competing favorably for a P30 (either a cancer center support grant or a consortium grant).

Grant review mechanism. Under the suggested plan, new guidelines for comprehensive cancer center support thorugh the P60 mechanism would need to be developed. In addition to the traditional cancer center review, a comprehensive cancer center core application (P60) would be reviewed on the basis of the breadth of the research; the center's capacity to demonstrate productive laboratory and clinical collaborations; its clinical research, its cancer prevention and control research and applications; its public and professional education and training effort; its cancer information effort; and the administrative commitment. While each of these areas would not necessarily be of equal strength or equally weighted in the evaluation, the program would have to demonstrate substantial efforts in each of these areas in order to successfully compete for a comprehensive cancer center designation through a P60 grant mechanism. These core grants would provide support for the supervision and integration of a broader based program into the cancer center. As with previous P30 evaluations, the focus of the review would be on activities which consolidate and focus cancer related efforts in a single administrative and programmatic structure. Primary review and funding of the individual projects within the center's broad efforts would be provided through other review and funding mechanisms.

The current guidelines for the Laboratory Research Centers, the Clinical Cancer Research Centers, and the Consortium Cancer Centers through the P30 grant mechanism would remain unchanged. Furthermore, the planning grants (P20) would be reviewed in the original manner.

The NCAB Centers Committee (Durant, Roswell Boutwell, Helene Brown, Enrico Mihich, Louis Sullivan, and NCAB Chairman David Korn ex officio) discussed the proposal with the NCI staff committee (with Linda Anderson of OCC sitting in for Nealon) at the Chicago meeting this week. DCPC Director Peter Greenwald and Donald Fox, chief of the Research Facilities Branch in DCPC, also were present. They agreed on a number of important points:

*P60 comprehensive cancer center core grants will not be funded at the expense of existing P30 grants but with additional dollars added to the core grant budget. "It will come out of the same pocket, but it will be a larger pocket," Durant said. Nor will the money be taken from basic research; NCI will ask that Congress place more money in its appropriations for the centers program.

*Centers with P30 grants which do not choose to become comprehensive centers will be permitted to continue using the term "NCI recognized" or "NCI designated" cancer centers. Only those with the P60 grants may use the term "comprehensive." NCI may design

a logo for use in print to go along with the name. Although NCI has no legal standing to do anything about other institutions using "comprehensive," it can stop them from attaching NCI's name to it.

The committee deleted language in the staff proposal which Korn felt would be viewed as an attempt to "prioritize" basic research. In characteristic No. 1, Basic Laboratory Research (see page 3), Korn asked that the sentence starting, "Research activities should be of high quality (as judged by peer review)" be ended at that point and the rest of the paragraph deleted. "Some of us are hypersensitive about someone telling us what should be high priority," Korn said. Committee members agreed.

"I have no problem with deleting that," Sullivan said, "but a cancer center is not an RO1 grant. "Some centers have felt no responsibility for anything other than RO1 research."

"Dr. DeVita has repeatedly said that the No. 1 priority is basic research," Greenwald said. "The issue is that comprehensive centers should be doing something else."

"I agree wholeheartedly on the language for basic research," Brown said. "But those centers that do not (want to undertake the activities required for comprehensive status) don't have to participate."

"What we're hearing is that the purity of basic research has got to be maintained," Durant added.

Greenwald suggested that the characteristic requiring basic and clinical research linkage was vital.

"I've no problem with that," Korn said. "I always thought that was what centers were supposed to do."

Korn did object to the language in characteristic No. 3, Clinical Research, requiring participation in clinical trials of "high priority."

"Who determines when something is high priority? How is it estabalished?" he asked. Greenwald said that that had not been fully established, although "there has been a lot of work on that in the last year or two." Friedman discussed DCT's view, that centers should be an integral part of the overall clinical trials program, by participating in some national high priority trials and by using their creativity in designing their own trials.

Durant asked if an assessment had been made on how many centers were capable of participating in prevention and control research and applications.

"We still do not have a critical mass," Greenwald said. "But in the last three to five years, we have seen growth, with a number of good scientists involved. Two years ago, the number of RO1 holders doing this was zero. Now, quite a few are picking this up."

Sinks said that there are 17 peer reviewed "bona fide cancer control research grants at centers. Cancer centers with core grants are awarded about 50 percent of the RO1/PO1 pool. Also, about 50 percent of cancer research is done in centers with core grants."

Korn agreed that comprehensive centers should have responsibility for the early phases of cancer control research but that phases 4 and 5 were close to public health obligations which "should be the role of state and local public health agencies."

"When the opportunity exists for a center to improve things in its backyard, there is some obligation to take advantage of it," Greenwald said. "If centers and universities don't have that responsibility, perhaps NCI should be emphasizing funding of public health agencies. But we think universities and centers do have an obligation and the capability."

