THE CANCER LETTER

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Conversation with The Cancer Letter

Friedman: Cancer Centers Must Adapt; "Not Losing Sleep" Over Sequestration

Cancer centers will need to show greater ingenuity and flexibility than they have in the past, Michael Friedman, CEO of City of Hope, said to The Cancer Letter.

"For centers that do extraordinary things clinically, I believe they will be able to demonstrate their value and will be strong components of organizations going forward," said Friedman, who will retire at the end of 2013 after a decade of running City of Hope, an NCI-designated comprehensive cancer center. "But to do this, they are going to have to be very cost-effective—that doesn't mean cheap—it means cost effective.

"They will have to demonstrate the value of the treatments or the services that they provide, and the idea that these are good academic institutions generating knowledge, that won't be enough in the future, I fear."

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A recording of the conversation is posted on The Cancer Letter website.

Capitol Hill

Patient Care Emerges as Major Concern Following Sequestration Cuts to Medicare

By Matthew Bin Han Ong

Two weeks after Congress voted to keep the government open through the end of the fiscal year, cancer researchers and physicians nationwide are feeling the first palpable impacts of sequestration.

The 5.1 percent across-the-board cuts will decrease the NIH budget by $1.553 billion, and NCI's by as much as $219 million. These cuts must be made in the remaining six months of this fiscal year.

Reports indicate that Medicare patients are among the first to be directly affected by the cuts. Sources say that, at some practices, patients are being turned away because of a 2 percent cut in reimbursement, which is intended to save the government $588 million.

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In Brief

AACR Presents Awards at Annual Meeting

THE AMERICAN ASSOCIATION FOR CANCER RESEARCH will present awards for outstanding achievements in basic and clinical cancer research, as well as contributions to the biomedical research community, at its annual meeting in Washington, April 6-10.

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THE RALLY FOR MEDICAL RESEARCH
will be held April 8
in Washington, D.C.

Cancer Centers Can Succeed By Providing Niche Services

(Continued from page 1)

Friedman, who will turn 70 in August, is a former acting commissioner of the FDA. He came to City of Hope from his job as senior vice president of research and development, medical and public policy, for Pharmacia Corp. In addition, he served as chief medical officer for biomedical preparedness at the Pharmaceutical Research and Manufacturers of America following the events of Sept. 11, 2001.

Before FDA, Friedman worked at the NCI Division of Cancer Treatment, rising to the position of associate director of the division's Cancer Therapy Evaluation Program. Prior to that, he directed the clinical oncology programs at University of California, San Francisco.

Robert Stone, the institution's current president, will assume the dual role of president and CEO.

Friedman spoke with Paul Goldberg, editor and publisher of The Cancer Letter. A transcript of the conversation follows:

PG: *As you look over the oncology field with the perspective you have acquired over the years, what are the challenges you now see for cancer centers?*

MF: This is, at the same moment, the most exciting and the most confusing time I can imagine. And I'm sure that people five years from now will look back on this as a simple time, but it seems really complex to me.

The science is evolving much more rapidly than we can manage, and the social systems—the support systems—are not. And so we have this explosion of wonderfully interesting scientific ideas and an increasing inability for us to capitalize on them efficiently.

Great work is being done, great work will continue to be done.

I have no doubts about that. But cancer centers will need to understand how best to function in a modern environment where there will be fewer resources, more good ideas, greater competition, and overall, greater stress on the people and the systems involved.

PG: *How has this changed over the past decade, and maybe how will this change over the next decade?*

MF: Well a decade ago, things were much more straightforward. I would never say that things were easy, but they were much more straightforward. The federal government had considerable resources to apply to good research and there were systems in place to do this. Universities and free-standing cancer centers were capable of funding the research and education from a mixture of patient care and philanthropy, and other systems.

Today, that's simply not the case. I think that the pressures on delivering really wonderful medical care will get greater and greater. The money that will be available will be less and the expectations of reporting and transparency, meeting quality standards will be even greater.

And so, whereas in the past there was some flexibility, fungibility of finances from one area to another, it is not at all clear to me how academic medical centers can, with the same vigor, pursue their educational, their research and their care missions as vigorously as they have in the past.

That doesn't mean they won't do it—I believe they will—but what I think it calls for is much greater creativity, much greater flexibility, and the need to really leave behind some of the old techniques that we've had and strike out looking for new ways in which to support the important missions of the cancer centers.

PG: *I guess what I am really asking is what would be the best case scenario for 2023, a decade from now?*

MF: I think the best case scenario would be that there would be stable, predictable funding for the cancer center enterprise as a whole.

Now, where that comes from and how it's done, I'm not sure if I can see a decade ahead to predict that, but stability of funding is a very important thing, that the opportunity for young investigators to move into the system successfully—it might be a smaller number of young investigators, but I want them to be the best and

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the brightest to be successful.

The idea that the tremendous intellectual capital that has been built up over the past 20, 30, 40 years will now be utilizable, and that people will be able to employ those great insights in ways that we've never done before. Will there be new consortia of cancer centers? Will there be new federal mechanisms for funding them? Will there be greater reliance on philanthropy as the flexible engine to drive research? I think all of those things are entirely possible.

PG: *Are these challenges any different for free-standing cancer centers like City of Hope, and are they a dwindling tribe?*

MF: Well, there are relatively few, absolutely, unaffiliated cancer centers and I don't see that trend changing. I think there'll be great pressures on free-standing cancer centers.

The advantages of being linked to a major university or a major educational system are many. Greater resources, greater power of the institution; often, greater academic resources—schools of engineering and chemistry and physics and computing and so forth, bioengineering—but the disadvantage of those large institutions are equally great.

> "I think that really fine centers will continue to evolve, to identify the value that they bring, both locally in their areas and also nationally, and they can be very successful, but in those niche areas."

They are relatively inflexible, they have very mixed agendas, and so, while it is good to be part of a large institution, it's not so good because your interests aren't the interests of the institution.

And looking very narrowly, very parochially, selfishly, what I care most about is, how to make progress for cancer patients, and to do that, freestanding centers often have really important advantages.

What I see in the future is the need for greater ingenuity and flexibility about how to do things, and not being bound by the same old ways that have been successful in the past and have served us well, but I fear are going to be increasingly less useful in the future.

I mean, freestanding cancer centers have the opportunity to really develop in ways that larger institutions will be more slow and more cumbersome, and perhaps more risk-averse.

So I think there are risks for free-standing cancer centers, I also think there are tremendous opportunities.

For City of Hope, I think this is a very exciting moment and I have never been so optimistic for our institution as I am right now.

PG: *Maybe I can address that in the context of the next question: Are cancer centers, in effect, becoming a niche business? Is there still room for a behemoth cancer center, or is that a thing of the past?*

MF: Well, I don't know how to answer that question. It's a little like the beginning of Anna Karenina, you know, all happy cancer centers share things in common and are alike and all unsuccessful and unhappy cancer centers are unique in their own ways.

I think there will be good opportunities for cancer centers that exploit their unique talents—whether these are clinical talents or research talents or educational talents—to exploit those and really serve a niche kind of market.

The American medical system appears to be growing more interconnected and linked. I think that's a trend that's undeniable. And so, cancer centers must understand what position, what niche—to use your word—they occupy within that greater ecosystem.

For centers that do extraordinary things clinically, I believe they will be able to demonstrate their value and will be strong components of organizations going forward. But to do this, they are going to have to be very cost-effective—that doesn't mean cheap—it means cost effective.

