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Genetics Flexes Muscle At AACR Annual Meeting, Joint Session With ASCO On Genetic Changes

If there was any doubt that genetics has become one of the major areas of cancer research, it was dispelled by the plethora of reports on gene studies at last week's 82nd annual meeting of the American Assn. for Cancer Research in Houston. "Genetic Changes in Cancer: Implications for Diagnosis and Treatment in the 1990s" was the topic of

(Continued to page 2)

In Brief

Moses, Wattenberg Lead AACR; NCI Budget Cut By $4.8 Mil. For Shannon Awards Contribution

HAROLD MOSES, professor and chairman of the Dept. of Cell Biology at Vanderbilt Univ. School of Medicine, assumed the presidency of the American Assn. for Cancer Research last week at the organization's 82nd annual meeting in Houston. **LEE WATTENBERG,** professor in the Dept. of Laboratory Medicine and Pathology at the Univ. of Minnesota, was named president elect. Wattenberg defeated Yung-chi Cheng, Yale Univ. Comprehensive Cancer Center, and will become president at AACR's meeting in San Diego next year. New board members are **John Lazo,** Pittsburgh Cancer Institute; **Lance Liotta,** NCI; **Sharon Murphy,** Northwestern Univ. Medical School; and **Eric Stanbridge,** Univ. of California (Irvine). . . . **NCI'S CONTRIBUTION** to the new NIH Shannon Awards is $4.8 million, according to NCI's financial management office. That amount will be taken out of NCI's $1.713 billion FY 1991 operating level to help pay for the $30 million in awards. NCI has leeway in deciding where the cut will be taken, as long as it is not taken out of research project grants. The awards will fund RPG applications that have barely missed the payline; presumably, some will be cancer related. . . **GABRIEL HORTOBAGYI** has been appointed to the Nylene Eckles Professorship in Breast Cancer Research at the M.D. Anderson Cancer Center. He is a professor of medicine and chief of the Medical Breast Section in the center's medical oncology department. . . . **JUNE LEVINE** has been named assistant administrator for patient care services and director of nursing for USC's Kenneth Norris Cancer Center. . . . **CHARLES MEINHOLD** was named president of the National Council on Radiation Protection and Measurements. He replaces Warren Sinclair, who headed the council for the past 14 years. . . . **BERNADINE HEALY,** new NIH director, told the National Cancer Advisory Board that she called former NIH director James Shannon to ask his permission to use his name on Healy's new awards mechanism. Shannon, informed that the new NIH director wanted to speak with him, said, "Put him right on."

AACR Using Its Clout To Urge Higher NCI Budget . . . Page 4

O'Connor Is New ONS President, Curtiss Is Next . . . Page 4

Three Nominated To ET2; NCI Seeks Clinical Applications . . . Page 5

Hopkins, Pennsylvania Ok'd As Comprehensive; No. Remains At 24 . . . Page 7

Americans Shouldn't Take NIH For Granted, Healy Tells NCAB . . . Page 7

Mayer Will Emphasize Rehab Research While Serving On NCAB . . . Page 8

Genetic Abnormalities Cause Cancer, Plethora Of Evidence Shows: AACR

(Continued from page 1)
the joint AACR-American Society of Clinical Oncology plenary session, and presenters on genetic studies dominated the scientific sessions.

"Abnormalities in genes cause cancer," **Janet Rowley**, Univ. of Chicago, said in a review of cytogenetic changes in leukemia and lymphoma. "Critical evidence supporting this statement has come from cancer cytogenetics, viral oncology, and molecular biology. The convergence of research in these areas has led to an extraordinary sense of excitement and discovery."

Research in the 1960s and 1970s led to the finding that for the acute leukemias, certain abnormalities were found to be closely associated with specific morphology or immunologic subtypes, Rowley said. "A unique example is the 15;17 translocation, which is seen only in acute promyelocytic leukemia (APL) and in the very rare acute promyelocytic transformation of chronic myeloid leukemia. Thus all 68 cases of APL analyzed in our laboratory had the translocation; furthermore, we have not identified this translocation any other tumor, not has it been reported, with the same breakpoints, in any constitutional chromosome abnormality."

