THE CANCER LETTER

Vol. 32 No. 10
March 17, 2006

Bush Nominates Von Eschenbach for FDA; Democrats Put Hold On Confirmation

By Paul Goldberg

The White House March 15 nominated NCI Director Andrew von Eschenbach to the permanent position of FDA commissioner.

Senate confirmation is required for von Eschenbach to take the top job at the regulatory agency.

Spokesmen for the White House and HHS said von Eschenbach would step down from the NCI post, but declined to state when this would occur.

"What I can say is that his intention is to step down at NCI, and we

(Continued to page 2)

Obituary:

Joseph Burchenal, 93, MSKCC Leader In Development Of Chemotherapy

By Kirsten Boyd Goldberg

Joseph H. Burchenal, a pioneer of cancer chemotherapy whose work with 6-mercaptopurine (6-MP) led to the first long-term remissions of acute leukemia in children, died March 8 at an assisted-living center in Hanover, NH, of heart failure. He was 93.

Burchenal was one of the first members of the famous Chemotherapy Service established by C.P. "Dusty" Rhoads at Memorial Sloan-Kettering Cancer Center in the mid-1940s. Rhoads recruited Burchenal and David Karnofsky, as well as several other Army physicians who were working on the treatment of infectious diseases, to test new chemical compounds for cancer treatment.

During World War II, Burchenal served as chief of infectious disease at the Harvard Fifth General Hospital in Northern Ireland, England, and France, and as chief of tropical medicine at Walter Reed Hospital.

In the 1950s, the work of the Chemotherapy Service led to the introduction of the first anti-cancer agents including nitrogen mustards, oral alkylating agents, and folate antagonists. Burchenal and others at Memorial studied the compounds in the laboratory, in mice and dogs, to learn about their effects before trying them in patients.

"Through his laboratory work, he developed deep insights into mechanisms of drug action and drug resistance," said Irwin Krakoff, who worked with Burchenal for 23 years at Memorial. "He worked toward the treatment of cancer with drugs at a time when most of his colleagues at Memorial thought he was crazy. I believe that he laid the foundation for much of the exciting things that are happening now in cancer treatment."

(Continued to page 7)

Nominee Intends To Leave NCI, But Details Are Unavailable

(Continued from page 1)

will have more details soon," said Christina Pearson, an HHS spokesman.

"The details are currently being worked out," echoed Christie Parell, a White House spokesman.

Asked whether von Eschenbach would resign from NCI in a matter of days or upon securing Senate confirmation for FDA, Pearson and Parell said that no further information was being released.

The von Eschenbach candidacy ran into immediate problems in the Senate, as critics attacked the agency's failure to act on the application for over-the-counter marketing of Plan B, a "morning-after" contraceptive.

"We will place a hold on the nomination of Dr. von Eschenbach until the FDA issues a decision on Plan B, yes or no," Sens. Hillary Rodham Clinton (D-N.Y.) and Patty Murray (D-Wash.) said in a joint statement immediately following von Eschenbach's nomination.

Von Eschenbach has headed NCI since 2002 and served as FDA acting commissioner since last October. These double duties have triggered allegations of conflict of interest, stemming from FDA's role in regulation of trials sponsored by NCI. Key legislators, particularly Sen. Chuck Grassley (R-Iowa), have stated repeatedly that FDA and NCI deserve two full-time leaders.

The patient-run Cancer Leadership Council stated in a letter to the White House that "the absence of permanent qualified leadership at the two agencies is a cause for concern" (The Cancer Letter, Nov. 23, 2005).

NCI advisors and other cancer researchers also have objected to von Eschenbach's dual role.

"No single person should simultaneously oversee the workings of the FDA (which is responsible for one quarter of the US economy) and the NCI (which oversees one-fifth of the NIH budget)," Nobel laureate and President of Memorial Sloan-Kettering Cancer Center Harold Varmus said in a recent speech. "This situation creates conflicts of commitment and conflicts of interest, and it shows contempt for these agencies and their activities." The speech is posted at www.mskcc.org/mskcc/html/61689.cfm.

Federal law restricts the duration of service by acting appointees to 210 days, and von Eschenbach's term limit was to kick in on April 21. With the nomination, he will be able to stay in the job for however long it takes the Senate to consider his nomination, plus another 210 days if he is rejected.

