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Milken Calls For Renewed War On Cancer, $20 Billion A Year International Effort

Since his cancer diagnosis three years ago, financier Michael Milken has been studying the inefficiencies and opportunities in cancer research.

Last week, at a Washington conference called the National Cancer *Summit, Milken* presented the synthesis of his findings and revealed what may be the most ambitious cancer research agenda ever.

While in recent years NCI officials have shied away from bold military allusions, all but dropping the rhetoric of "The War On Cancer," Milken

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In Brief

New Spending Plan Funds NIH At FY95 Level; Continuing Resolution Expires Dec. 15

US GOVERNMENT employees went back to work on Nov. 20 after Congress and President Clinton agreed on a bill that extends federal spending to Dec. 15. Under the measure, NIH will be funded at its FY95 level. Federal workers were furloughed for six days beginning Nov. 14, when a temporary spending measure approved last month ran out, and President Clinton vetoed the Republican-supported budget reconciliation bill. The budget uncertainty led NIH officials earlier this month to declare that the Institutes may suspend for this fiscal year the 4% annual increase usually provided to noncompeting continuation grants. . . . **WOLF PRIZE** in Chemistry was awarded to **Samuel Danishefsky** of Memorial Sloan-Kettering Cancer Center, and **Gilbert Stork** of Columbia Univ. The *$100,000 prize recognizes* their work to design and develop novel chemical reactions that have led to the synthesis of complex molecules. . . . **ALFRED KNUDSON JR.**, of Fox Chase Cancer Center, received the 1995 Ernst W. Bertner Memorial Award from M.D. Anderson Cancer Center. . . . **JAMES NEEL**, professor emeritus of human genetics, Univ.of Michigan, received the Wick R. Williams award and lectureship from Fox Chase Cancer Center. . . . **ONCOLOGY NURSING** Society has received an NCI grant to host a two-day program on cancer prevention and early detection for nurses working with African-Americans. The principal investigator is Sanra Millon Underwood, of Univ. of Wisconsin-Milwaukee. For information, contact ONS, 501 Holiday Dr., Pittsburgh, PA 15220-2749, tel: 412/921-7373, fax: 412/921-6565. . . . **STANISLAW BURZYNSKI**, a Houston practitioner of alternative medicine, was indicted Nov. 20 on 75 counts of violation of federal laws. Charges included mail fraud and violation of a court order that prohibited the sale of his drug, antineoplaston, across state lines, US law enforcement officials said.

Summit Calls For New Funds, Commitment In Cancer War

(Continued from page 1)

last week returned to the war path, calling for a new $20 billion-a-year worldwide assault on the disease.

The money could come from the US government, industry, charitable foundations and other nations, Milken said. In a nutshell, Milken argued, the War on Cancer has not been given the same commitment, energy and investment as defense and information technology, and, for that reason it has not yielded comparable returns of wealth and glory. Make cancer a priority, adapt research to the age of information, streamline the unwieldy regulatory mechanisms, and dazzling returns will surely follow.

The astronomical figure proposed by Milken did not seem to raise any eyebrows among the over 200 prominent cancer researchers, clinicians and patient advocates who attended the summit Nov. 14.

"It's not very difficult to spend $20 billion," Vincent DeVita, former NCI Director who heads the Yale Cancer Center, said to **The Cancer Letter**. "Right now you have a starving enterprise at about $2.2 billion. We are funding 15% of approved applications, if we are lucky. You could go up to $4 billion by blinking an eye, without breaking into a sweat.

"You need a lot more money than you have now," said DeVita, who took part in the conference. "How much more? Ten times would be fine. Eight times would be fine. Five times would be fine."

Paul Calabresi, a member of the President's Cancer Panel, said billions of dollars could easily be devoted to pursuing the leads emerging from molecular and genetic research.

THE CANCER LETTER

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"Well, $20 billion is a lot of money, but my feeling is that we are not doing better in the war on cancer because we are not applying what we already know," Calabresi said to **The Cancer Letter**.