Rowley noted that especially informative examples of this specificity are available for the acute lymphoblastic leukemias. "With rare exceptions, when translocations involve the immunoglobulin genes or the T-cell receptor genes, they have occurred in B-cell or T-cell leukemias, respectively. For the translocation junctions that have been cloned, the chromosome rearrangements were found to result in the juxtaposition of the relevant, active cell specific gene and a known or presumptive proto-oncogene. . .

"Until recently, only a few of the 50 or so relatively common translocation junctions in leukemia had been cloned, and for the others, we were ignorant of the genes involved and of the changes in these genes that occurred as a consequence of the translocations. However, this situation is changing rapidly and many translocation breakpoints have been cloned in the last year.

"A good example is the cloning of the junction of the 15;17 translocation and the identification of the affected gene on chromosome 17 as the retinoic acid receptor alpha. The 6;9 translocation in acute myelogenous leukemia has been cloned and DNA probes for the 11;23 translocation and the 8;21 translocation junctions have been isolated."

Rowley said that cosmids or yeast artificial chromosome have been used as probes for in situ hybridization in analysis of chromosome translocations involving band 11;q23. "We have isolated human DNA probes that span the breakpoint on chromosome 11 and are currently cloning the junction itself.

"Cloning of the 9;22 translocation junction in CML and Philadelphia chromosome positive ALL has had a major impact on basic and clinical research," Rowley said. "This will be multiplied at least 50 times when the junctions of additional translocations, inversions, and other structural rearrangements have been cloned. The insights that will emerge from our increased understanding of the genetic changes associated with malignant transformation, some of which are due to chromosome rearrangements, should lead to better diagnosis and to improved, more effective and less toxic treatment of our patients."

Harold Moses, chairman of cell biology at Vanderbilt Univ. School of Medicine and new president of AACR, has been studying the mechanism of transforming growth factor beta (TGF beta), a cell growth inhibitor that may have potential in limiting the progress of some cancers and may also play a role in cancer therapy. Specifically, Moses has studied the manner in which TGF beta, as a negative growth factor, regulates cell proliferation by counteracting the growth stimulating effects of positive cell growth factors such as epidermal growth factor (EGF).

"Our work has been concerned with a group of factors that inhibit cell proliferation, with the mechanism of growth inhibition," Moses said. "Growth inhibition is one of the major effects of transforming growth factor beta. We think that's very important because any situation where you have a positive growth factor, you have a counteracting negative

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growth factor, and that allows a very precise control over cell proliferation, better than one would see with a mechanism that acted as a type of on/off switch of a positive growth factor."

Rather than directly inhibiting the function of positive growth factors, TGF beta acts on a specific gene, C-MYC (which functions within the cell nucleus to regulate other genes necessary for proliferation) by suppressing its production. This in turn inhibits the action of the positive growth factors, Moses explained.

Moses' research has also defined the intricate relationship between TGF beta and genes which suppress tumor growth and other genetic material involved in the formation and progression, or conversely in the suppression, of cancer. Due to its cell growth inhibiting properties, TGF beta may eventually be used in some early stage cancers to slow the progression of cancer. In late stage cancers, TGF beta may play an alternative role by enhancing the therapeutic effects of chemotherapy.

George Vande Woude, director of the basic research program at Frederick Cancer Research & Development Center, described some findings coming out of the research there on the mos oncogene.

Mos is active in germ cells, where it contributes to spindle formation, the critical point when the cell is parcelling its genetic information into opposite ends of the cell to ready it for division. This stage of cell division is the M phase.

In cancer cells, mos is active throughout the different stages of cell division. The inappropriate expression of mos during the cell cycle may result in the production of proteins that cause the visible growth characteristics of cancer cells growing in the laboratory cultures. This includes abnormalities such as irregular shape and growth in clusters that signals loss of contact inhibition.

Vande Woude's laboratory has concentrated on identifying the genes which are encoding proteins that can make a normal cell convert in appearance. In germ cells, mos encodes its protein during spindle formation. The laboratory has now shown that the product of the mos gene is an essential component of a complex called cytostatic factor (CSF), which influences the stability of a protein called maturation promoting factor (MPF), MPF has been found in actively dividing eukaryotic cells from a wide variety of species, from yeast to humans.

The laboratory has showed that the protein encoded by the mos gene could be blocked when oocytes were injected with mos antisense oligodeoxyr ibonucleotides. Loss of mos function blocked oocyte maturation. It was also found that after fertilization, the mos protein is degraded rapidly, a characteristics shared also by CSF in oocytes.