They will have to demonstrate the value of the treatments or the services that they provide, and the idea that these are good academic institutions generating knowledge, that won't be enough in the future, I fear.

I really regret that, I mourn that, but I fear that what's going to happen in the future is, notwithstanding what your reputation is or what you've done in the past, or how good your intentions are—and I have the greatest respect for cancer centers in general around the country, they are wonderful institutions in many, many ways—those things won't matter in the future.

What will matter is how you serve the needs of either a system or a population of patients in the most effective way. And so, yes, I think that really fine centers will continue to evolve, to identify the value that they bring, both locally in their areas and also nationally, and they can be very successful, but in those niche areas.

PG: *Well, maybe I can make this question less Tolstoyan. It would seem that the number of reasons for a patient to go to a cancer center is not increasing. It*

actually seems to be shrinking, which is what seems to be making it a niche business. So, for example, at City of Hope, if I'm right. Am I right, by the way?

MF: I think that our patient population can continue to grow, but it's not growing as fast as the aging of the population and the demographics of cancer in our area. And I think this is true for all institutions.

> "We have really an exceptional hematologic cancer program, the largest in the state, performing more than 11,000 bone marrow transplants, really an exceptionally high quality program by any measures or standards."

More and more care is being provided in the general community. And often it is extremely good care. So primary of breast or colon cancer patients, prostate cancer patients, often this is done highly competently in local community facilities, a part of networks, or a part of familiar systems.

But I do think, just to use City of Hope as an example, we have really an exceptional hematologic cancer program, the largest in the state, performing more than 11,000 bone marrow transplants, really an exceptionally high quality program by any measures or standards.

And so that kind of care won't be so easily available, or so well available in the community, and for that, hospital systems, physicians, are referring patients to us are doing so at an increasing rate and will continue to do so for the foreseeable future.

I think that cancer centers must provide those complicated, elegant, difficult services where there is real benefit for the patient, and do so in the most cost effective way that they can. So for us, and hematologic malignancy is just one example, but for us, this is a very successful model.

PG: *So this is what you did?*

MF: This is what has been happening at City of Hope for three decades. It's getting more elegant, it's getting more powerful, and I think seeing this as a resource to the community, but also to the nation.

PG: *I hear all gloomy prognoses for cancer centers and yet, many new players are standing poised to enter the field. Why do you think that is, and what would be your advice to people who are staying in the ring?*

MF: Anyone who looks at the future of academic medical centers, not even focusing on cancer centers, would have to be somewhat gloomy about looking at the future. If you are not gloomy, then you're not seeing things as they really are.

These are really strenuous, difficult times and will be increasingly so, again, for the foreseeable next 10 years. But that doesn't mean that the opportunities aren't even greater. I mean, the game is still worth a candle—this is the most exciting, the most wonderful, the most meaningful kind of activity that I can imagine.

So, I'm very sympathetic for both the institutions that are doing it now and those other institutions that aspire to do it in the future. Yes, it is a difficult, competitive climate, but there are opportunities, and as I say, I remain guardedly, but definitely optimistic about the future.

PG: *Now, looking back at your decade at City of Hope, what was your strategy going in? Did you have a strategy, or were you thinking on your feet?*

MF: Well, I think that this is a wonderful institution that had some opportunities for focusing on bringing our laboratory research more effectively in line with our clinical activities. The institution has a wonderful history of doing research that's a real pragmatic value—really turns into products and really helps people in amazing ways.

We've estimated that, globally, research that's been done by our scientists here result in medicines that are used by 100 million people globally each year.

And that's a phenomenal number, things from recombinant human insulin and growth hormone to humanized monoclonal antibody technologies, and so forth. So to try and exploit that, my goal has been to strengthen the infrastructure of the institution, because although we certainly have been a venerable institution, we weren't as financially strong on our facilities or as good as they needed to be.

> "These are really strenuous, difficult times and will be increasingly so, again, for the foreseeable next 10 years. But that doesn't mean that the opportunities aren't even greater. I mean, the game is still worth a candle."

Our systems weren't as robust or as modern as they needed to be. As an institution, we weren't well configured.

Our physician leadership was not aligned well with the institution, and it was clear that in the future,

that is today, what will be needed is a really modern institution with greater alignment between all the various components.

And so, with a lot of very talented people here, we've all worked together to try and create an environment that positions us for potential success as we move forward to the future.

PG: *So you had that as a plan…*

MF: I did.

PG: *What was your biggest achievement and smartest move, and since I'm asking that, it is only fair that I would ask, what your biggest mistake was as well.*

MF: I think my biggest mistake—it's a series of mistakes—really is not taking action on certain things even more quickly than I did. And they're a whole series of things. I tend to be so busy day in and day out that some things don't get the attention that you'd like them to.

And the idea that we could have done more, or a sense of impatience of wanting to have created more opportunity for people—I think those were the general failings.

The thing I'm most proud of at City of Hope really is the quality of the leadership of the institution. These are individuals and people in the sciences and the administration throughout the institution that are such terrific people, and leave the opportunity for doing so much more in the future, palpably, right there.

> "I think it's much more important to leave when things are going extremely well rather than when they're going poorly."

I'm very, very proud of being part of an institution where we really gained strength in that direction. I think good leadership for institutions in the future will be key to success in the future.

PG: *So it's all in the leadership and the faculty?*

MF: Wonderful people, wonderful people. And I was very fortunate to be at a terrific institution with so many attributes and talented folks here to begin with and then really building on that.

PG: *In the quarter of a century that you and I have known each other, you've done an astonishing number of really big jobs at NCI, at FDA, big pharma and biodefense even, and finally, here you are at a cancer center. Was there ever a plan that you were pursuing, and I guess, what was your most favorite part of your most favorite job?*

MF: Well, I can't answer the last one, because there had been so many wonderful and also, I must say, honestly, so many difficult moments at each of those positions, so none of them were without tremendous—at least for me it would seem tremendous—challenges at the time.

PG: *Were you happy as you were going to work on each of these jobs?*

MF: This morning. But that's each day—I love some of the things I did at NCI. I was very happy and privileged to do things at FDA and the pharmaceutical industry, and there had been many days that I've just been absolutely happy to just come to work here.

So every job, every opportunity has its challenges and its frustrations. And I think it is unrealistic to think that it's going to be wonderful, wonderful every day. But I did not have a plan—my life sort of turned out like a Hardy novel that turned out happy rather than sad.

Just a series of accidents that I've been unbelievably lucky in—the people that I ever worked for and worked with really insanely fortunate to be associated with such wonderful and caring people who have been so helpful and even today, formative of how I think and act. So I feel like I've just been extraordinarily lucky.

PG: *I guess with every one of these occupations, every one of these positions, is potentially a silo, and yet you did not end up in any of those silos. You sort of jumped from one to another—not jumped, you stayed a long time and did a good job—but you know…*

MF: Well, the transition wasn't a conscious one, and at each moment when I made a change, something was offered that I hadn't necessarily anticipated, and in many hadn't anticipated at all.

Things happened by sort of accident, but these were really wonderful opportunities, my years of public service I'm very grateful for.

Government service, I think, is still a very important and very crucial activity and I was glad to do that, but I also enjoyed very much time in academia and in the private sector as well.

PG: *What was the least favorite part of your least favorite job? I can think of potential answers but, when were you least happy going to work?*

MF: They are probably associated with some oversight activities in the federal government, I have to say, was probably my least favorite general category. And it's probably wise to go no further than that.

PG: *Well, [former NCI Director] Sam Broder used to say, and still says, I'm sure, that the worst day in the private sector is better than the best day in the*

government.