Durant suggested that the characteristic on training and education should be clearly written to include all areas, rather than the emphasis on cancer control related disciplines. "Training in general is a serious problem."

Mihich asked if that characteristic included responsibility for continuing education, and was told it did.

NCAB Role

Mihich noted that the staff plan implies the NCAB would not longer have responsibility for recognizing a center as comprehensive, except as the grants are presented after initial review. Those presentations are frequently en bloc. "I think we should put these in the same category as foreign grants, with decisions made on specific grants."

No one objected to that, but Longfellow added, "They apply for a P60 and get a fundable priority score or they don't. If they don't, then they can apply for a P30."

Longfellow suggested that once the program is in place, centers with P30 grants, including the 20 now considered comprehensive, could apply for the P60 grants but that they would be prudent not to do so when their P30s were up for renewal. "That would put them in harm's way;" if they failed in the P60 review, they wouldn't have the P30.

The July 21-22 workshop will also take up other cancer center issues, including that of

where the program should be located within NCI.

Those planning to attend the workshop should contact Ginny Absher at Technical Resources Inc., which will be handling logistics for the meeting. The phone number is 301/231-5250.

Joseph Cullen, DCPC deputy director, was also a member of the staff committee which developed the P60 proposal but was unable to attend the Chicago meeting.

FDA Advisors Recommend Approval Of Ifosfamide As Third Line Therapy

The Oncologic Drugs Advisory Committee of the Food & Drug Administration last week recommended approval of the Bristol-Myers' new drug application for ifosfamide in combination with other drugs as third line therapy for testicular cancer.

The committee's action was conditioned on approval of a uroprotective agent to be used with ifosfamide. FDA staff members said they expected to receive soon an NDA for MESNA from its sponsor, a West German firm.

MESNA has been tested and approved in other countries, and was used with ifosfamide in trials conducted by Lawrence Einhorn at Indiana Univ. Einhorn presented data on 59 patients in the nonrandomized study, upon which the NDA was largely based.

"This is a historic occasion," acting committee Chairman Robert Capizzi said. "We're approving a drug (MESNA) before the NDA has been submitted."

Approval of ifosfamide on the basis of such a small, nonrandomized study, if not also unprecedented, was unusual, although there were supporting data. The action reflects the high opinion committee members and FDA staff have of Einhorn, whose development of chemotherapy regimens for testicular cancer is one of the great success stories in clinical cancer research.

Einhorn told the committee that initial treatment cures about 70 percent of the 5,500 men who present each year with testicular cancer. Second line therapy cures 10 percent more, which leaves only about 340 who are candidates for third line treatment. Regimens containing platinum, usually also with VP-16 (etoposide) and bleomycin, are generally those used in first and second line treatment.

Starting in April 1983, Einhorn's group began substituting ifosfamide for bleomycin as third line salvage therapy. Fifty nine patients were accrued through February 1986. Fifteen had complete response following chemotherapy and eight more were disease free folling chemotherapy and surgical resection of teratomas or carcinomas. There were nine partial responders. Of the 27 nonresponders, one is currently alive with no disease at 103 weeks. A total of 13 patients are presently alive with no evidence of disease.

Toxicity is formidable, although Einhorn said that aggressive hydration in his opinion could be as effective as MESNA in protecting against urotoxicity.

Committee members Charles Moertel and Albert Bernath expressed reservations about approval of the drug now, although not doubting its efficacy. But with the caveat that FDA action would await approval of MESNA, they voted with Capizzi, Robert Bast, Thomas Fleming, Susan Krown, Teresa Vietti and Dean Brenner for approval.

NCI Advisory Group, Other Cancer Meetings For May, June, Future

Reach to Recovery: 5th European Congress--May 3-6, Luxembourg. Contact Reach to Recovery, p.a. Action Lions, Vaincre le Cancer, B.P. 782, 2017 Luxembourg.

Centers Community Oncology Program Committee of Div. of Cancer Prevention & Control--May 4, 7 p.m., NIH Bldg 31, Rm 2.

Cell and Molecular Biology of Chlamydomonas--May 4-8, Cold Spring Harbor, NY. Contact Cold Spring Harbor Laboratory, Bungtown Rd., Cold Spring Harbor, NY 11724, 516/367-8343.

Oncology Nursing Society--May 4-7, Pittsburgh. 13th annual congress. Contact Nancy Berkowitz, ONS, 1016 Greentree Rd., Pittsburgh, PA 15220.