Numbers notwithstanding, DeVita and other supporters said Milken's emergence as a cancer advocate may give the cancer program something it hasn't had in over a decade: a bold vision and *strong* advocacy.

The proposal for new investment in cancer research could have been seen as more than a little audacious on a day when federal employees were told to stay home since the government lacked the money to pay them. In fact, the shutdown forced the relocation of the summit from the Dirksen Senate Office Building to a downtown hotel.

While Milken didn't nominate the commander in the new War on Cancer, many of those in attendance appeared to know exactly whom they wanted to lead the campaign: Michael Milken.

"I've probably been to 10,000 cancer meetings, and I've never been as excited as I am now," said Helene Brown, a member of the board of directors of CaP CURE, a foundation through which Milken has funded $20 million in prostate cancer research.

"If he would make this his life's work, he could move this progress forward by leaps and bounds, and I think it would even help him as a patient," Brown said to **The Cancer Letter**.

Days after the meeting, Brown sent Milken a note.

"What I see emerging is a new lay leader of stature who can make a huge difference," she wrote. "Benno Schmidt did it in his time. Mary Lasker in hers. And now you can. I hope you do."

"Feet to the Fire"

Milken has managed to assemble a United Front of a breadth rarely seen in cancer politics.

Four former NCI Directors joined the current Director, Richard Klausner, as guests at the conference. Former US Surgeon General C. Everett Koop moderated the morning session. Drug companies, cancer centers and patient advocacy groups sent their top leadership, and the wives of US Senators sponsored the luncheon.

If Milken indeed chooses to implement his vision, he would have to build a solid organization, establish a permanent presence in Washington, and, more likely than not, devote most of his time to the effort.

Otherwise, the same observers who applauded Milken's ideas at the summit will be almost certain

to view the gathering as a gigantic letdown.

"We've committed ourselves to him," said Ellen Stovall, executive director of the National Coalition for Cancer Survivorship, a cosponsor of the summit. "Now we should hold his feet to the fire. We will come back and say to him, 'Now what?'"

Brown was not alone in noting that Milken has the opportunity to stand shoulder-to-shoulder with the giants like Lasker, the tireless lobbyist for the cancer program, and Schmidt, the first chairman of the President's Cancer Panel.

"Lasker understood that public policy and awareness of this battle is very, very important, and she brought in philanthropic money, and she certainly understood how important it is to work with Congress," said Ellen Sigal, a member of the National Cancer Advisory Board and a co-sponsor of the summit.

"Michael is bringing in that, and I think he brings in something else. He brings the technological world, the corporate world, the capital markets," Sigal said.

DeVita, who worked closely with Lasker, said Milken reminds him of the late philanthropist.

"One thing I learned very quickly with Mary Lasker was that you didn't say, 'Gee, Mary I can't get this done.' The question was, 'How do we get it done?'" DeVita said to **The Cancer Letter**. "Milken seems to have the attitude that there isn't any such thing as 'It can't be done'.

"There are people who say he is doing this just to rehabilitate his name. I don't see that," De Vita said.

"He has gone to great lengths to understand what's going on. He could easily just hand money out, and smile, and wave, and name buildings after himself, and that would rehabilitate his name to about the same degree," DeVita said.

The Intellectual Journey of Michael Milken

Last week's summit appears to be the culmination of an intellectual journey that began in the office Stuart Holden, the Los Angeles urologist who gave Milken the bad news: he had a high grade, aggressive tumor that had spread beyond the prostate at the outset.

"You tell people they have cancer, they respond in the usual variety of ways," Holden said to **The Cancer Letter**. "They have shock. They have anger. They have denial. They have 'Why Me?' Or most of them have reluctant acceptance.

"But in Michael's case, it was, `Okay. Fine. This is it. What are we going to do about it? There is no treatment for advanced prostate cancer? We are going to have to find one.'"

A week later, under an alias, Milken attended a conference on advanced prostate cancer at M.D. Anderson Cancer Center. "He went as a participant in the conference, and stayed there for two days, and listened to the scary statistics about people dying from advanced prostate cancer," Holden said.