MF: I don't agree with that. But, you know, I respect his opinion, but no. I think that each is unique and wonderful in his own way.

And there are moments in the government when I just could not have been happier, and there are moments in the private sector when I couldn't have been happier.

PG: *And the other way around.*

MF: Yeah, exactly.

PG: *Why are you retiring now? What are you going to do next?*

MF: Well this is—I've been thinking about this for at least the past three years. This is the ideal moment for me to step aside and to transition to new leadership here. It's our 100th anniversary, our centennial celebration this year.

> "I did not have a plan—my life sort of turned out like a Hardy novel that turned out happy rather than sad."

So, emotionally that feels like a really terrific time to transfer. We're just completing our first multi-year fundraising campaign, and by the end of the year we'll have raised a billion dollars.

The institution is enormously stronger, financially, our endowment increased fivefold, our assets doubled, our bond rating increased, we've added almost a million square feet of facilities, systems are in place, our leadership is, as I've mention earlier, is so much stronger, and our systems, our medical foundation is such a key component of a modern institution and our physicians are so important to our success in the future.

So many things have been accomplished here that I think it's much more important to leave when things are going extremely well rather than when they're going poorly.

And I don't want to be one of those people who hang on longer than he should. The fact that things are going so well and that there will be things that I will miss having a hand in the fruition.

That's bittersweet, but that's always the case, so this is an ideal moment to transition and I feel, as I said, very confident about the quality of the leadership that will take the institution forward. I think we're really well positioned to do great things in the future.

PG: *What are you going to do next?*

MF: Well, I want to continue to help out here at the City of Hope in any ways that I can. I am on boards and will probably join a couple of more boards of for-profit companies.

I want to continue to do some public service on at least a couple of not-for-profit boards and continue that activity.

I want to take some time to think and study some things that I haven't done since college and want to get back to the sort of, just think about different things, and really enjoy a little leisure.

This is not something I've ever had before, so it all feels a little novel to me, but I'm very excited about it.

PG: *So some of this is going to be outside medicine?*

MF: Yes.

PG: *I remember having seen your CV years ago, and it would have to do a Shakespeare, I would suspect.*

MF: Yes, that's right. Elizabethan and Jacobean drama still really fascinate me.

PG: *That's really incredible, and nice to know. I won't ask any further about that, that's personal life, spiritual life, intellectual life, it's all good.*

Another question I have, a more pedestrian question—sequestration has just pretty much gone into effect. Is that going to affect City of Hope in any particular way?

> "I don't want to be cavalier and say, 'Oh, no, no it won't have any effect whatsoever.' It will, but it is entirely manageable."

MF: It will affect us the way that it will affect many institutions in terms of a diminution in funding and options—that's certainly, for sure.

I don't expect it to be dramatically impactful at this time, we are working hard to generate other sources of revenue, and to be more efficient, to use the money that we have more effectively.

Both of those things are to mitigate the lack of federal dollars and the lack of flexibility from federal dollars, which is probably equally important.

But it is real, like our sister institutions, it affects all of us and I don't want to be cavalier and say, "Oh, no, no it won't have any effect whatsoever." It will, but it is entirely manageable.

PG: *And so you are not losing sleep?*

MF: I'm not losing sleep, no.

PG: *Thank you.*

Capitol Hill

Patient Care Emerges As Concern Following Sequestration Cuts

(Continued from page 1)

The continuing resolution attempted to ease this pain, and adds $67 million to the NIH budget and about $10 million for NCI (The Cancer Letter, March 22).

Both institutions have yet to reveal their plans for managing sequestration, and sources say that the details of the NIH budget for the rest of fiscal 2013 will not surface until mid-to-late April.

"Medicare reimbursement for cancer drugs is specifically fixed by law at ASP+6%, as opposed to services or budgets cut by sequestration," said an April 1 joint statement by the American Society of Clinical Oncology, Community Oncology Alliance, ION Solutions and the US Oncology Network.

"The reduction of the 6 percent add-on to effectively 4.3 percent (after sequestration is applied) is a 28 percent cut, not a 2 percent cut."

"According to a recent survey, sequestration will force 72 percent of cancer clinics to not see new Medicare patients or send all Medicare patients to the hospital for treatment," the statement said. "These impacts do not have to occur."

More than 60 percent of cancer patients in the U.S. rely on Medicare.

Work in Progress: 2014 Budget

The financial situation could conceivably change as Congress returns from its two-week spring recess April 8.

Both chambers have formally rejected each other's blueprints before the end of March, setting the stage for months of debate and amendments to the budget.

The House and Senate plans share the same top line budget number for next year—a discretionary spending limit of $966 billion for fiscal 2014.

The House austerity budget, written by Rep. Paul Ryan (R-Wis.), calls for a $5 trillion cut in federal spending—and includes the repeal of the Affordable Care Act and an overhaul of Medicare. The plan supports some funding for basic science research, but removes loan guarantees and other dollars for sectors such as alternative energy.

The Senate's blueprint, spearheaded by budget chair Sen. Patty Murray (D-Wash.), would instead increase spending on infrastructure, transportation and technology, and reverse sequestration for the next nine years. This means funds would be restored for research and the scientific enterprise. Murray also proposed $1.85 trillion in deficit reduction over the next decade through new revenue and cuts to defense and non-discretionary programs.

The Senate's budget was rejected in a 154-261 House vote, with 35 Democrats voting against it.

While specifics on funding for NIH have not been revealed, members of the Senate are advancing a bipartisan amendment to create a deficit-neutral reserve fund which would help grow NIH's budget through 2023.

"As the Senate considers amendments to the FY2014 Budget Resolution, it is our hope that they will continue to make NIH a national priority," said a statement from United for Medical Research. "In the past decade, NIH's budget has already suffered a 20 percent decline in purchasing power, and the devastating impact of the March 1 sequester, which could lead to the loss of more than 20,000 jobs and $3 billion in economic activity, has already begun to be felt.

"Morale among the best and brightest scientific talent is already alarmingly low, even as they stand on the brink of unprecedented scientific opportunity, and we are in real danger of losing an entire generation of medical innovators.

"It is critical that we restore hope to millions of patients and restore our place as the world leader in cutting edge biomedical research by restoring the nearly $1.5 billion cut from NIH's budget."

President Barack Obama will release his budget request April 10, which plans to remove the major cuts to Medicaid, a program that is a key component of his health care overhaul plan.

It will also include a previously promised inflation gauge, chained CPI, that would reduce cost-of-living increases for Social Security beneficiaries—a move that will draw opposition from Democrats, according to recent news reports.

Obama recently asked Congress to spend $100 million next year on a brain-mapping research initiative that he said could create jobs and help find cures for stroke, autism and Parkinson's.

Biomedical research groups are staging a Rally for Medical Research during the American Association for Cancer Research annual meeting, **April 8 at 11 a.m.** in Washington, D.C., across from the Walter E. Washington Convention Center.

Restore NIH Funding, Advocates Say

The loss to NIH's purchasing power may total 23 percent over the past decade, according to a recent fact sheet published by the Federation of American Societies for Experimental Biology.

After a stretch of flat funding and inflation, sequestration would reduce the NIH funding capacity to $20.7 billion—nearly a one-quarter loss.

"FASEB urges Congress to make investment in research a priority and requests that, in fiscal year 2014, NIH receive at least $32 billion," FASEB President Judith Bond said at a Washington press conference April 4. "Terminating ongoing studies and the diminishing availability of grant support will result in the closure of laboratories and the loss of highly skilled scientific and research positions."