Symposium on Indoor Air--May 5, Sheraton Imperial Hotel, Research Triangle Park, NC. Sponsored by the Genotoxicity & Environmental Mutagen Society. Contact Dr. Larry Claxton, EPA, Research Triangle Park 27711, phone 919/541-2329, or Thomas Hughes, RTI, RTP 27709, phone 919/541-6148.

Developmental Therapeutics Contract Review Committee--May 5-6, Linden Hill Hotel, Bethesda, MD, open May 5 8-8:30 a.m.

Div. of Cancer Prevention & Control Board of Scientific Counselors--May 5-6, NIH Bldg 31 Rm 10, 8:30 a.m. both days, open.

88th Annual Meeting of the American Roentgen Ray Society--May 8-13, San Francisco Hilton. Contact John Ciccone, ARRS, 1891 Preston White Dr., Reston, VA 22091, phone 703/648-8900.

Effects of Dietary Omega-3 Fatty Acids--May 8-12, Phoenix, AZ. American Oil Chemists' Society annual meeting. Contact AOCS, PO Box 3489, Champaign, IL 61821, phone 217/359-2344.

NCAB Committee on Cancer Centers--May 8, 6 p.m., NIH Bldg 31, Rm 7, open.

National Cancer Advisory Board--May 9-11, NIH Bldg 31 Rm 6, open 8:30 a.m.-adjournment May 9, 8 a.m.-adjournment May 11. Closed May 10.

NCAB Committee on Environmental Carcinogenesis--May 9, 6 p.m., NIH Bldg 31, Rm 2, open.

NCAB Committee on Cancer Control & the Year 2000 --May 9, 6:15 p.m., NIH Bldg 31, Rm 8, open.

NCAB Committee on AIDS--May 9, 7:30 p.m., NIH

Bldg 31, Rm 7, open.

NCAB Committee on Special Actions on Grants--May 10, 8:30 a.m., NIH Bldg 31, Rm 6, closed.

NCAB Committee for Review of Contracts & Budget for Office of NCI Director--May 10, NIH Bldg 31, Rm 7, open. Follows recess of above committee.

NCAB Committee on Planning & Budget--May 10, 5:30 p.m., NIH Bldg 31, Rm 8, open.

Course on Cancer Epidemiology--May 9-20, Moscow. Contact Dr. W. Davis, IARC, 150 cours Albert Thomas, 69372 Lyon Cedex 08, France.

RNA Processing--May 11-15, Cold Spring Harbor, NY. Contact Registrar, Cold Spring Harbor Laboratory, Bungtown Rd., Cold Spring Harbor, NY 11724, phone 516/367-8343.

Div. of Cancer Etiology Board of Scientific Counselors--May 12-13, NIH Bldg 31 Rm 10.

National Toxicology Program Board of Scientific Counselors--May 16-17, National Institute of Environmental Sciences, Research Triangle Park, NC.

President's Cancer Panel--May 17, Univ. of Wisconsin, Madison.

RNA Tumor Viruses--May 17-22, Cold Spring Harbor, NY. Contact Registrar, Cold Spring Harbor Laboratory, Bungtown Rd., Cold Spring Harbor, NY 11724, phone 516/367-8343.

New Controversies in Breast Cancer--May 18, Middlebury Inn, Middlebury, VT. Focus on management of noninvasive intraductal and the new role of perioperative chemotherapy. Contact Mary Lou Giddings RN, OCN, Cancer Program Office, 160 Allen St., Rutland, VT 05701, phone 802/775-7111.

American Society of Clinical Oncology--May 22-24, New Orleans. 24th annual meeting. Contact ASCO, 435 N. Michigan Ave., Suite 1717, Chicago, IL 60611, phone 312/644-0828.

Fundamental Tumor Registry Operations--May 22-24, Seattle. Contact Connie Creitz, LPN, CTR, Local Coordinator, phone 206/228-3405.

National Tumor Registrars Assn.--May 24-27, Westin Hotel, Seattle. 14th annual conference. Contact NTRA, 104 Wilmot Rd., Suite 201, Deerfield, IL 60015, phone 312/940-8800.

American Assn. for Cancer Research--May 25-28, New Orleans. 79th annual meeting. Contact AACR, Temple Univ. School of Medicine, West Bldg Rm 301, Philadelphia, PA 19140, phone 215/221-4565.

Advances in the Applications of Monoclonal Antibodies in Clinical Oncology--May 25, London. Contact School Officer, RPMS, Hammersmith Hospital, DuCare Rd., London W12 OHS, UK.

1988 Symposium on Mammography and Breast Ultrasound--May 25-26, Indianapolis, IN. Contact Indiana Univ. School of Medicine, phone 317/274-8353.

Div. of Cancer Biology & Diagnosis Board of Scientific Counselors--May 31, NIH Bldg 31 Rm 9, 8:30 a.m., open.