The hold Sens. Clinton and Murray placed on the nomination could extinguish von Eschenbach's chances of confirmation, but—by the same token—the legislative maneuver gives the administration more time, making it possible for the controversial government official to continue to head both the research institute and the regulatory agency.

Though FDA external advisors recommended approval for Plan B for over-the-counter sale, the administration can't afford to allow the contraceptive on the market. According to a poll by Pew Research Center for the People & the Press, Bush's approval rating has dropped to 33 percent. An approval of Plan B would further erode support for the administration among its most dedicated supporters, the social conservatives.

No Acting Director Appointed at NCI

Von Eschenbach and the administration have some important details to work out.

If his nomination to head FDA is indeed a political kamikaze mission, his reluctance to give up a tangible job at NCI would be understandable.

In a memorandum to NCI staff, von Eschenbach didn't mention stepping down, emphasizing instead that leadership at the institute will remain the same.

"President George W. Bush today announced my nomination as Commissioner of the Food and Drug Administration," he wrote. "I am deeply honored to be nominated, and I look forward to continuing to serve our great nation in this capacity.

THE CANCER LETTER

Member, Newsletter and Electronic Publishers Association

Editor & Publisher: Kirsten Boyd Goldberg
Editor: Paul Goldberg
Editorial Assistant: Shelley Whitmore Wolfe

Editorial: 202-362-1809 Fax: 202-318-4030
PO Box 9905, Washington DC 20016
Letters to the Editor may be sent to the above address.

Customer Service: 800-513-7042
PO Box 40724, Nashville TN 37204-0724
Customer service FAQ: www.cancerletter.com

Subscription $355 per year worldwide. ISSN 0096-3917. Published 46 times a year by The Cancer Letter Inc.
Founded Dec. 21, 1973, by Jerry D. Boyd.

"Dr. John Niederhuber will continue to manage the day-to-day operations of the National Cancer Institute. I am confident that under John's leadership, NCI's talented deputies and division, center and office directors will continue to achieve great things, including a future free from the suffering and death due to cancer."

Niederhuber was named "chief operating officer" for NCI by HHS Secretary Michael Leavitt after von Eschenbach's appointment as acting FDA commissioner. He also is deputy director for translational and clinical science.

Meanwhile, appearing as head of FDA, von Eschenbach refrains from mentioning his goal to "eliminate suffering and death due to cancer by 2015," and is describing his vision of biomarkers and their role in shaping medicine of the future.

This new vision is being developed under the auspices of the FDA "critical path" initiative for accelerating development of pharmaceuticals.

At a press conference March 16, von Eschenbach and FDA officials introduced 76 "opportunities" for development and approval of medical products.

FDA has no plans to fund this work, and would instead rely on the industry, patient groups and government agencies to address the questions, said Janet Woodcock, FDA deputy commissioner for operations, who runs the Critical Paths project.

On that list, ideas 34 through 39 deal with "creating innovative and efficient clinical trials and improved clinical endpoints."

The list would likely expand, Woodcock said.

"I fully expect many patient groups and others to be coming in to us today with 'Why wasn't our disease on the list, and we have a crying need for this, that, and the other thing,'" Woodcock said. "But at least they are having the right conversation now, because they've looked at the list, because they know, they understand what is needed more at a level of concreteness."

The document is posted at www.fda.gov/oc/initiatives/criticalpath/.

At the conference, von Eschenbach and HHS Secretary Leavitt described their vision for approaching drug development as an engineering process based on greater reliance on biomarkers.

"The purpose of the critical path initiative is to find better ways to rapidly develop and to approve safer treatments at lower cost and with a greater degree of success," Leavitt said. "The critical path initiative will provide impetus for a major cultural shift in the way that we make scientific discoveries and the way we turn them into medicines targeted at the right patient at the right time in the right dose and at the right stage of their disease."

In his remarks, von Eschenbach refrained from referring to his NCI goal to "eliminate suffering and death due to cancer by 2015," pledging instead to make drug development into an engineering problem.

"You will hear about the integration of science, and technology and engineering that will truly produce solutions," von Eschenbach said. "Solutions that people and patients have been longing for, solutions that will fulfill the Secretary's commitment to create a healthcare system that is personalized, that will be predictive, and that will be preemptive.