Anecdotal evidence suggests that the number of faculty positions and grants to universities is plummeting because of the cuts, and that private funding isn't making up for the gap sequestration has created, Bond told The Cancer Letter.

"At a time when we are trying to encourage more students to pursue science and engineering studies, talented young scientists are being driven away by the disruption of their training and lack of career opportunities," Bond said.

The chances of restoring sequestration cuts to research by 2014 will depend on support from both chambers of Congress, said Jennifer Zeitzer, FASEB's director of legislative relations.

"The Murray budget assumes that sequestration ends—I think Murray will have the support of others behind her," Zeitzer said. "She's obviously sort of the ringleader, so we have stronger support from the Senate to cancel sequestration right now.

"There is a desire from the appropriations committees to get back to what is called the regular order.

"But the problem is, Congress will have to get together and agree on an alternative deficit reduction plan—every time they get to that point, things fall apart."

Negative Publicity from Medicare Cuts

The first round of Medicare cuts has triggered a national wave of coverage that suggests that oncology practices are turning away cancer patients, because treating them has become financially not sustainable.

This phenomenon, which reportedly has affected "thousands" of cancer patients, was first reported by The Washington Post. The story is being replicated nationwide, as news outlets look for the local angle on the story.

Coverage of this sort, if it continues, could well alter the political landscape of sequestration, as voters weigh in on deciding whether it's acceptable to deny care to cancer patients.

Practices will start seeing the reduction in payments in about two weeks. The cut, which will be effective for services rendered April 1 forward, will cause practices to lose 2 percent off the Medicare payment for all services, including drugs. Practices would be precluded from billing for this shortfall.

The joint statement by ASCO, COA, ION Solutions and the US Oncology Network follows:

Today, America's seniors and the physicians who care for them will begin to feel the impact of a federal government policy that was never supposed to happen. Sequestration has been applied to Medicare, reducing payments to physicians and care providers. This is bad news for all seniors, but likely devastating for seniors struggling with cancer. The Administration has decided to apply the sequester cuts not only to services physicians and others provide, but also to the fixed, pass-through costs of chemotherapy and related cancer-fighting drugs used to treat and manage this life-threatening disease.

More than 60 percent of cancer patients in the United States rely on Medicare. A series of misguided Medicare reimbursement cuts has created an unsustainable situation whereby many community cancer care providers operate at a loss when providing treatment to Medicare patients. Medicare reimburses community cancer clinics for chemotherapy based on an average sales price (ASP) and an additional services payment (6%) for administrative costs and financial risks associated with handling, storage, preparation, administration, and disposal of these highly toxic drugs. Unfortunately, Medicare payment falls short, and many cancer clinics are currently paid less than it costs to treat seniors fighting cancer.

Community cancer care providers are struggling to survive in this unsustainable environment. Until recently, more than 80 percent of the nation's cancer patients were treated in physicians' offices in the community setting. Since 2008, more than 1,200 community cancer care centers have closed, consolidated, or reported financial problems. The result has been patient access problems, increased costs to seniors, Medicare, and taxpayers due to the migration of Medicare patients to costlier care settings, and new barriers to care for elderly patients in remote areas.

When community cancer clinics close their doors, access to cancer care is compromised for all cancer patients, but especially vulnerable seniors.

The sequester cut to cancer drugs threatens viability of community cancer care. In effect, the government is forcing clinics to subsidize Medicare—that is, to make up the difference between what Medicare pays and the actual cost of cancer drugs. Health care providers are never comfortable putting their work in purely economic terms, but the fact is community cancer clinics are small businesses held to the economic reality that operating at a loss cannot be sustained. It is hard to imagine any business—small or otherwise—accepting a policy that requires operating at a loss. Oncologists should not be put in the untenable position of continuing to treat patients at a loss, which will result in clinic closings, or being unable to treat Medicare seniors fighting cancer in order to keep the clinic doors open.

It would be one thing for community oncologists to absorb the 2 percent Medicare sequester applied to physician and provider services, but it is entirely another for the sequester cut to apply to the market-priced, underlying drug costs paid by practices. This is unlike any other payment reduction to Medicare and has an inordinate impact beyond 2 percent. Medicare reimbursement for cancer drugs is specifically fixed by law at ASP+6%, as opposed to services or budgets cut by sequestration. The reduction of the 6 percent add-on to effectively 4.3 percent (after sequestration is applied) is a 28 percent cut, not a 2 percent cut. A recent survey indicates the sequester cut will force 72 percent of cancer clinics to not see new Medicare patients or send all Medicare patients to the hospital for treatment. Access problems will multiply and costs will increase for both seniors fighting cancer and Medicare.

These impacts do not have to occur. There are several ways that the Administration and Congress can act to avoid the most devastating of sequestration impacts. CMS has the authority to exempt cancer drugs from the sequester cut or to apply the 2 percent sequester cut only to the 6 percent services payment. Congress can pass H.R. 800 to bring Medicare drug reimbursement closer to costs in order to sustain community cancer care. However addressed, this must be done immediately to preserve patient access to community cancer care.

In the absence of government action to stop the dismantling of community cancer care, practices have signaled they will have no choice but to adopt emergency measures to deal with the sequester cut to cancer drugs. Our organizations will continue to provide support and guidance to cancer clinics and their patients throughout this crisis. It is imperative that the cancer community raises its voice to protect patients and a vital national resource: community cancer care. We will be providing materials to educate physicians, staff, patients, and the public to help in reaching out to the Administration and Congress in a unified, strong voice.

In Brief

AACR to Present Awards At its 104th Annual Meeting

(Continued from page 1)

The award winners are:

Hagop Kantarjian—18th Annual **AACR Joseph H. Burchenal Memorial Award** for outstanding achievements in clinical cancer research. Kantarjian is professor of medicine and chairman of the Department of Leukemia at the MD Anderson Cancer Center. His lecture, "Leukemia Research and Progress – A Look Back at the Future," is at 4 p.m., April 9 in Ballroom A-B.

Alexander Levitzki—Seventh Annual **AACR Award for Outstanding Achievement in Chemistry** in cancer research. Levitzki is Wolfson Family Professor Emeritus of Biochemistry, Unit of Cellular Signaling of the Department of Biological Chemistry at the Hebrew University of Jerusalem. his lecture, "Eradicating Tumors by Targeting Nonviral Vectors Carrying PolyIC," is at 3 p.m., April 9 in Ballroom A-B.

Michael Stratton—53rd Annual AACR G.H.A. **Clowes Memorial Award** for outstanding recent accomplishments in basic cancer research. Stratton is director of the Wellcome Trust Sanger Institute. His lecture, "The Causes of Mutations in Human Cancer" is at 3:30 p.m, April 8 in Ballroom A-B.

James Allison—First **Lloyd J. Old Award in Cancer Immunology** for outstanding and innovative research in cancer immunology. Allison is chairman of the immunology program at the MD Anderson Cancer Center. His lecture, "*Mobilizing the Immune System for Cancer Therapy"* is at 10 a.m., April 10 in Ballroom A-B.

Katie Couric—2013 **AACR Award for Distinguished Public Service**. Couric is a journalist, author and correspondent for ABC News. She will receive the award 8:30 a.m., April 7 in Halls D-E.