"I hated to see this guy go there and hear all this bad news about how little we really know about it, and how little is really being done for it. On the other hand, he wanted to know. And it's certainly his right to know," Holden said.

After the meeting at M.D. Anderson, Holden and Milken visited NCI, Memorial Sloan-Kettering Cancer Center and Johns Hopkins Univ. In addition, Milken gathered the statistics: in 1993, the government was spending $1,100 for every man who died of prostate cancer, $4,700 for every woman who died of breast cancer, and $52,000 for every patient who died of AIDS.

Within a month of his diagnosis, Milken formed a foundation to fund prostate cancer research, and from that point Milken's personal involvement in the effort began to escalate, Holden said.

"Michael needed to become personally involved," Holden said. "CaP CURE was not going to be an organization that just wrote checks. It was going to delve into the culture of how scientific research is done, how the money is allocated, how priorities are determined."

Holden said the foundation met his needs as well:

"I've been in practice for over 20 years. I've seen this kind of patients. It's frustrating to have been taking care of them for so long and to have so few tools to treat them," said Holden, who became the medical director of the foundation.

From the outset, CaP CURE, initially funded through a transfer from the Milken Family Foundation, decided to adopt a new approach to grant-making.

For one thing, applications were to be short, less than five pages, and peer review was to take less than two months.

"It's not productive to have scientists spend three months a year writing grants," Holden said. "Mike saw that right away: Scientists should be in the lab."

Another basic problem, pointed out by Harvard Medical School pathologist Lan Bo Chen, was the lack of prostate tissues.

To fill that void, Milken founded four prostate cancer tissue banks, at Dana Farber Cancer Institute, M.D. Anderson, Washington Univ. School of Medicine at St. Louis and the Univ. of Washington School of Medicine.

In addition to the tissue banks, the foundation established a genetics consortium based at the Fred Hutchinson Cancer Center, the Whitehead Institute and the Univ. of Washington. The consortium, headed by Leroy Hood, a molecular biologist at the Univ. of Washington, studies families with abnormally high incidence of prostate cancer.

Over three years, CaP CURE has awarded about $20 million. Half of that total, $10.2 million, was given out last week, Holden said.

All through, Milken has been doing more than signing checks. He has been studying the emerging approaches to the disease and attending scientific meetings.

Last year, Milken showed up in Palm Springs at a prostate cancer symposium organized by the American Association for Cancer Research.

"On the first day, it was really hard-core molecular biology," said Otis Brawley, program director for the Prostate Cancer Prevention Trial and coordinator of the NCI intramural Prostate Cancer Service. "We had a couple of clinicians leave the room and socialize during basic science presentations. And basic scientists were doing the same thing when the clinicians were talking.

"But Michael Milken had an incredible interest in all of it," Brawley said. "When I wasn't taking notes, I was watching with amazement Michael Milken taking notes."

On Political Oncology

It appears that from the start of this intellectual journey, Milken realized that he needed a political road map, a way of distinguishing the white hats from the black hats.

To that end he recruited Brown, a long-time cancer activist who describes herself as a "political oncologist."

Over four decades of cancer activism, Brown has offered many a word of advice to a long line of NCI directors as well as activists including Lasker and Armand Hammer.

To sundry others, she has delivered an ultimatum or two. Brown is a member of the board of directors of the American Cancer Society and the advisory board of the NCI Div. of Cancer Prevention and Control. She is also the director of Community Applications of Research at the Univ. of California at Los Angeles Jonsson Cancer Center.

Brown first met Milken when he was a student Birmingham High School in Van Nuys. Brown's children were attending the same school. The two were re-introduced years later by Hammer, then chairman of the President's Cancer Panel.

As Milken was starting CaP CURE, he invited Brown to serve on the board.

"My decision was simple," Brown said. "Here is a man who has the courage and conviction and the need to do something.