"Personalized in that we will offer patients the opportunity—by using biomarkers and other tools—to determine what the right treatment is for their particular disease and circumstance," he said. "It will be predictive, in that physicians will have tools and opportunities available to them like imaging strategies that will enable them to know whether a treatment is working very, very early in its inception, so they can be assured that they are giving the right solution to that patient.

"And it will give us an opportunity to move from a model that is forced to deal with established and advanced disease to an opportunity to be able to intervene much earlier in the course of illness when patients are susceptible to diseases, such that our healthcare system becomes much more preventative and is focused much more on health than it is on disease," von Eschenbach said.

After making brief remarks, Leavitt and von Eschenbach left the conference. When a reporter asked whether the agency had plans to accelerate the review of Plan B, Woodcock, declined to answer.

"I think that's a little bit off the topic here, and I am sorry I can't comment on it," she said.

Applause and Outrage

Reactions to von Eschenbach's nominations ranged from "applause" from the American Association for Cancer Research to concern from Public Citizen to tense silence from several groups.

A selection of these reactions follows:

PhRMA President and CEO Billy Tauzin: "Dr. von Eschenbach has both tremendous research and management credentials. He has served with distinction as director of the National Cancer Institute for nearly four years and as a leader of the University of Texas M.D. Anderson Cancer Center.

"His leadership, and the expertise of the

dedicated FDA staff, will help ensure that Americans continue to see the health benefits of the most safe and effective drug approval system in the world."

* * *

Rep. Henry A. Waxman (D-Calif.): "I hope that in Dr. von Eschenbach's confirmation hearing, the Senate will ask the necessary questions to restore integrity to science at the FDA.

"Dr. von Eschenbach must affirm that, unlike his recent predecessors at the FDA, he will ensure that the Plan B decision and future regulatory decisions are based on scientific evidence, not on ideology. He should also be asked whether his claims that cancer will be cured in the next decade are scientifically credible."

* * *

Margaret Foti, CEO of the American Association for Cancer Research: "Dr. von Eschenbach brings enormous medical and administrative expertise and experience to this post. This background will be vitally important in his new challenging role of FDA commissioner. Dr. von Eschenbach not only brings a wealth of scientific knowledge to the FDA post, he also brings the personal experiences of a cancer patient and survivor."

* * *

Peter Jones, AACR president and director of the University of Southern California/Norris Comprehensive Cancer Center: "Dr. von Eschenbach also has a special appreciation for translational cancer research, the process that bridges basic research with clinical research, with the goal of bringing new discoveries to the cancer patient. His knowledge of the health delivery system at all levels—as a medical researcher, cancer physician and as a leader of a major government health agency—lend support to his qualifications as FDA commissioner."

* * *

Joint statement by Sens. Hillary Rodham Clinton (D-NY) and Patty Murray (D-Wash.): "The American people deserve an FDA that sets the gold standard in drug approval. The FDA under this Administration has squandered that trust and the over the counter application of Plan B is a case in point.

"For more than two years, the FDA has dragged its feet on making a decision, putting ideology over science. It is past time for the FDA to stop dragging its heels and make a decision on Plan B. We will place a hold on the nomination of Dr. von Eschenbach until the FDA issues a decision on Plan B, yes or no."

* * *

HHS Secretary Mike Leavitt: "Andy is an inspired choice to provide permanent leadership at this critical agency. His career has been defined by his vision for progress in research and passion for the care of patients – two qualities which will serve the agency and the American public well.

"FDA needs permanent leadership to spur more innovation, improve drug safety, and help life-saving drugs reach patients faster. Andy understands these needs and will provide leadership to get the job done."

* * *

Sen. Chuck Grassley (R-Iowa): "The FDA has an enormous mission. It needs a permanent commissioner who's willing and able to take on its entrenched cultural problems and turn them around. That task is like turning around an aircraft carrier, and it'll take a very determined, reform-minded individual to do it.

"The next commissioner can't accept business as usual at an agency that protects the well-being of all Americans. I look forward to learning more about Dr. von Eschenbach's plans for assuring people that they can trust what's in their medicine cabinet.

"This nomination will offer a good opportunity for the Senate to take a good look at how the FDA operates and I hope, to reward its successes and address its shortcomings."