Gabriel Hortobagyi—Jane Cooke Wright Lectureship Award for meritorious contributions

to cancer research and the advancement of minority investigators in cancer research. Hortobagyi is professor and chair of the Department of Breast Medical Oncology at the MD Anderson Cancer Center. His lecture, "Dual Targeting for Endocrine Therapy of Breast Cancer," is at 4:15 p.m., April 7 in Ballroom C.

Roger Lo—Outstanding Achievement in Cancer Research Award for meritorious achievement in cancer research before 40 years of age. Lo is assistant professor of the Department of Dermatology at the University of California Los Angeles. His lecture, "How Melanoma Escapes From BRAF Inhibition," is at 4 p.m., April 9 in Ballroom C.

Guillermina Lozano—16th Annual **AACR-Women in Cancer Research Charlotte Friend Memorial Lectureship** for outstanding contributions to the field of cancer and the advancement of women in science. Lozano is professor and chair of the Department of Genetics and the MD Anderson cancer Center. Her lecture, "Activities of Mutant p53 Proteins in Cancer," is at 5:15 p.m., April 6 in Ballroom C.

Robert Young—Margaret Foti Award for leadership and extraordinary achievements in cancer research or in support of cancer research. Young is president of RCY Medicine. He will receive the award 8:30 a.m., April 7 in Halls D-E.

Harold Moses—10th Annual Award for **Lifetime Achievement in Cancer Research** for significant fundamental contributions to cancer research and a lifetime commitment to progress against cancer. Moses is professor and chair of cancer biology, Hortense B. Ingram Professor of Molecular Biology, and director emeritus of the Vanderbilt-Ingram Cancer Center at the Vanderbilt School of Medicine. He will receive the award 8:30 a.m., April 7 in Hall D.

Peter Vogt—Pezcoller Foundation-AACR International Award for Cancer Research for international renown in major scientific discoveries or contributions to cancer research. Vogt is professor of the Department of Molecular and Experimental Medicine at the Scripps Research Institute. His lecture, "PI3K – from simplicity to complexity and back," is at 5:30 p.m., April 8 in Ballroom A-B.

Carlo Croce—2013 **AACR Princess Takamatsu Memorial Lectureship** for far-reaching impact on the detection, diagnosis, treatment, or prevention of cancer, and dedication to multinational collaborations. Croce is director of human cancer genetics at the Ohio State University Comprehensive Cancer Center. His lecture, "Causes and Consequences of microRNA Dysregulation in Cancer," is at 4:30 p.m., April 8 in Ballroom C.

Fadlo Khuri—2013 AACR-**Richard and Hinda Rosenthal Memorial Award** for research that has made or promises to soon make a notable contribution to improved clinical care in the field of cancer. Khuri is professor and chair of hematology and oncology and deputy director of the Winship Cancer Institute at the Emory University School of Medicine. His lecture, "Causes and Consequences of microRNA Dysregulation in Cancer," is at 4:30 p.m., April 8 in Ballroom C.

The Pancreatic Cancer Sequencing Team in the Sol Goldman Pancreatic Cancer Research Center at Johns Hopkins University**,** Seventh Annual AACR Team Science Award for outstanding interdisciplinary research that has advanced or likely will advance our fundamental knowledge of cancer. The team will receive the award 8:30 a.m., April 7 in Hall D. Team members: **David Klimstra, Kenneth Kinzler, Ralph Hruban, Bert Vogelstein, Nicholas Papadopoulos, Michael Choti, Victor Velculescu, Christopher Wolfgang, Joseph Herman, Laura Wood, Scott Kern, N. Volkan Adsay, Alison Klein, Christine Iacobuzio-Donahue, Peter Allen, Luis Diaz, James Eshleman, Michael Goggins, Anirban Maitra** and **Alan Meeker.**

Christiane Nüsslein-Volhard—Ninth Annual **AACR-Irving Weinstein Foundation Distinguished Lectureship** for outstanding innovations in science and leadership potential to inspire creative thinking and new directions in cancer research. Nüsslein-Volhard is director of the Department of Genetics at the Max Planck Institute for Developmental Biology. Her lecture, "The Development of Color Patterns in Zebrafish: Toward an Understanding of the Evolution of Beauty," is at 5:30 p.m., April 6 in Ballroom A-B.

Laurence Kolonel—AACR-ACS Award for Excellence in Cancer Epidemiology and Prevention for outstanding research accomplishments in the fields of cancer epidemiology, biomarkers and prevention. Kolonel is a professor at the University of Hawaii. His lecture, "Advancing Epidemiologic Research: Studies in 'Special' Populations," is at 3 p.m., April 9, in Ballroom A-B.

The following Landon Foundation-AACR Innovator award recipients will be honored 6:30 p.m., April 9 in the Independence Foyer and Independence F-I:

Kenneth Tsai—Sixth Annual **Landon Foundation-AACR Innovator Award for Cancer Prevention Research** for outstanding achievement

of an early-career assistant professor in the field of cancer prevention, and to provide support for cancer prevention research of significant scientific merit in any discipline across the continuum of research. Tsai is assistant professor of the Department of Dermatology, Division of Internal Medicine at the MD Anderson Cancer Center.

David Carbone—Sixth Annual **Landon Foundation-AACR Innovator Award for International Collaboration in Cancer Research** for highly meritorious research that is being conducted collaboratively by investigators in different countries around the world. Carbone is a professor of the College of Medicine at the Ohio State University Comprehensive Cancer Center.

Nikhil Wagle—Fourth Annual **Landon Foundation-AACR Innovator Award for Research in Personalized Cancer Medicine** for meritorious studies that hold promise for near-patient benefit. Wagle is instructor in medicine and associated researcher at the Dana-Farber Cancer Institute.

THE AMERICAN ASSOCIATION FOR CANCER RESEARCH has elected the following scientists to serve on the board of directors for the 2013-2016 term:

Mary Beckerle, chief executive officer and director of the Huntsman Cancer Institute at the University of Utah in Salt Lake City. She is also associate vice president for cancer affairs, distinguished professor of biology and adjunct professor of oncological sciences at the University of Utah.

Beckerle is a member of the AACR Science Policy and Government Affairs Committee and served as a scientific lecturer at the Meet-the-Expert Session, "Genesis and Impact of Cytoskeletal Changes in Transformed Cells," at the AACR Annual Meeting 2011.

Michael Caligiuri, chief executive officer of the James Cancer Hospital and Solove Research Institute at The Ohio State University in Columbus, Ohio. He is also director of The Ohio State University Comprehensive Cancer Center; vice president for health sciences, cancer programs; chair in cancer research at the John L. Marakas Nationwide Insurance Enterprise Foundation; and professor in the departments of molecular virology, immunology, medical genetics and internal medicine at Ohio State University.

Caligiuri is chair of the AACR Publications Committee and a member of the Council of Scientific Advisors, the Science Policy and Government Affairs Committee, the Clinical and Translational Cancer Research Committee and the steering committee for the Cancer Immunology Working Group. He was also chairperson for the Annual Meeting Program Committee in 2009 and a member of the editorial boards of *Molecular Cancer Therapeutics* and *Clinical Cancer Research*.

Hans Clevers, president of The Royal Netherlands Academy of Arts and Sciences in Amsterdam and professor in molecular genetics at the Academic Biomedical Center at the University of Utrecht, in Utrecht, Netherlands.

Clevers has served on several AACR selection committees including the AACR-Princess Takamatsu Memorial Lectureship Selection Committee, the Landon Basic Prize Selection Committee and the Laboratory Research Awards Selection Committee. He was also on the editorial board of *Molecular Cancer Research*.