Knowing that mos protein is a component of CSF provides a direct link between the normal function of mos and the critical cell cycle regulators p34cdc2 and cyclin, Vande Woude said. Discovering that the cancer drug taxol mimics CSF/mos in immature blostomeres (the cells produced by cleavage of a fertilized ovum) provides a link between the function of a specific proto-oncogene function and the mechanism of action of a specific cancer drug.

Vande Woude and his colleagues are now looking at other cancer drugs to see if the molecular targets correlate with other specific alterations of cell division by oncogene proteins.

Carlo Croce, Fells Institute for Cancer Research and Molecular Biology, revealed what he called "a very exciting new finding," the discovery of a gene that may be one of the key players in lung cancer. He described the gene as "a candidate for a tumor suppressor gene." The gene is missing from the cells of lung cancer patients.

Croce calls it the PTP gamma gene; it makes a cancer suppressing enzyme that prevents cells from multiplying. Croce and his coworkers found that the PTP gamma gene is missing from a strategic site on a strategic chromosome, number 3. On chromosome 3, the short arms are thought to be hotbeds of genes implicated in lung cancer.

Croce's PTP gamma may offer a new way to diagnose lung cancer, and eventually intervene to prevent or treat it, he said. "Many oncogenes code for growth promoting substances called protein kinases. So you could easily speculate that cancer suppressing genes would code for the opposite--growth suppressing phosphatases."

Razelle Kurzrock, M.D. Anderson Cancer Center, presented examples of recently cloned abnormalities that can be detected by polymerase chain reaction, a technique that can detect one malignant cell among one million normal cells if the malignant cell contains a tumor specific abnormal genetic sequence that is known.

One type of abnormality occurs when a translocation results in an abnormal hybrid gene and protein, Kurzrock noted. "To date, three such abnormalities have been cloned, and these may represent just the tip of the iceberg. Their abnormal gene products are now known to serve as a marker which is found in almost 100 percent of patients with that type of cancer and is never found in normals;

such a degree of sensitivity and specificity was heretofore unknown."

The cloning of molecular abnormalities involved in cancer may have important implications for treatment, Kurzrock said. "It has long been known that in acute promyelocytic leukemia, there is an exchange of DNA between chromosomes 15 and 17. During the last decade, Chinese physicians noted that the vast majority of patients with this type of leukemia respond to a vitamin A derivative known as all transretinoic acid. The response is remarkable, not only in that it occurs in most patients but also in that the medication can be given in pill form and has very little in the way of side effects, in direct contrast to most types of therapy for leukemias. These results have now been confirmed by French and American doctors.

"The relevant finding that has been discovered in the field of molecular biology over the last year is that the gene that is broken or disrupted on chromosome 17 in this leukemia is actually the retinoic acid receptor-a gene. It, therefore, appears that the reason that treatment with a retinoid is so simple and effective is that it directly targets the genetic abnormality in this leukemia. Although discoveries in acute promyelocytic leukemia were made in reverse order, i.e., the treatment was discovered first and later the genetic abnormality, the remarkable effectiveness of this type of molecularly targeted treatment illustrates the potential that other analogous therapies may have. For example, we are now exploring the use of antisense molecules to the BCR-ABL message in Philadelphia positive disease. Antisense is made up of a sequence that is complementary to the normal RNA message sequence, and therefore binds with it and prevents the RNA being translated into a protein. Antisense would theoretically be useful in a cancer if the tumor cells had a message that drives their growth and if this message was absent in the normal cells. The BCR-ABL message meets these criteria. In our preliminary laboratory tests, it is apparent that specific antisense molecules against BCR-ABL are able to decrease BCR-ABL protein production and inhibit leukemic growth.

'The techniques of genetic engineering are beginning to dramatically change our ability to diagnose cancer. Probes can be used to classify malignant disorders, to screen individuals at risk for cancer, and to discover which patients have residual disease after therapy and therefore need additional treatment. Finally, the identification of molecular abnormalities that are specific for tumors suggests that we are at the brink of a new era in cancer treatment. As we uncover the specific defects that characterize cancer cells but are not found in normal cells, we can begin to develop therapies which target those defects and, therefore, should eliminate the cancer cells without harming their normal counterparts."