* * *

Merrill Goozner, director of the Integrity in Science Project of the Center for Science in the PublicInterest: "Dr. von Eschenbach has a structural conflict of interest that, even if he fully severed all of his ties with NCI, would still leave him with potentially conflict, which should be aired in a public hearing.

"Definitely, the public should be told what clinical trials he has approved at NCI that would lead to possible registration applications with FDA, what research grants have been granted to companies, including for anti-bioterror drugs and vaccines, that could eventually lead to registration to FDA, what cooperative research and development agreements have been signed during his tenure at NCI that may result in regulatory applications and actions at FDA.

"The point is that of all the agencies in U.S. government, NCI is one that is closest in its history and present activities to functioning as a drug company. Given that, what would the public think if we put a head of a drug company in charge of FDA even if he quit the drug company."

* * *

Sen. Barbara Mikulski (D-Md.): "I am pleased to see that the Administration has appointed a competent, permanent head of FDA instead of a temp. Today's

announcement is a move towards reforming FDA as the agency recovers from several years of weak leadership.

"FDA has always been the gold standard in maintaining drug safety and drug efficacy. The American public, and our devoted FDA employees, deserve a full-time leader who can help restore our faith in an agency that has been politicized and degraded.

"I have fought for years for the right facilities and the right resources for FDA, located in my home state of Maryland. I will continue to look out for its well-being, and look forward to working with its new leadership."

* * *

*Sidney Wolfe, Director of Public Citizen's Health Research Group: "*If confirmed by the U.S. Senate to be the next commissioner of FDA, Dr. Andrew von Eschenbach will become yet another Bush appointee whose main reason for being selected is that he is a family friend, someone who has been warmly embraced by the regulated industries—especially the pharmaceutical industry—and someone who has been and will continue to be loyal to the White House agenda.

"Von Eschenbach continues to exhibit extraordinarily bad judgment, a lack of being in touch with reality and insensitivity to the hopes and fears of other cancer patients and their friends and families, as evidenced by his oft-stated 'plan' to eliminate the suffering and death from cancer by 2015. Eradicating cancer within 10 years is not realistic, and by making this statement, von Eschenbach is cruelly raising people's hopes.

"He is a very poor choice to head this critical agency, and his nomination must be defeated. Otherwise, the FDA will be further weakened and the public health further damaged by someone who is so unqualified."

* * *

A statement by the American Cancer Society: "We are pleased that President Bush has nominated one of the most knowledgeable and respected members of the cancer community to lead the FDA. As a three-time cancer survivor who has headed the National Cancer Institute since 2002, Dr. von Eschenbach understands the critical importance of the government's role in waging the fight against cancer.

"Dr. von Eschenbach has dedicated his career to transforming cancer from a deadly disease to one that a person can live with over the course of a long and productive life. Under his leadership at NCI, the country achieved the first actual reduction in cancer deaths since such figures began to be recorded.

"The Society has enjoyed a long relationship with Dr. von Eschenbach, a longtime Society volunteer and former member of the Board of Directors. In recent years we have worked closely with Dr. von Eschenbach and the National Cancer Institute to advance a comprehensive national program to defeat cancer. Our efforts have educated the public and policymakers about the enormous progress that has been achieved and the promise that exists for exponential progress in the future.

"Dr. von Eschenbach's goal of eliminating death and suffering from cancer by the year 2015 has earned the support of 92 Senators and 280 members of the House, who sent a letter to President Bush encouraging the federal government to make the investment necessary to accomplish the 2015 goal. By publicly declaring their support for the 2015 goal, a majority of lawmakers from both parties claimed their share of responsibility for putting the nation back on track toward meeting the goal.

"In September, more than 10,000 of the Society's cancer advocates representing every congressional district will descend upon the National Mall for 'Celebration on the Hill,' where they will show their support for the sustained government investment in cancer research and programs that are necessary to make real progress toward the 2015 goal. With just six months to go before Celebration, the Society's millions of volunteers across the country are urging lawmakers to oppose cuts and boost funding for the National Institutes of Health, NCI, and the Centers for Disease Control and Prevention.

"We look forward to continuing our work with Dr. von Eschenbach, the Administration, the bipartisan majority in Congress, the medical community and patients groups across the country to accelerate the country's progress toward the 2015 goal."