"Enormous advances come from people who think differently. What Michael did in financial markets was astounding. He came up with a new way to finance business. If there is a new way to get at the cancer puzzle a bit faster, Michael has the kind of mind to be able to do that."

As Milken's interest in cancer grew, Brown acted as a guide, opening doors, steering the foundation toward the mainstream, and preventing gratuitous conflicts with other groups.

Brown said that now that Milken's interest has broadened to all cancers, he finds himself in the advantageous position of having the support of virtually all major cancer interests while incurring none of the logistical problems of maintaining a membership-based organization.

"He is extremely interested in working with every stake-holder in the cancer program," Brown said. "He doesn't need his own constituency, and the existing constituencies need a leader. It's a beautiful exchange."

The Unveiling

It may have been inevitable that Milken's exploration of one cancer evolved into an exploration of all cancers.

Genetic clues point in a variety of directions. Drugs have multiple indications. Drug approval, access and reimbursement make it hard to keep the quest within the boundaries of one disease.

"It wasn't the intent, but CaP CURE is kind of a pilot project," Holden said to **The Cancer Letter**. "That's the way it has sort of worked out."

The summit was Milken's idea, Holden said.

The foundation has been preparing the meeting for several months, ultimately hiring the Washington law firm of Fox, Bennett & Turner to handle the strategy and the logistics.

"I quickly recognized in my discussions with Michael Milken that he was going to take a bolder approach," said Samuel Turner, an attorney with the firm.

"He is fresh, and he is taking a different tack. That's what makes him so special: his willingness to look at things in different ways, and perhaps have a bigger vision than others have had.

"Whether it works or not remains to be seen," Turner said.

If anything, the summit served as something of an unveiling for Milken, an opportunity to acquaint the powers in cancer research with the results of his three-year quest.

"Clearly, we have not mobilized all possible resources to win the war on cancer," Milken said at the summit. "Cancer is not just an American problem; it is a worldwide problem. Financial and human capital from around the world needs to be mobilized."

In his remarks, Milken recounted the progress in American science and technology in the 25 years since the signing of the National Cancer Act of 1971, when then-President Nixon promised a cure within a decade.

The same year, the first pocket calculators were being developed, Milken noted.

"By 1995, 25 years since the war on cancer was declared, Powerbooks have made those first Texas Instrument calculators seem like relics and silicon chips drive everything from microwave ovens to missiles," Milken said. "Yet victory still eludes us in our efforts to find a cure for cancer."

The US can no longer support cancer research without the involvement of other countries, Milken said.

"Cancer patients from around the world travel to the US for its superior research and treatment," Milken said. "Nevertheless, our medical research infrastructure is now in danger of weakening from the weight of neglect and lack of sufficient funding. Recent reductions by both the public and private sectors make it all but impossible to sustain even current research efforts."

The 1991 Persian Gulf War provides a model of a successful international mobilization, Milken said. "What is required are seven critical elements: Leadership, communications, collaboration, technology, financial resources, human capital, and most of all, the will to win," he said. "The most recent example of such a convergence came during the Gulf War. The success of that effort provides 10 road signs we might follow in rethinking the war on cancer."

Milken's 10-point program follows:

1. Internationalize the war on cancer

"A minimum $20 billion annual investment is needed to deploy the technological and human resources necessary to finally bring the war on cancer to an immediate close. While this amount is nearly 10 times more than NCI's current $2.2 billion budget, it pales in comparison to the $61.1 billion the nations of the world allocated to win the Gulf War.

"The same international commitment is needed in the war on cancer.... Today, more than 90% of all cancer deaths occur outside the US. Yet we have not succeeded in drafting other nations in this battle. Indeed, other governments have made a relatively small investment on scientific and clinical cancer research. Japan, for example, with the world's second largest economy, currently plans to spend only $543 million on cancer research over 10 years."

2. Investing in the War on Cancer makes economic sense

"Increased investments in medical research will become even more critical with our aging population. The fastest growing segment of the US population is Americans over the age of 85; the second fastest are those over the age of 75. This demographic shift also is occurring in other countries, such as China, Japan and Mexico. Since most cancers occur in people over the age of 40, the aging of the world's population will inevitably increase cancer health care costs.