AACR Using Political Clout To Urge Congress To Increase NCI's Budget

The American Assn. for Cancer Research, continuing the surge in growth it has experienced in recent years, is using that increased muscle in the effort to convince Congress that it should increase NCI's budget by at least $200 million over the President's request for the fiscal year that starts next October 1.

AACR is a member of the National Coalition for Cancer Research, and it permitted the coalition to assist those attending the annual meeting last week in writing letters to Congress supporting the increase. The coalition effort, staffed by Capitol Associates of Washington, DC, included distribution of a pamphlet advising how letters to Congress should be written, and information sheets on points to be made in requesting the increase in NCI appropriations. There was plenty of action at the coalition table, and staff members estimated that it would result in more that 1,000 letters to Congress.

The fact sheet points out that since 1980, funding for cancer research has decreased 18.5 percent in real dollars; that the President's request for FY 1992 falls $802 million short of the bypass budget request, which AACR and the coalition support; that the request of $200 million above the President's request would only return NCI's purchasing power to the 1980 level; and that crucial priorities exist in cancer research, including basic and clinical research, cancer survivorship and rehabilitation research, and research training and career development.

The association's membership total as of April 30 was 7,014 up from 6,305 at this time last year. That includes 4,567 active members, 1,153 corresponding, 416 emeritus, 19 honorary and 859 associate.

O'Connor New ONS President; Plans To Focus on Mammography Costs

Linda O'Connor became the new president of the Oncology Nursing Society on May 10 at the society's 16th Annual Congress in San Antonio, Texas. She succeeds Barbara Britt, who was the 1990-91 president of the 18,500-member national organization.

O'Connor, who has been a member of ONS for many years, is a pediatric clinical nurse specialist at

Baystate Medical Center in Springfield, MA.

O'Connor told **The Cancer Letter** that one of her first tasks in her new position would be to use ONS' special $5,000 fund called the President's Grant to launch a campaign in state governments for greater third-party reimbursement of screening mammography.

In meetings with the society's government relations committee and government relations director, said O'Connor, "we've researched those states that do not currently provide for reimbursement of screening mammography. We will be working on trying to move those states closer to the passage of legislation mandating payment for mammography.

"We're starting with federal insurers, because that's the place where we have the opportunity to make the greatest impact," she said. "There are some states with pending legislation, and those will be most likely our first target."

Although the brevity of a one-year term as president precludes her from making too many "grandiose" plans, said O'Connor, she does want to play a role in the development of some sort of credentials program for advanced practitioners in oncology nursing.

"We have credentialling now for entry level oncology nursing, but I think that advanced practitioners are now asking for and deserving credentialling," O'Connor said. "We are making a much more concerted effort to meet the educational needs of advanced practitioners."

Curtiss Is President Elect

The other new members of ONS's Board of Directors were also announced at the society's annual business meeting. The new president elect is Carol Curtiss, an oncology manager/nurse consultant at Franklin Medical Center in Greenfield, MA. Catherine Hogan, an oncology clinical nurse specialist at Dana Farber Cancer Institute in Boston, MA, is the new secretary of the organization; and Valinda Rowe-Rutledge, director of nursing at the Community Hospitals Indianapolis in Indianapolis, IN is the new treasurer.

Participants at ONS's business meeting passed a resolution on the use of technology in pain management. The society has made intense efforts in the past few years to teach nurses and other health care workers how to alleviate the pain that cancer patients experience. The new resolution calls for the society to continue to take "an active role in policy issues, clinical practice, and research regarding appropriate use of technology in pain treatment," and to "form liaisons with other professional groups and policy organizations in order to define the use of technology in pain management."

Four other resolutions were passed to commemorate ONS members who have made important contributions to cancer nursing. Among these was Susan Baird, who is ending her 12 year term as editor in chief of the society's professional journal, "Oncology Nursing Forum." ONS member Rose Mary Carroll-Johnson, who is now editor of "Nursing Diagnosis," will replace Baird as the new editor in June.

Three Nominated To ET2 Qualified For Clinical Applications Review

The NIH Div. of Research Grants has nominated three candidates to the Experimental Therapeutics 2 study section who are qualified to evaluate applications in clinical investigation, according to an NCI official.

The three candidates, whose names could not be released until their final confirmation, replace three members of the study section whose four year terms expire on June 30.

Marvin Kalt, deputy director of NCI's Div. of Extramural Activities, told the National Cancer Advisory Board at its recent meeting that the candidates have the "experience and qualifications to evaluate applications covering the full spectrum of clinical investigations."