* * *

Sen. Edward Kennedy (D-Mass.): "The FDA is responsible for assuring the safety of the food we eat, and the medicines we rely on to keep us healthy.

"An FDA Commissioner must have the vision to lead, the competence to make crucial public health decisions, and the integrity to keep FDA's decisions free from political manipulation.

"I look forward to a careful evaluation of Dr. von Eschenbach's qualifications in these areas, and to a thorough examination of his capacity to see that FDA once again sets the standard for quality, sound science, and integrity. That being said, I expect the Administration will have to address the Plan B issue fair and square before he can be confirmed."

Von Eschenbach Leads Retreat From 2015 Goal Deadline

By Kirsten Boyd Goldberg

Suddenly, the 2015 goal isn't what it used to be.

Earlier this week, three influential officials backpedaled from the target date by which NCI would reach its goal to end "suffering and death" from cancer.

The three were the NCI director who established the goal four years ago, the NIH director who tolerated the goal, and a representative of the American Cancer Society that inspired the goal.

—"What may be at issue is the timeline of how long it will take us to accomplish that goal," NCI Director Andrew von Eschenbach said at a March 13 meeting of NCI advisory committees.

—"I'm not one of those that say by 2015 we will do all of this. I think we have to be very realistic," NIH Director Elias Zerhouni said March 15 on The Diane Rehm Show, carried by National Pubic Radio.

—"Do we believe that we can actually get to that point at some point in the future? Absolutely," Dan Smith, ACS senior vice president for government relations, said on The Diane Rehm Show.

The retreat from 2015 could be fueled by two events: von Eschenbach's nomination for FDA commissioner, a position that requires Senate confirmation; and the President's proposed $40 million budget cut for NCI. Von Eschenbach may need to downplay the 2015 target date, because it has been criticized as unrealistic even before the proposed budget cut.

Ultimately, the 2015 goal raises questions about von Eschenbach's grasp of science and his track record as a science administrator, critics say.

"Great Institutions Set Great Goals"

As NCI director, von Eschenbach has forcefully and incessantly defended what became known as "the 2015 challenge goal" from the moment he announced it in 2003. However, in recent weeks, as acting FDA commissioner, he started to back away from that target date.

Facing the NCI Board of Scientific Advisors and the Board of Scientific Counselors earlier this week, he adamantly defended the goal while backing away from the target date.

"Great institutions set great goals, but even greater institutions accomplish great goals," von Eschenbach said at the joint meeting of the BSA and BSC March 13. "The NCI has set a great goal. The destination—the elimination of the suffering and death due to cancer—I believe, and others believe, is quite rational and quite practical, given all the progress that has been made. What may be at issue is the timeline of how long it will take us to accomplish that goal."

The "timeline" is achievable if everyone works together, von Eschenbach said. "I believe that with the incredible resources that we have… the goal, the destination, and the timeline are still within our grasp," he said. "It will require the best of all of us. It will require us to dig down and work collaboratively and cooperatively together."

As evidence of progress in meeting the goal, von Eschenbach cited the recent report by ACS of a drop in U.S. cancer mortality by 369 deaths (The Cancer Letter, Feb. 11).

"We've seen this year, for the first time, a decline in the actual number of people who are dying—suffering and dying—due to cancer," von Eschenbach said. "Not just the rates, but the actual number. And we know that, due to the limitations of our data system, that that data and that experience that we now have in hand is reflecting a reality that is years old. So, progress may be even better than our data reflects, because our data is reflecting the past, not reflecting the present."

NCI "is playing a critically important leadership role… to transform healthcare based on all the promise of molecular medicine," von Eschenbach said. "It's a leadership role that we can't shrink from, even in a time of shrinking resources."

Von Eschenbach equated the goal with the establishment of NCI in 1937 and the signing of the National Cancer Act of 1971: "That goal of eliminating the suffering and death due to cancer is non-negotiable. It is, in fact, the expectation that was placed on us as far back as 1937, and most importantly, renewed in 1971, and it's the goal that all of the effort and all of the work that has gone into the cancer enterprise has placed within our grasp, and we cannot—we cannot—turn away from our responsibility to those who are threatened by cancer to fulfill that commitment and to fulfill that goal."