"Currently cancer is costing the nation over $100 billion a year in direct and indirect health care costs that can only be reduced through cancer prevention, early detection, and discovery of a cure."

3. Recruit a world-class scientific cancer team

"One of the keys to success in the Gulf War was the ability to dispatch troops already proficient in the use and deployment of modern technology. The same approach is needed in the war on cancer.

"It is estimated that fewer than 10% of the world's leading chemists, biologists and other scientists have ever worked in the field of cancer. Too many scientists have been dissuaded by the lack of sustained financial commitments by the public and private sectors....

"Recent research-and-development cutbacks by many pharmaceutical companies have already resulted in approximately 100,000 layoffs, with an estimated 200,000 more employees projected to lose their jobs by the end of the decade. We are at risk of dismantling teams of medical researchers who together might hold

the keys to unlocking the next great medical secret.

"A potential solution to this dilemma may be the creation of a matching grant program between for-profit companies and government. This would help spread the risks, as well as any future rewards, while at the same time preserving the medical research infrastructure needed to ultimately aid in finding a cure for cancer and other diseases.

4. Coordinate worldwide cancer resources

"Another strength of the Allied Gulf War effort was the ability to coordinate the resources of different nations toward a common goal. The war on cancer needs a similar decision-making structure to reduce duplication of effort and cut through fossilized forms and procedures. To be effective, we must link scientists, clinicians, patients and even laypersons in a 'Manhattan Project' set in the information age.

"But unlike the bricks-and-mortar investments that were made to assemble the hydrogen bomb scientific team all under the same roof, the investments needed for today's war on cancer should be in communications technology. For example, Intel's new 'Proserve' system will make it possible for scientists to communicate through full-motion video conferencing and document-sharing. It is this type of 'virtual laboratory' that will foster greater collaboration and reduce duplication of research."

5. Accelerate the pace of technology transfers from space and military to medical applications

"The technological successes that have come from decades of work by government space and military agencies, in cooperation with private enterprise, should now be deployed in the war on cancer. Let us use the technological advances from the Cold War to help us win the cancer war.

"The Jet Propulsion Laboratory has already begun to explore ways to use its computing storage and sequencing technology in medical research. Similarly, NASA is developing advanced ultrasound instrumentation that promises to advance space travel as well as provide high-resolution imaging techniques.

"While these efforts are significant, they are not enough. We need to systematically review all the technology that's been developed through decades of public and private investments in the nation's military and space programs. After the technology has been identified, a crash effort must be made to determine which applications can be converted to research."

6. Push the technological envelope

"We have made great strides in computing speed, storage capacity and sequencing. Using computer databasing techniques that did not exist just five years ago, scientists should be creating and analyzing libraries of cancer genes that may well hold the key to determining what differentiates normal cells from malignant ones. No longer do scientists need to study just one gene or one protein at a time. They should be using technology now available that makes it possible to look at tens of thousands of genes simultaneously and find out how they differ. We must make available other new tools that enable researchers to take a *single* drop of blood from a patient, extract a single piece of DNA and amplify it a million-fold.

"At the same time, advanced robotic laboratories should be created around the world to conduct large-scale biorational drug screening operations. Ten million chemical compounds still exist today—more than 10% of which are owned by three companies, Merck, DuPont and Eastman Kodak. Yet according to NCI, only an estimated 46,500 compounds have ever been tested against any of the thousands of known cancer cell lines. For a relatively small $30 million investment, 37 prototypical advanced robotic devices—each costing $800,000—could test in a single year four times as many compounds against cancer cell lines as have been tested since the start of the war on cancer."

7. Create a world library of organic chemicals

"There is no central depository for the 10 million chemical compounds known to be in existence today. In addition, many of those who own these compounds lack the incentive or the financial ability to conduct the testing of these compounds against cancer cell lines. If past performance is any indication, a generation from now only a small fraction will have been tested. That's why action is needed. An international consortium should be formed to facilitate the rapid testing of every known chemical compound against cancer cell lines.