Kalt said his division has been working with DRG and NCI's Cancer Therapy Evaluation Program in the Div. of Cancer Treatment and the Centers, Training & Resources Program in the Div. of Cancer Biology, Diagnosis & Centers, to "broaden the selection of reviewers and the utility of summary statements in conveying to applicants where their own ideas stand in relation to the current state of the art."

The effort is key to NCI's "grand experiment," as CTEP Director Michael Friedman has called it, of attempting to increase the amount of clinical cancer research that is funded through research project grants (R01s, P01s).

Kalt said the Div. of Research Grants will continue to add reviewers as the application load dictates.

"When a sufficient level of clinical applications can be sustained, DRG is amenable to developing a fully dictated clinical study section," Kalt told the NCAB.

A similar process is underway in prevention and control. Div. of Cancer Prevention & Control Director Peter Greenwald met with Jerome Green, director of DRG, "to assure that appropriately constituted study sections exist in DRG for the review of clinical prevention and intervention studies," Kalt said.

NCI staff have also forwarded the names of

potential reviewers with clinical expertise for consideration as members of the NIH Reviewers' Reserve, Kalt said. "We expect a number of these individuals to be offered nominations in the near future. Membership in the Reviewers' Reserve allows an individual to serve as a full voting member on any chartered initial review group, and thus is an additional means of providing relevant expertise for the review of clinically oriented proposals."

Most importantly, Kalt said, NCI is trying to "impress upon the community of potential investigators that their applications are wanted and will be reviewed by their true peers."

In addition, NCI will issue a number of new Requests for Applications in areas of high priority clinical research over the next year, Kalt said. "These initiatives will provide increased opportunities to submit innovative studies that are focused on more effective and expeditious ways to bring new research findings to the patient or to individuals at risk."

Kalt warned that competition for grant funds will continue to be intense. However, he said, "the Institute can't consider for funding ideas that don't come in the door; and standing review groups cannot be justified to evaluate applications that aren't there in sufficient numbers.

"Therefore, it's incumbent upon the potential applicant community not to be deterred by the odds, just as many of their patients have shown courage in the face of adversity," Kalt continued. "Clinicians can be assured that the Institute considers clinical research a very high priority, and will respond accordingly when presented with increasing numbers of high quality applications.

"It is the RPG pool of funds that continues to enjoy growth in absolute dollars, so is most likely to be the source of expanded research opportunities of all types. This is the pool that clinical researchers must reach for if their numbers are ultimately to increase.

"To achieve this objective, applicants' commitments to research need to be sustained over the long term, even if it means having to revise and resubmit an application. Through means such as critical self-evaluation and prescreening of applications by knowledgeable colleagues prior to submission to NIH, investigators can ensure that quality applications get to study sections. They also will gain instruction and better focus from reading their summary statements, whether successful or not. If these commitments are undertaken, the quality of clinical science overall will improve, and priority score improvements and funding will follow."

Friedman told the Board that some members of ET2 "have gotten the impression that I or others have been critical of their activities--far from it. We made it clear that the reviewers on each of these study sections are doing a fine job under difficult circumstances and our goal is to assist them in the kinds of deliberations that they're involved in."

He emphasized that it is "absolutely essential" for investigators to submit clinical applications. "Unless we get a large quantity of high quality applications then whatever our purpose might be, it is doomed to failure."

Friedman commented on recent NCI activities designed to aid the effort to increase clinical research funding:

▶NCI recently issued a program announcement on clinical therapeutic research (**The Cancer Letter,** April 19). While the PA was not aimed solely at the ET2 study section, NCI hopes to have "all those grants which are appropriate be reviewed there," Friedman said. "Only in this way can the ET2 study section come back to its original charge, which was to review and evaluate clinical investigations."

▶NCI scheduled an educational session on how to prepare a successful clinical research grant application to be held May 19 during the American Society of Clinical Oncology annual meeting in Houston. "We recognize that one of the major problems is not just the quantity of these applications but the quality. Unless these are high quality applications they will not fare well," Friedman said.

▶An upcoming issue of the "Journal of the National Cancer Institute" will contain several papers on this issue, including the report by Emil (Jay) Freireich on how to foster clinical investigation.

Friedman stressed that the effort will take several years.