As for the date: "We will continue to work on the timeline that we established, the 2015, recognizing the enormous challenges and the enormous complexity of being able to meet that timeline, especially in an era of shrinking resources," he said.

Zerhouni: "We Have To Be Realistic"

In an interview with radio talkshow host Rehm, NIH Director Zerhouni said the 2015 goal—minus 2015—could be reached "hopefully." ACS official Smith

concurred that the goal could be reached "at some point in the future."

Zerhouni has never supported the 2015 goal. ACS has supported the goal, and most recently, applauded it in a statement on von Eschenbach's nomination for FDA commissioner (see story on page 5).

Last year, von Eschenbach told Congress it would be possible to reach the 2015 goal by 2010 with additional funding (The Cancer Letter, July 29, 2005). The goal was developed with the assumption that NCI would receive "increasing resources," he said last month (The Cancer Letter, Feb. 10, 2006).

Thus, the President's proposal to cut the NCI budget by $40 million for FY 2007 could present a problem. The NIH and NCI directors are required to support the President's budget.

One could anticipate questions by members of Congress: Does the budget cut indicate that the administration doesn't support the principal goal of its NCI director? Does a $40 million cut delay reaching the goal by one year, two years, five years?

Zerhouni and Smith tried to separate the timing issue from the budget issue.

REHM: "This administration said it wanted to see an eradication of death from cancer by the year 2015. Are you still on track for that, or is that a goal that's gone by the wayside?"

ZERHOUNI: "No, it's not gone by the wayside. It's a worthwhile goal, it's a vision. I think that we have to be realistic, that we need to understand how you get there. Cancer is not one disease, [it's] 200 diseases. And I think that the cancer research community has made enormous progress…. This year, for the first year, we have a decrease in the total number of cancer deaths. We have 10 million Americans who have survived cancer, and if you look at the number of lives that have been spared, it's about 12 million lives. So, my point is that the investment in cancer research has been extremely productive. I think the seed of research findings we have made have led to an explosion of new approaches in biotechnology and pharma, and I think if you look at that trend, hopefully we can reach that. But I'm not one of those that say, you know, by 2015 we will do all of this. I think we have to be very realistic."

ACS: Restore Funding to NIH, NCI

Turning to Smith, Rehm sought his view of the President's budget proposal. "We are deeply disappointed in the President's budget," he said. "We believe that it's misplaced priorities and it really takes us off the track of where we need to be going."

Smith said ACS and other organizations supported a move by Sen. Arlen Specter (R-Penn.) and Sen. Tom Harkin (D-Iowa) to restore $7 billion to health and education accounts. (The Senate approved the amendment March 16 by a vote of 73-27.)

REHM: "Is it realistic to continue to talk about ending death and suffering from cancer by 2015?"

SMITH: "Every year that we don't put resources into the fight against cancer is another year where we are going to delay being able to get to a point where people don't suffer and die from cancer. We do believe that there is a point where that will happen. The 2015 goal that was laid out by the National Cancer Institute, by the President's political appointment, Dr. von Eschenbach, is a goal which is worth embracing in the sense that it will challenge the nation to get there. It's like going to the moon. We have to put the resources in to make it happen, and every year that we delay putting those resources in is a year that we will delay getting there. Do we believe that we can actually get to that point at some point in the future? Absolutely. We have made tremendous gains in a whole number of cancers. Prostate cancer now is a type of cancer that most people—99 percent of people will survive prostate cancer and die from something else."

Obituary:

Burchenal, Known For Work On 6-MP, Trained Many Others

(Continued from page 1)

In this new field, the physician-scientists had to develop basic methods and measurements. In 1949, Karnofsky, with Burchenal's help, developed the Karnofsky scale to describe the wellbeing of cancer patients, with 100 being fully functional and 0 representing death.

"In those days, there was hardly anyone working on chemotherapy, because there was hardly anything that worked," said Bayard Clarkson, professor of medicine at the Cornell University/Weill Medical College and a member of the Memorial Sloan-Kettering Cancer Center. "The work on the purine analogues was Joe's crowning achievement."

The most promising of the purine analogues at the time was 6-MP, developed in 1951 at Burroughs Wellcome Co. by George Hitchings and Gertrude Elion, who received the Nobel Prize for Medicine and Physiology in 1988 for their work on cancer drug development.