8. Accelerate the approval of new drugs

"The time required to develop a new drug continues to increase. According to the Pharmaceutical Research and Manufacturers of America, the drug development and approval process took 8.1 years on average in 1960s, 11.6 years in the 1970s, and 14.2 years in the 1980s. Today it takes 14.8 years. If a cure for a particular kind of cancer were discovered tomorrow, under current regulation, it might take 15 years or more to get it approved for full distribution.

"Similarly, the cost of discovering and developing a new drug continues to soar - from, $54 million on

average in 1976 to $359 million in 1990. The increasing length and cost of drug development represent a rising barrier to innovation—and threaten the United States' leadership role in drug discovery. Rather than draining time and energy pointing fingers at who might be at fault, let's figure out what we can do to get more drugs to patients more quickly."

9. Develop strategies to quickly get product to the marketplace

"Like a business, our goal should be to quickly get product to the marketplace, to the patients fighting for their lives. Scientists should be spending their time implementing their ideas, not spending months to years writing grant proposals, and then waiting additional months or years for approval and funding.

"At CaP CURE, we have tried a new approach to the funding of cancer research. Grant applications are restricted to five pages, and approval is granted within 30-45 days. By comparison, the federal grant process requires mountains of paperwork and an approval process that often takes up to 16 months, even for renewal."

10. Mobilize cancer patients and families around the world

"Most of my fellow cancer survivors need just one thing: Leadership. They need to be told what they can do. In 1961, John F. Kennedy challenged the American people to ask themselves what they could do for their country. Today, eight million cancer survivors in the US, joined by tens of millions other survivors from around the world. are asking what we can do to help save our own lives and those of future generations.

"The American people would not and should not stand for a military war to drag on for 25 years and claim more than ten million American lives. Yet despite growing fatalities and demoralization of our troops, the war on cancer has been allowed to drift. It's time for real leadership from both the President and Congress.

"There will be those who say we must practice patience—that we still lack the information to mount an effective offensive against cancer. But anyone ever involved in war knows that great costs can result from further delay.

"We have plenty of information to wage our offensive," Milken said. "What we need now is an international mobilization to finally get the job done."

What Next?

Brown and Holden said the question of Milken's plans came up following the summit, on a flight back to Los Angeles.

"We've talked about it," Holden said. .

"It may be that in cancer we are further along than we thought. Maybe it is just a matter of having somebody who can pull all the pieces together. I think it became apparent at that meeting that somebody needs to do it. Maybe Michael is that person," Holden said.

"I think, as a result of this meeting, he recognizes this, but I don't know if he has made that leap."

MSKCC Cited For 8 Violations Of NY State Quality Standards

The New York State Department of Health last week cited Memorial Sloan-Kettering Cancer Center for violation of state quality of care standards in connection with the surgical error that led to surgery being performed on the wrong side of a patient's brain.

The incident occurred last May.

Memorial was cited for eight violations that included improper referral, an inadequate preoperative evaluation, inaccessibility of medical records, failure to match records to patient name and improper signing of the consent form.

State officials recommended that the hospital be fined $16,000. The maximum fine for every violation is $2,000.

"It is clear that a number of fail-safe procedures designed to prevent medical errors were not followed by the staff of Memorial Sloan-Kettering Hospital in this case," state health commissioner Barbara DeBuono. "Our investigation reveals that the care provided to [the patient Rajeswari] Ayyappan did not meet acceptable standards of professional practice.

"I am particularly disturbed to learn that at no time prior to entering the operating room did the surgeon or other members of the surgical team review the patient's medical history, diagnostic reports or CAT scan films," DeBuono said in a statement.

Pre-Operative Procedures Implemented

Memorial officials said the case has prompted the hospital to institute pre-operative procedures that include a documented review of patient records by an operating surgeon and a senior nurse.