"This is a grand experiment. If we or the investigative community cannot be successful in fostering enough interest to have applications submitted, then no matter how many good ideas there are, we won't have a larger fund of clinical investigation. Given the outstanding opportunities that exist, I think this would be a great tragedy," he said.

NCAB member Sidney Salmon noted that the PA "may not alter in any way the fraction of clinical research grants that get funded, even if they get good priority scores," and asked why an RFA was not issued.

"There is concern from within NCI that we run the danger of having a too large amount of the overall grant portfolio committed with dollars targeted to research activities," Friedman said. "Before money is set aside for specific things, a number of questions are

raised, and one is, 'Why can't we do this as a program announcement?' We know that when we have set aside money, the kinds of applications we have seen have been really excellent. The question is, couldn't much of the same thing be accomplished more flexibly through a program announcement? It may be that we'll come back and say, no, that wasn't successful."

A second problem, Friedman said, is that RFAs are designed to focus research on specific topics. "What we're talking about here is a very broad activity including all disciplines, all kinds of programs, merely with the intent of therapeutic outcome."

Third, he said, is that "this has got to be an ongoing activity. Unless we're able to present the ET2 study section with round after round of large numbers of applications, then that study section will never format to their original charge and will remain the diverse review body that they are right now."

NCI Director Samuel Broder said that RFAs "are like dealing with a dead battery that you have to jump start. If you have jumper cables, then you'll probably get your car started, but it's much better to have a battery that works. What you really want is for this area of research to receive a tough but fair hearing."

Broder asked NCAB members to spread the word in their institutions that NCI wants clinical investigators in all cancer related disciplines to submit applications.

"I personally don't see any substitute other than to have a chartered, standing study section be there to review and prioritize the high quality research that comes in," Broder said. "The statement that, 'I'm sorry, we can't have a special chartered study section for clinical research because we never get enough applications,' I don't really believe that is valid, but I can assure you that is something that we hear all the time. I'd like to put an end to that."

He added that, "None of this is intended to be a negative statement toward ET2. They are excellent scientists and do their job and we want to make sure they have a good portfolio."

Friedman said ET2 was originally chartered to be a clinical investigation review committee, but over the years the number of clinical applications that came in was small. The study section was asked to take on the overflow from other study sections.

Friedman said he has met with members of ET2. "They are committed to the idea of high quality clinical applications--but they must see a number of these to satisfy that effort. If they could have round after round of enough applications, then they become what they were all along, a clinical review body. At that point a certain percent of their grants will get funded. That will be a very positive effect."

Hopkins, Pennsylvania Approved As Comprehensive Cancer Centers

The National Cancer Advisory Board has approved two cancer centers for status as NCI designated comprehensive cancer centers.

The two institutions and their directors are:

▶Johns Hopkins Oncology Center, Johns Hopkins Univ. School of Medicine, Albert Owens.

▶Univ. of Pennsylvania Cancer Center, John Glick.

The number of comprehensive cancer centers remains at 24, since both institutions had been NCI comprehensive cancer centers under designation guidelines issued in the 1970s. Both were favorably recommended for the renewal of their comprehensive designations to the NCAB by NCI's Cancer Center Support Grant peer review committee. The centers' comprehensive status will remain in effect for the duration of their Cancer Center Support Grants.

Six comprehensive cancer centers that were designated as such in the 1970s have yet to be reviewed for that status under NCI's new guidelines. They are:

UCLA's Jonsson Comprehensive Cancer Center, Univ. of Miami Sylvester Comprehensive Cancer Center, Columbia Univ. Comprehensive Cancer Center, Duke Comprehensive Cancer Center, Ohio State Univ. Comprehensive Cancer Center, and Univ. of Texas M.D. Anderson Cancer Center.

The remaining comprehensive cancer centers have been approved previously by the NCAB:

Univ. of Alabama at Birmingham Comprehensive Cancer Center, Arizona Cancer Center, Kenneth Norris Comprehensive Cancer Center, Yale Comprehensive Cancer Center, Dana-Farber Cancer Institute, Meyer Prentis Comprehensive Cancer Center, Mayo Comprehensive Cancer Center, Norris Cotton Cancer Center, Roswell Park Cancer Institute, Memorial Sloan-Kettering Cancer Center, Lineberger Comprehensive Cancer Center, Cancer Center of Wake Forest Univ., Fox Chase Cancer Center, Pittsburgh Cancer Institute, Fred Hutchinson Cancer Research Center, and Univ. of Wisconsin Clinical Cancer Center.