"With 6-MP, these little kids would be on death's

door, and in a few weeks would be back up again," Clarkson said.

Burchenal gathered the first data on long-term survivors of acute leukemia through correspondence with anyone who was treating leukemia around the world. He collected data on more than 100 patients who survived over five years, most of whom had been treated with 6-MP. It was the first evidence that long-term remissions in acute leukemia could be achieved.

"In recent years, people have forgotten about this early work," Clarkson said. "They have been settling for prolongation of life or palliation. That's all they've got at the moment. We were going after cures, and it worked, at least in a lot of lymphomas."

Burchenal became chief of the Division of Clinical Chemotherapy in 1954. In 1963, he received the Alfred P. Sloan Award. He served as president of the American Association for Cancer Research in 1965.

In the 1960s, he collaborated with Herbert Oettgen, oncologist and immunologist at MSKCC, to develop treatments for Burkitt's lymphoma. The treatments, which included cyclophosphamide, led to Burchenal's receipt of the 1972 Lasker Medical Research Award along with Oettgen and 14 others.

He also was vice president of the Sloan-Kettering Institute from 1964-72 and head of its Applied Therapy Laboratory from 1973 to his retirement in 1983.

Burchenal and Karnofsky recruited many other physicians to the emerging field of oncology. Their work together ended when Karnofsky died in 1969.

"Joe was one of the originals," Clarkson said. "I don't think he had any enemies. He was a thoroughly nice person and a great boss." Burchenal enjoyed mountain climbing and walked up to his 11th-floor office until his retirement, Clarkson said.

In 1996, AACR established the Joseph H. Burchenal Clinical Research Award. He attended the lectures in his honor nearly every year.

Besides the Sloan and Lasker awards, he received the Prix Leopold Griffuel (1970), the David A. Karnofsky Memorial Award of the American Society of Clinical Oncology (1974), the James Ewing Award (1975), the American Cancer Society Annual Award (1982), the Return of the Child Award of the Leukemia Society of America (1986), and the ASCO Distinguished Scientific Award (1994).

Burchenal is survived by his wife of 58 years, Joan Riley. His first wife, Margaret Pembroke Thom, died in 1943. He is survived by three sons, three daughters, a sister, 16 grandchildren, and eight great-grandchildren.

Distribution Policy for The Cancer Letter

Thank you for your purchase of this issue of The Cancer Letter! Because issue and subscription sales are our major source of revenue, we wouldn't be able to provide you with the information contained in this newsletter without your support. If you have any questions or comments about the articles, please contact the editors (see page 2 of your issue for contact information).

We welcome your use of the newsletter and encourage you to send articles once in a while to colleagues. But please don't engage in routine distribution of The Cancer Letter to the same people week after week, unless your organization has purchased a site license or group subscription. If you aren't sure, ask the person who is paying for this subscription. If you are sending the newsletter to an unauthorized list, please stop; your actions are against Federal law. If you received this newsletter under an unauthorized arrangement, know that you are in receipt of stolen goods. Please do the right thing and purchase your own subscription.

If you would like to report illegal distribution within your company or institution, please collect specific evidence from emails or photocopies and contact us. Your identity will be protected. Our goal would be to seek a fair arrangement with your organization to prevent future illegal distribution.

Please review the following guidelines on distribution of the material in The Cancer Letter to remain in compliance with the U.S. Copyright Act:

What you can do:

- Route a print subscription of the newsletter (original only) or one printout of the PDF version around the office.
- Copy, on an occasional basis, a single article and send it to a colleague.
- Consider purchasing multiple subscriptions. We offer group rates on email subscriptions for two to 20 people.
- For institution-wide distribution or for groups larger than 20, consider purchasing a site license. Contact your librarian or information specialist who can work with us to establish a site license agreement.

What you can't do without prior permission from us:

- Routinely copy and distribute the entire newsletter or even a few pages.
- Republish or repackage the contents of the newsletter in any form.

If you have any questions regarding distribution, please contact us. We welcome the opportunity to speak with you regarding your information needs.

The Cancer Letter
PO Box 9905
Washington DC 20016
Tel: 202-362-1809
www.cancerletter.com