Elizabeth Jaffee, a professor of oncology and pathology at Johns Hopkins University School of Medicine in Baltimore, Md., active staff in oncology at Johns Hopkins Hospital, associate director for translational research and co-director of the Gastrointestinal Cancers Program at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins. She is also medical director of the Johns Hopkins Oncology Center Cell Processing and Gene Therapy Facility, deputy director of the Institute for Translational and Clinical Research and on the faculty of the graduate programs in immunology, cellular and molecular medicine, and pharmacology at the Johns Hopkins University School of Medicine.

Jaffee is chair of the AACR Cancer Immunology Working Group and a member of the Tumor Microenvironment Working Group and the Science Policy and Government Affairs Committee. She has served as co-chairperson of Mentored Grants and Research Fellowships and of the special conferences, "Tumor Immunology: Multidisciplinary Science Driving Basic and Clinical Advances" and "Tumor Immunology: Basic and Clinical Advances." She was also an associate editor of *Cancer Research* and member of the editorial boards of *Clinical Cancer Research* and *Molecular Cancer Therapeutics*.

Victor Velculescu, professor of oncology at Johns Hopkins University School of Medicine, co-director of the Cancer Biology Program at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins and director of cancer genetics at the Ludwig Center for Cancer Genetics and Therapeutics at the

Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins University.

Velculescu is chair of the AACR Basic Cancer Research Grants Scientific Review Committee and a member of the Education and Training Committee. Additionally, he was a member of the Annual Meeting 2012 Program Committee, the Breast Cancer Research Foundation-AACR Grants for Translational Breast Cancer Scientific Review Committee and was a keynote speaker at the 2007 International Conference on Molecular Diagnostics in Cancer Therapeutic Development.

AACR will induct **Charles Sawyers** as president of the AACR April 9, at 7 a.m. during the AACR Annual Meeting Business Meeting.

Sawyers is chair of the Human Oncology and Pathogenesis Program at Memorial Sloan-Kettering Cancer, and a Howard Hughes Medical Institute investigator. He is also a professor in the Cell and Developmental Biology Program at the Joan and Sanford I. Weill Graduate School of Medical Sciences of Cornell University. He is co-leader of the Stand Up To Cancer-Prostate Cancer Foundation Prostate Cancer Dream Team: Precision Therapy of Advanced Prostate Cancer, and is scientific editor of *Cancer Discovery*.

Sawyers will succeed **Frank McCormick,** director of the University of California, San Francisco Helen Diller Family Comprehensive Cancer Center. McCormick holds the E. Dixon Heise distinguished professorship in oncology and the David A. Wood distinguished professorship of tumor biology and cancer research at UCSF. Additionally, he is the associate dean of the UCSF School of Medicine and a distinguished professor in residence in the department of microbiology and immunology as well as in the department of biochemistry and biophysics.

McCormick served with distinction as AACR president for the 2012-2013 term and will assume the role of past-president for 2013-2014.

The following scientists have been elected to serve as members of the nominating committee for the 2013-2015 term:

Elizabeth Blackburn, the Morris Herzstein Professor of Biology and Physiology in the departments of biochemistry and biophysics, and microbiology and immunology at the University of California, San Francisco.

Blackburn, recipient of the 2009 Nobel Prize in Physiology or Medicine, is scientific editor of *Cancer Discovery*, deputy editor of *Cancer Prevention Research* and a member of the Stand Up To Cancer Scientific Advisory Committee, the AACR Cancer Prevention Committee and the Science Policy and Government Affairs Committee. Blackburn served as AACR president from 2010 to 2011, co-chairperson of the AACR Cancer Progress Report 2011 Writing Committee, and chairperson of the AACR Award for Lifetime Achievement in Cancer Research Committee. She was also on the board of directors (2006-2009) and a senior editor of *Molecular Cancer Research*.

In addition, Blackburn will be inducted to the inaugural class of fellows of the AACR academy.

Kenneth Kinzler, director of the Ludwig Center for Cancer Genetics and Therapeutics at the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins and professor of oncology at Johns Hopkins University School of Medicine.

He is a member of the Fight Colorectal Cancer-AACR Award Selection Committee and the Publications Committee. Kinzler has served as chairperson of the Editor-in-Chief Search Committee for *Molecular Cancer Research* and the AACR Laboratory Research Awards Selection Committee. He was also a member of the board of directors for 2008-2011.

Scott Lowe, an investigator at the Howard Hughes Medical Institute, member of Memorial Sloan-Kettering Cancer Center and chair of the Geoffrey Beene Cancer Research Center at Memorial Sloan-Kettering Cancer Center. He is also adjunct associate professor in the Department of Physiology and Biophysics at Stony Brook University School of Medicine in Stony Brook, N.Y. and an adjunct professor at Cold Spring Harbor Laboratory, in Cold Spring Harbor, N.Y.

Lowe is chair of the AACR International Conference on Frontiers in Basic Cancer Research 2013. He was a co-committee member and keynote speaker at the 2011 AACR-Japanese Cancer Association joint conference, "The Latest Advances in Liver Cancer Research: From Basic Science to Therapeutics," chairperson of AACR Laboratory Research Awards Selection Committee, chairperson of the special conference, "Mouse Models of Cancer" and a member of the board of directors (2005-2008).

Martine Piccart, a professor of oncology at the Université Libre de Bruxelles in Brussels, Belgium, and head of the medicine department at the Institut Jules Bordet in Brussels. She is president-elect and a board member of the European CanCer Organization

and president of the European Society for Medical Oncology.

Piccart is a member of the AACR-Women in Cancer Research Council. She was co-chairperson of the 2010 Annual Meeting Education Committee, the 2010 AACR Dead Sea International Conference on Advances in Cancer Research: From the Laboratory to the Clinic, and the 2004 and 2010 Annual Meeting Program Committees.

Piccart will be inducted to the inaugural class of fellows of the AACR academy.

THE AMERICAN ASSOCIATION FOR CANCER RESEARCH has formed the AACR Academy to recognize scientists who have contributed to innovation and progress against cancer.

The inaugural group of fellows of the academy consists of 106 individuals, symbolizing the age of the organization upon establishment of the Academy.

These fellows have been selected through a peer review process that evaluates individuals on the basis of their stellar scientific achievements in cancer research.

The fellows of the academy is a separate entity within the AACR.

Future classes of fellows shall consist of no more than 11 individuals, in honor of the 11 founding members of the AACR. The fellows will be elected by a vote of all the fellows of the academy.

AACR will induct the fellows on April 5, at the National Museum of Women in the Arts in Washington, at 6:30 p.m.

The induction ceremony will be followed by a meeting of the Academy April 6, and special recognition of the inaugural fellows during the opening plenary session April 7. These events will be annual occurrences at future AACR annual meetings.

The inductees are:

Karen Antman, John Sandson Professor of Health Sciences; dean, Boston University School of Medicine; provost, Boston University Medical Campus.

David Baltimore, Robert Andrews Millikan Professor of Biology, president emeritus, California Institute of Technology.

Françoise Barré-Sinoussi, professor and director, Regulation of Retroviral Infections Unit, Virology Department, Institut Pasteur.

Paul Berg, Cahill Professor of Biochemistry, emeritus, Stanford University School of Medicine.

Joseph Bertino, American Cancer Society Professor; Chief Scientific Officer, The Cancer Institute of New Jersey; University Professor of Medicine & Pharmacology, UMDNJ-RWJMS; interim director, The Stem Cell Institute of N.J.

J. Michael Bishop, professor, Department of Microbiology and Immunology; director, G. W. Hooper Research Foundation; chancellor emeritus, University of California, San Francisco.