Americans Shouldn't Take NIH For Granted, Healy Tells NCAB

It is most important for the American public not to take NIH for granted, NIH Director Bernadine Healy said in her first official appearance before the National Cancer Advisory Board at its recent meeting.

"We're all saddened by the bashing NIH has gotten lately--NIH in crisis, in flames, crumbling," Healy said.

This sort of criticism can become unconstructive, and it is important that the American public recognize NIH as an agency that performs "heroic" work, akin to NASA's astronauts. "We're in a business that is as important as going to Mars," she said.

NCI Director Samuel Broder welcomed Healy back to the NCAB as another of the board's former members who have gone on to high government posts.

Healy was an ex officio member of the board from 1984-86 when she worked at the White House Office of Science and Technology Policy. Another former NCAB member is Healy's boss, HHS Secretary Louis Sullivan.

In her remarks to the board, Healy again outlined what she has called her "general principles" for NIH, which she discussed in testimony before the House Appropriations Committee (**The Cancer Letter,** April 19):

▶First priority is NIH's human talent base. "Our science is only as good as our scientists. We need to make sure we have an environment for opportunity, real and perceived."

▶Peer review must be "vital and strong, and sufficiently wise so that unconventional ideas are given due consideration."

▶Financial stability. Success rates of 25 percent are "clearly a big problem." Healy said she is "hard at work to move it closer to 30 percent" for FY 1992. But because of the "crisis" in FY91, Healy plans to use her director's discretionary fund and her authority to transfer funds within NIH to create a $30 million pool for what she has named the James Shannon Awards, after the NIH director of the institute's "golden years" in the 1950s and 1960s. These would be grants of $40,000 to $50,000 each for one year, or two year grants of $100,000, for some of those applications that just barely missed the payline in the research project grant pool.

Healy said the grants "are not a booby prize, but a strong statement about that individual investigator's career, which hopefully will be sustained."

Healy said NIH staff will nominate investigators for Shannon awards. She plans to take $16 million from the budgets of the institutes to pay for half of this program. Broder told the NCAB that NCI's contribution to the program will come "from those aspects of the NCI budget not considered research project grants, such as centers or intramural research."

▶Need for a long term financial management plan addressing "thornier issues" such as indirect costs. Healy is involved in a senior level working group on indirect costs made up of NIH, HHS and White House Office of Management and Budget representatives.

NCI will be a major player in Healy's other new initiative, a long term study of the major diseases that affect older women, including cancer, heart disease, stroke, and osteoporosis (**The Cancer Letter,** May 3). Broder and Peter Greenwald, director of the Div. of Cancer Prevention & Control, are participating in the planning of study, Healy said. Several other institutes involved in the study.

Healy also told the NCAB that the study will address complex issues such as diet and dietary supplements, and noted that "this board has hotly debated issues of diet in the last year."

The $500 million study, she said, "will be a bargain."

Mayer To Promote Rehab Research As First Oncology Nurse On NCAB

The National Cancer Advisory Board should promote research on issues surrounding cancer rehabilitation, the first oncology nurse appointee to that panel said recently.

Deborah Mayer, an oncology lecturer in the graduate program in nursing at the MGH Institute of Health Professions in Boston and a former president of the Oncology Nursing Society, said cancer rehabilitation will be one of her priorities during her five year term as one of 12 "Science Members" on the 18-member NCAB.

Mayer told **The Cancer Letter** that although NIH has not necessarily neglected cancer rehabilitation in the past, "it's an issue whose time is coming. This is a big issue facing care; in the future we will have a lot of cancer survivors."

Right now, said Mayer, only 0.2 percent of NCI's funds are devoted to rehabilitation research. "I'm curious about what has been funded and why [the amount] isn't more," Mayer said. "Molecular biology and research at the cellular level are very important, but we mustn't lose sight of what happens to these patients after they go through treatment. We need to balance the "high tech and high touch."

Mayer, who has already attended one NCAB meeting in May, said she is now engaged in some "cautious data gathering" to determine what kind of research projects on rehabilitation need to be conducted.

Mayer also plans to investigate where and how nurses participate in research supported by NCI. "Once I get a feel for this, I want to look at how to increase nurse participation. Nurses can make a unique contribution to this area."