Cancer Horizons--Planning for the Future--May 31-June 1, London. Contact European Study Conferences, Kirby House, 31 High Street East Uppingham, Rutland, Leics, LE15 9PY, UK.

International Symposium on Perinatal and Multi-Generation Carcinogenesis--May 31-June 2, Leningrad, USSR. Contact Dr. Hiroshi Yamasaki, IARC, 150, cours Albert-Thomas, 69372 Lyon Cedex, France.

Div. of Cancer Treatment Board of Scientific Counselors--June 6-7, NIH, Bldg 31, Conference Rm 6. 8:30 a.m.

Symposium on Research on Chemistry, Biochemistry and pharmacology of Trimetrexate--June 6-7, Univ. of Vermont, Burlington, VT. Contact Dr. John McCormack, phone 301/496-3597.

The Care of the Patient With Cancer--June 6-8, London. Contact Institute of Oncology, Marie Curie Memorial Foundation, 28 Belgrave Square, London SW1X 8QG, UK.

General Meeting of the Nordic Cancer Union--June 7-10, Reykjavik, Iceland. Contact Secretariat Nordic Cancerunion, P.O. Box 5420, 125 Reykjavic, Iceland.

Music Therapy with the Terminally Ill: A Symposium --June 9-10, Calvary Hospital, Bronx, NY. Contact Sr. Patricia Sheridan, phone 212/430-9393 ext. 2259 or 212/863-6900.

Fourth International Conference on AIDS--June 12-16, Stockholm. Contact Prof. L.O. Kallings, National Bacteriological Laboratory, 105 21 Stockholm, Sweden.

Clinical Aspects of Hyperthermia--June 12-17, Sheraton Univ. Center, Durham, NC. Contact Sandy Huskins, Duke Univ. Medical Center, Box 3085, Durham, NC 27710, phone 919/684-4384.

American Society of Colon and Rectal Surgeons annual conference--June 12-17, Anaheim, CA. Contact Miss H. Gibson, ASCRS, 615 Griswold, Suite 1717, Detroit, MI 48226, 313/961-7880.

Critical Issues in Tumor Microcirculation, Angiogenesis and Metastasis--June 13-17, Pittsburgh, PA. Contact Hilda Diamond, associate director, Biomedical Engineering Program, Carnegie Mellon Univ. of Pittsburgh, PA 15213, phone 412/268-2521.

Eurocancer--June 15-17, Paris. Contact Secretariat d'Eurocancer, Hopital Saint-Louis, Centre G. Hayem, 1, Av. Claude-Vellefaux, 75010 Paris, France.

Adjuvant therapy of Cancer--June 25, Bunts Auditorium, Cleveland Clinic. Contact Dept. of Continuing Education, Cleveland Clinic Educational Foundation, 9500 Euclid Ave., Rm TT3-301, Cleveland, OH 44195, phone 444-5694 (local), 800/762-8172 (Ohio), 800/762-8173 (elsewhere).

AIDS: Essential Issues and Practical Approaches--June 29, Alta Bates Hospital, Berkeley, CA. Contact Mary Grim, medical education coordinator, phone 415/540-1420.

Therapeutic Progress in Urologic cancers: An International Symposium--June 29-July 1, Hotel Inter-Continental, Paris. Contact American Urological Assn. Office of education, 6750 West Loop South, Suite 900, Bellaire, TX 77401.

FUTURE MEETINGS

Chemotherapy of Clinical and Experimental Cancer, Gordon Research Conference--July 18-22, Colby-Sawyer College, New London, NH. Contact Thomas Tritton, Dept. of Pharmacology, Univ. of Vermont Medical School, Burlington, VT 05405.

Harvard postgraduate course on urologic cancer--Oct. 6-8, Ritz Carlton Hotel, Boston, MA. Contact Dr. Jerome Richie, phone 617/732-6598.

12th Annual Cancer Symposium--Nov. 7-9, Sheraton Harbor Island Hotel East, San Diego, CA. Contact Nomi Feldman, Conference Coordinator, 3770 Tansy St., San Diego, CA 92121, phone 619/453-6222.

Florida Association of Pediatric Tumor Programs 12th annual seminar, "Directions in Pediatric Hematology/Oncology Care"--Nov. 17-19, Harbor Island Resort, Tampa. Contact Cindi Butson, FATP, P.O. Box 13372, Gainesville, FL 32604, phone 904/375-6848.

Society of Gynecologic Oncologists annual meeting--Feb. 5-9, 1989, Hyatt Regency, Maui, Hawaii. Contact SGO headquarters, 111 East Whacker Dr., Chicago, IL 6061, phone 312/644-6610.

The Cancer Letter _Editor Jerry D. Boyd Associate Editor Patricia Williams

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