Mina Bissell, Distinguished Scientist, Life Sciences Division, Lawrence Berkeley National Laboratory.

Elizabeth Blackburn, Morris Herzstein Endowed Chair in Biology and Physiology and professor, Departments of Biochemistry/Biophysics and Microbiology/Immunology, University of California, San Francisco.

Sydney Brenner, founder, Acidophil, LLC; Senior Distinguished Fellow of the Crick-Jacobs Center, Salk Institute for Biological Studies.

Angela Brodie, professor of Pharmacology and Experimental Therapeutics, University of Maryland School of Medicine.

Mario Capecchi, Distinguished Professor, Human Genetics and Biology, University of Utah School of Medicine; investigator, Howard Hughes Medical Institute.

Webster Cavenee, director, Ludwig Institute for Cancer Research; Distinguished Professor, University of California, San Diego.

Martin Chalfie, William R. Kenan, Jr. Professor of Biological Sciences, Department of Biological Sciences, Columbia University.

Zhu Chen, vice-chairman, 12th Standing Committee of the National People's Congress; chairman, 15th Chinese Peasants and Workers Democratic Party, Central Committee.

Aaron Ciechanover, Distinguished Research Professor, Technion-Israel Institute of Technology.

Bayard Clarkson, member and head, Laboratory of Hematopoietic Cell Kinetics, Memorial Sloan-Kettering Cancer Center.

Donald Coffey, Catherine Iola and J. Smith Michael Distinguished Professor of Urology, Johns Hopkins University School of Medicine.

Stanley Cohen, Kwoh-Ting Li Professor in the School of Medicine, Professor of Genetics, and Professor of Medicine, Stanford University.

Suzanne Cory, Honorary Distinguished Professorial Fellow, Molecular Genetics of Cancer Division, Walter and Eliza Hall Institute of Medical Research and Vice-Chancellor's Fellow, University of Melbourne.

Carlo Croce, professor and chair, Department of Molecular Virology, Immunology and Medical Genetics; director, Institute of Genetics, The Ohio State University School of Medicine.

Tom Curran, deputy scientific director, Division of Cancer Pathobiology; Mai and Harry F. West Chair in Pediatric Research, The Children's Hospital of Philadelphia Research Institute; Professor of Pathology and Laboratory Medicine, Cell and Developmental Biology, Perelman School of Medicine; associate director, Translational Genomics, University of Pennsylvania.

Brian Druker, director, Knight Cancer Institute, Oregon Health and Science University; JELD-WEN Chair of Leukemia Research; investigator, Howard Hughes Medical Institute.

Raymond DuBois, executive director, The Biodesign Institute; Dalton Chair, School of Health Solutions, Arizona State University.

Sir Martin Evans, chancellor, Cardiff University.

Emmanuel Farber, chairman emeritus and professor, Department of Pathology, University of Toronto.

Napoleone Ferrara, Distinguished Professor of Pathology, senior deputy director for Basic Sciences, Moores Cancer Center, University of California, San Diego.

Isaiah Fidler, professor, Department of Cancer Biology, R.E. "Bob" Smith Distinguished Chair in Cell Biology, Head, Cancer Metastasis Laboratory, The University of Texas MD Anderson Cancer Center.

Bernard Fisher, Distinguished Service Professor, Department of Surgery, University of Pittsburgh.

Joseph Fraumeni Jr., senior investigator and advisor, NCI Division of Cancer Epidemiology and Genetics.

Emil Frei III, physician-in-chief emeritus, Richard and Susan Smith Distinguished Professor of Medicine Emeritus, Dana-Farber Cancer Institute, Harvard Medical School.

Elaine Fuchs, Rebecca C. Lancefield Professor, Laboratory of Mammalian Cell Biology and Development, Rockefeller University; investigator, Howard Hughes Medical Institute.

Judy Garber, director, Center for Cancer Genetics and Prevention, Dana-Farber Cancer Institute; Professor of Medicine, Harvard Medical School.

Walter Gilbert, Carl M. Loeb University Professor Emeritus, Department of Molecular and Cellular Biology, Harvard University.

Alfred Gilman, Regental Professor of Pharmacology Emeritus, University of Texas Southwestern Medical Center.

Carol Greider, Daniel Nathans Professor and Director, Department of Molecular Biology and Genetics; professor of oncology, Johns Hopkins University School of Medicine.

Roger Guillemin, Distinguished Professor, Salk Institute for Biological Studies

Sir John Gurdon, Distinguished Group Leader, Wellcome Trust/Cancer Research U.K. Gurdon Institute.

William Hait, global head at Janssen Research and Development, LLC.

Leland Hartwell, Virginia G. Piper Chair of Personalized Medicine, chief scientist, Center for Sustainable Health, Biodesign Institute, Arizona State University; president emeritus, Fred Hutchinson Cancer Research Center.

Avram Hershko, Distinguished Professor at the Rappaport Faculty of Medicine, Technion-Israel Institute of Technology; adjunct professor of pathology, New York University School of Medicine.

James Holland, Distinguished Professor of Neoplastic Diseases, Mount Sinai Medical Center.

Jimmie Holland, Wayne E. Chapman Chair in Psychiatric Oncology; attending psychiatrist, Department of Psychiatry and Behavioral Sciences, Memorial Sloan-Kettering Cancer Center.

Waun Ki Hong, vice provost, Clinical Research; head, Division of Cancer Medicine; Samsung Distinguished University Chair in Cancer Medicine, The University of Texas MD Anderson Cancer Center.

Leroy Hood, president and co-founder, Institute for Systems Biology; full member, University of Washington Molecular and Cellular Biology Program; Professor at Large, Keck Graduate Institute of Applied Life Sciences.

H. Robert Horvitz, David H. Koch Professor of Biology, Massachusetts Institute of Technology; member, MIT Koch Institute for Integrative Cancer Research; member, MIT McGovern Institute for Brain Research; investigator, Howard Hughes Medical Institute.

Susan Band Horwitz, Distinguished Professor, Rose C. Falkenstein Chair in Cancer Research, associate director for therapeutics, Albert Einstein Cancer Center; co-chair, Department of Molecular Pharmacology, Albert Einstein College of Medicine.

Sir R. Timothy Hunt, emeritus group leader, Clare Hall Laboratories, Cancer Research U.K.

Tony Hunter, director, Salk Institute Cancer Center; American Cancer Society Professor of Molecular and Cell Biology, Renato Dulbecco Chair,

The Salk Institute for Biological Studies.

Tyler Jacks, director, David H. Koch Institute for Integrative Cancer Research; professor of biology, Massachusetts Institute of Technology; investigator, Howard Hughes Medical Institute.

Peter Jones, Distinguished Professor of Urology and Biochemistry & Molecular Biology; Mark A, J. Ruth, and Stillman F. Sawyer Chair in Cancer Research, University of Southern California (USC) Norris Comprehensive Cancer Center.

V. Craig Jordan, professor of oncology and pharmacology, Vincent T. Lombardi Chair of Translational Cancer Research, vice chair, Department of Oncology; Scientific Director, Lombardi Comprehensive Cancer Center, Georgetown University.

Yuet Wai Kan, Louis K. Diamond Professor of Hematology, Departments of Laboratory Medicine and Medicine, University of California, San Francisco.

Mary-Claire King, American Cancer Society Professor, Departments of Medicine and Genome Sciences, University of Washington.

Eva Klein, professor emeritus, Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet.