"The findings by the Health Department reflect in large measure the results of our exhaustive internal review of the incident, which was submitted to the department in August," Memorial officials said in a

statement.

Memorial has moved to dismiss the surgeon who operated on Ayyappan May 26. Ehud Arbit, the surgeon, is appealing MSK's notice of dismissal.

Lenhard, Dessart Elected To Top Posts At Cancer Society

The American Cancer Society elected officers and presented several awards at a meeting of its Board of Directors last week in Chicago.

Raymond Lenhard, of Johns Hopkins Univ., succeeded LaMar McGinnis, of Dekalb Medical Cancer Center, as president of the society.

George Dessart, of the City Univ. of New York, was elected chairman of the board, succeeding Larry Fuller, a retired executive of Southwestern Public Service Co.

Vice president and president-elect is Myles Cunningham, of the Univ. of Illinois College of Medicine. Jennie Cook, an accountant and chair of the ACS California Division, was elected chair-elect. Vice-chair is Frank Coolidge, a Boston attorney.

David Rosenthal, a hematologist/oncologist and professor at Harvard Univ., was elected chairman of the medical affairs committee. Charles McDonald, head of the dermatology division of Brown Univ., was elected vice chair of the committee.

The society presented its Medal of Honor to two scientists and a tobacco-control advocate.

Brian MacMahon, the Henry Pickering Walcott Professor of Epidemiology Emeritus of Harvard Univ. School of Public Health, received the award for founding the field of modern cancer epidemiology. His work demonstrated techniques to determine risk factors for cancer and other diseases, and revolutionized the understanding of how estrogen affects breast cancer risk.

Alfred Gilman, chairman of the Department of Pharmacology, Univ. of Texas Southwestern Medical Center, was honored for pioneering research into cellular signal transduction, which led to earlier and better diagnosis and treatment of cancer.

Michael Pertschuk, founder of the Advocacy Institute and the Smoking Control Advocacy Resources Center, of Washington, DC, received the award for leadership in the development of tobacco control policies, including the development of grassroots advocacy principles and providing advocacy training and strategy counseling to non-profit organizations.

ACS presented its Distinguished Service Award to four leaders in cancer control: Carl Hartrampt Jr., a plastic surgeon who developed the TRAM flap breast reconstruction procedure; James Mullen, a prostate cancer survivor who formed a support group, called Man To Man, now a nationwide program; Wendy Schain, a psychologist who has written extensively on the psychosocial effects of cancer; and Mark Skolnick, of Univ. of Utah, who led a team of scientists that isolated the BRCA1 gene.

The society presented its Humanitarian Award to Carey Stratton Hill Jr., of the M.D. Anderson Cancer Center.

The society cited Hill for "using his medical and scientific skills to inspire his peers to establish pain management in the important place in medical practice that it deserves."

Working with state legislatures, FDA, pharmacy boards, and state and national narcotic boards, Hill's efforts have brought improved methods of pain relief to cancer patients, the society said.

New Toxicological Test Criteria Outlined In Report

The National Institute of Environmental Health Sciences and 14 other federal agencies have released a draft report on the criteria for the development and acceptance of new toxicological test methods by government agencies.

The report encourages the development and use of new test methods, including those referred to as alternative methods, to assess the safety or potential hazard of products.

Toxicological test methods are being developed that can be conducted in less time and with less expense, according to the report, drafted by the ad hoc Interagency Coordinating Committee on the Validation of Alternative Methods.

"By incorporating into new test methods the advances in our scientific understanding of mechanisms by which chemicals exert their toxicity, we can improve our ability to predict the adverse health effects of such substances," said William Stokes, of NIEHS and co-chairman of the committee.

The National Toxicology Program has scheduled a workshop, "Validation and Regulatory Acceptance of Alternative Toxicological Test Methods," Dec. 11-12, Arlington, VA. For a copy of the report, contact NTP Liaison Office, tel: 919/541-0530, fax: 919/541-0295, e-mail: stokes@niehs. nih.gov.