

University of Chicago Cancer Research Center

In the News: Our Members in the Media

The University of Chicago Cancer Research Center (UCCRC) publishes this newsletter periodically to provide its members, University of Chicago Cancer Research Foundation members, and other associates with informative articles or press releases regarding cancer and research by our members. If you wish to include a media story in the next issue, please e-mail us at pbutera@medicine.bsd.uchicago.edu.

MARCH 20, 2009

Obama's Hope for Cancer Cure Draws Applause

CBS 2
February 25, 2009

President Barack Obama's recent speech before a joint session of Congress is resonating in the medical world, where his call for a cure for cancer in our time is drawing applause.

"It will launch a new effort to conquer a disease that has touched the life of nearly every American, including me, by seeking a cure for cancer in our time," Obama said.

That one line in president Obama's speech struck a chord of hope not only with those present in the room, but countless others watching at home, including Michelle Le Beau, PhD, the Director of the University of Chicago Cancer Research Center.

"He has revitalized hope in our ability to perform the most leading edge, exciting research, and to bring that to the benefit of patients," Le Beau said.

President Obama is not the first U.S. president to take a stand against cancer. Back in 1971, President Richard Nixon did the same.

The National Cancer Act

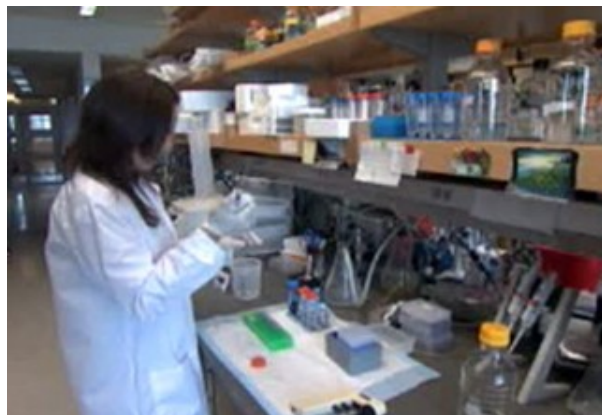
helped establish funding for cancer centers across the country which are credited with making great strides in cancer treatment and prevention. The University of Chicago Cancer Research Center was one of the first cancer centers funded by the National Cancer Act of 1971.

Researchers believe with President Obama's renewed call to action, even greater strides can be made. Cancer patients and their families hope that's true, but they also hope it won't be decades before they see the results.

"Get that research done before it's too late for all of us," cancer patient Marlene Luhrsen said.

"She's got it now, and we've got to stop it," said her husband, Paul Luhrsen. "This is a deadly cancer, and they haven't had much success in treating it."


Some critics of President Obama's plan say his call for a cure for



A researcher at the Ben May Department for Cancer Research

cancer is unrealistic, but researchers at the University of Chicago Cancer Research Center strongly disagree. They say it's not only realistic, it's possible.

"Given the pace of discovery, and the technologies that we have available today, I think that it is realistic to expect that we will find many cures for cancers in our lifetime," Le Beau said.

Luhrsen and her husband of 55 years say they hope that's true. 

Prostate Cancer Anxiety Tied to Early Use of Androgen Deprivation Therapy

Reuters Health
March 3, 2009

In older prostate cancer patients with a biochemical recurrence, cancer anxiety predicts earlier use of androgen deprivation therapy (ADT), new research shows.

This finding is important since early ADT may not improve survival but could impinge on quality of life, William Dale, MD, PhD, from the University of Chicago, and colleagues point out.

As reported in the Journal of Clinical Oncology, the researchers used the Memorial Anxiety Scale for Prostate Cancer (MAX-PC) to assess the emotional status of 67 older men (average age of 68 years) with a biochemical recurrence of prostate cancer.

Questionnaires were given to the subjects at presentation, and at each follow-up visit prior to initiation of ADT. Treating oncologists were also surveyed to record their recommenda-

tions for ADT initiation.

A subject was considered to be an early ADT initiator if he decided to begin treatment at either the first or second clinic visit. On that basis, 33 percent of patients were early ADT initiators, the report shows. Increased

Continued on page 2

Prostate Cancer Anxiety Tied to Early Use of Androgen Deprivation Therapy (Continued)

Continued from page 1

prostate cancer-specific anxiety (a MAX-PC score >16) was the strongest predictor of early treatment, with an odds ratio of 9.19.