George Klein, professor emeritus, Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet.

Alfred Knudson Jr., Distinguished Scientist and Senior Advisor to the President, Fox Chase Cancer Center.

Brian Kobilka, professor, Molecular and Cellular Physiology and Medicine, Stanford University School of Medicine.

Margaret Kripke, chief scientific officer of the Cancer Prevention and Research Institute of Texas; Vivian L. Smith Distinguished Chair in Immunology Emerita and professor emerita, Department of Immunology, and professor emerita, Graduate School of Biomedical Sciences, MD Anderson Cancer Center.

Philip Leder, professor emeritus, Department of Genetics, Harvard Medical School

Robert Lefkowitz, investigator, Howard Hughes Medical Institute; James B. Duke Professor of Medicine; professor of biochemistry and chemistry, Duke University Medical Center.

Arnold Levine, professor, Simons Center for Systems Biology, Institute for Advanced Study; professor, Cancer Institute of New Jersey.

Lawrence Loeb, professor of pathology, Biochemistry and Director, Joseph Goldstein Memorial Cancer Research Laboratory, University of Washington School of Medicine.

Tak Mak, director, Advanced Medical Discovery Institute and director, The Campbell Family Institute for Breast Cancer Research, Ontario Cancer Institute, Princess Margaret Cancer Centre; professor, Departments of Medical Biophysics and Immunology, University of Toronto.

Lynn Matrisian, vice president for scientific and medical affairs, Pancreatic Cancer Action Network.

Frank McCormick, director, Helen Diller Family Comprehensive Cancer Center; associate dean, School of Medicine, University of California, San Francisco.

John Mendelsohn, director, Sheik Kalifa Bin Zayed Al Nahyan Institute for Personalized Cancer Therapy and past president, MD Anderson Cancer Center.

Donald Metcalf, professor emeritus, University of Melbourne; Carden Fellow in Cancer Research, Division of Cancer and Hematology, the Walter and Eliza Hall Institute of Medical Research.

Enrico Mihich, presidential scholar and special assistant to the President for Sponsored Research, Dana-Farber Cancer Institute.

Beatrice Mintz, professor and Jack Schultz Chair in Basic Research, Fox Chase Cancer Center.

Luc Montagnier, co-founder and president, World Foundation for AIDS Research and Prevention; director of research emeritus, Centre National de la Recherché Scientifique; professor emeritus, Pasteur Institute.

Harold Moses, Hortense B. Ingram Professor of Molecular Oncology; professor of cancer biology, medicine and pathology; director emeritus, Vanderbilt-Ingram Comprehensive Cancer Center.

Sir Paul Nurse, director, Francis Crick Institute, London; president, The Royal Society.

Olufunmilayo Olopade, Walter L. Palmer Distinguished Service Professor of Medicine & Human Genetics; associate dean for global health; director, Center for Clinical Cancer Genetics, University of Chicago Pritzker School of Medicine.

Arthur Pardee, professor of biological chemistry and molecular pharmacology emeritus, Harvard Medical School.

Martine Piccart, professor of oncology, Université Libre de Bruxelles; director of medicine, Jules Bordet Institute.

Sir Bruce Ponder, founding director, Cancer Research U.K. Cambridge Research Institute; professor and head of oncology, University of Cambridge; honorary consultant physician, Cambridge University Hospitals.

Sir Richard Roberts, chief scientific officer, New England Biolabs, Inc.

Irwin Rose, distinguished professor emeritus, Department of Physiology and Biophysics, University of California, Irvine.

Janet Rowley, Blum-Riese Distinguished Professor of Medicine, Molecular Genetics and Cell Biology, and Human Genetics, University of Chicago.

Frederick Sanger, emeritus professor, Laboratory for Molecular Biology, University of Cambridge.

Alan Sartorelli, Alfred Gilman Professor of Pharmacology, Yale University School of Medicine.

Andrew Schally, distinguished medical research scientist; head, Endocrine, Polypeptide and Cancer Institute, Veterans Affairs Medical Center, Department of Veterans Affairs; Distinguished Leonard M. Miller Professor of Pathology, Miller School of Medicine, University of Miami.

Phillip Sharp, institute professor and faculty member, David H. Koch Institute for Integrative Cancer Research and Department of Biology, Massachusetts Institute of Technology.

Charles Sherr, Herrick Foundation Chair, Department of Tumor Cell Biology, St. Jude Children's Research Hospital; investigator, Howard Hughes Medical Institute.

Osamu Shimomura, distinguished scientist, Marine Biological Laboratory; professor of physiology emeritus, Boston University School of Medicine.

Dennis Slamon, director, Clinical/Translational Research; director, Revlon/UCLA Women's Cancer Research Program, Jonsson Comprehensive Cancer Center; professor of medicine; Chief of the Division of Hematology/Oncology; executive vice chair for research, David Geffen School of Medicine, University of California, Los Angeles.

Oliver Smithies, Weatherspoon Eminent Distinguished Professor, University of North Carolina School of Medicine at Chapel Hill.

Michael Sporn, professor of pharmacology and medicine, Geisel School of Medicine at Dartmouth.

Louise Strong, Sue and Radcliffe Killam Chair, Department of Genetics, and professor, Department of Genetics, The University of Texas MD Anderson Cancer Center.

Takashi Sugimura, president, Toho University; president emeritus, National Cancer Center.

Sir John Sulston, professor and chair of the Institute for Science, Ethics and Innovation, University of Manchester.

Jack Szostak, investigator, Howard Hughes Medical Institute; professor of genetics, Harvard Medical School; professor of chemistry and chemical biology, Harvard University; Alexander Rick Distinguished Investigator, Department of Molecular Biology, Massachusetts General Hospital.

Roger Tsien, professor of pharmacology, chemistry and biochemistry, University of California, San Diego; investigator, Howard Hughes Medical Institute.

Arthur Upton, emeritus professor of environmental medicine and clinical professor of environmental and community medicine, University of Medicine and Dentistry, Robert Wood Johnson Medical School.

George Vande Woude, distinguished scientific fellow, Van Andel Research Institute.

Bert Vogelstein, director, Ludwig Center for Cancer Genetics and Therapeutics, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine; investigator, Howard Hughes Medical Institute.

Peter Vogt, executive vice president for scientific affairs; professor, Department of Molecular and Experimental Medicine; The Scripps Research Institute.

Daniel Von Hoff, physician in chief, distinguished professor, Translational Genomics Research Institute; professor of medicine, Mayo Clinic; chief scientific officer, Scottsdale Health Care; professor, University of Arizona College of Pharmacy.

Geoffrey Wahl, professor, Gene Expression Laboratory; Daniel and Martina Lewis Chair, Salk Institute for Biological Studies.

James Watson, chancellor emeritus, Cold Spring Harbor Laboratory.

Lee Wattenberg, professor of laboratory medicine and pathology emeritus, Masonic Cancer Center, University of Minnesota.

Robert Weinberg, member, Whitehead Institute for Biomedical Research; professor, Department of Biology, Massachusetts Institute of Technology; director, Ludwig/MIT Center for Molecular Oncology.

John Weisburger, research professor of pathology, Graduate School of Basic Medical Sciences, New York Medical College.

Jane Cooke Wright, Deceased (1919 – 2013).

Shinya Yamanaka, director and professor, Center for iPS Cell Research and Application, Kyoto University; senior investigator, Gladstone Institute of Cardiovascular Disease; and professor of anatomy, University of California, San Francisco.

Harald zur Hausen, professor emeritus, German Cancer Research Center.