The prostate specific antigen level, which did not correlate with the MAX-PC score, was also an independ-

ent predictor of early ADT initiation.

The findings "suggest that the nonclinical factor of patient anxiety about cancer may be both important and overlooked in choosing when to initiate ADT," Dr. Dale and colleagues conclude.

"It is important for physicians to discuss with patients the worries

and anxieties associated with cancer," they add. "Doing so may help prevent unnecessary early initiation of a therapy with significant toxicities and questionable impact on life expectancy in otherwise asymptomatic older men."



Kitchen Pest Is A Hero To Scientists Meeting In Chicago

Chicago Tribune
March 6, 2009

At least a dozen fruit-fly laboratories operate on university campuses in the Chicago area, using the tiny insects to study such issues as sleep disorders, sexual orientation, evolution and gene therapy.

Buzzing with excitement, the "fly people" swarmed into Chicago this week to hear the latest news about an unsung hero of science: the humble fruit fly.

The public may see the insect mainly as a kitchen pest, but to the 1,500 scientists attending the 50th annual *Drosophila* Research Conference, *Drosophila melanogaster* is one of the most important research animals in genetics, an encyclopedia of knowledge packed into a critter a tenth of an inch long.

By breeding fruit flies, early 20th Century scientists figured out the location of genes controlling certain traits, creating the first crude genetic map. In 2000, *Drosophila* was one of the first multicellular organisms to have its genome fully sequenced, providing a full blueprint of the organism.

With almost a century of fruit-fly research merging with new genetic technologies, the insect is poised to broaden human knowledge of diseases, including cancer and depression, and provide a cost-effective and efficient system for testing promising therapies.

Flies and humans share many genes and proteins, making the fruit fly ideal for unraveling biological mysteries.

"It's very, very hard for the average person or congressman to really

believe that when we look at an insect it has anything to do with them," said Allan Spradling, an embryologist and *Drosophila* researcher at the Carnegie Institution of Washington. "But, an organism that seems so foreign and different from us really taught us a lot about ourselves and our genome."

Politicians have been known to look down on fruit-fly research. A recent example was when Republican Vice Presidential candidate Sarah Palin cited it as an example of unnecessary earmarks at an October appearance. Though she was referring to a specific agricultural study taking place in Paris, *Drosophila* researchers were quick to defend their field, saying many fly projects were aimed at one of Palin's favorite concerns—autism.

In truth, similar arguments on behalf of *Drosophila* could be made for virtually any human disease or behavior. Since 1910, when T.H. Morgan discovered a white-eyed mutant fly among his stock of wild-type red-eyed flies, scientists have been manipulating the flies' genes to learn how they work.

Drosophila is so popular in part because researchers can breed and raise thousands of them very quickly and at a fraction of the cost of using rats or mice. A new generation of fruit flies can be created every 10 days, and females lay as many as 400 eggs during their lifetime.

In addition, exposing flies to radiation quickly creates random genetic mutations to study, and genetic tools can be used to flick genes on and off in fruit flies much more easily than in larger organisms.

"In spite of the hundreds of millions of years of evolution that have



occurred between humans and *Drosophila* lineages, still 70 percent of the genes encoded in their genomes are similar," said University of Chicago geneticist Kevin White, PhD. "So we're able to use *Drosophila* ... to very rapidly do experiments and genetic manipulations that you just can't do in humans."

Last week, White and other researchers from the University of Chicago and Argonne National Laboratory, near Lemont, published a paper in the journal *Nature* on a project that combined fruit-fly genetics with the latest in data-mining systems to find a new genetic marker of kidney cancer in humans.

Continued on Next Page

Kitchen Pest Is A Hero To Scientists Meeting In Chicago Continued

Continued from page 2

Drawing upon nearly a century of work mapping *Drosophila* genes and the way their proteins interact, the team narrowed thousands of candidate genes down to a single protein, called SPOP, that is associated with faulty development of fly embryos. When the researchers tested human cancer cells for SPOP, they found it in 85 percent of renal cell carcinomas, a common form of kidney cancer.

The discovery could lead to tests that would identify kidney cancer at an early stage, improving treatment outcomes for patients, White said.

The lives of fruit flies may also hold insight into human behavior. Ravi Allada, a neurobiologist at Northwestern University, uses the insects to study circadian rhythms, the mechanisms that control sleep cycles in flies and humans.

"The big picture is that if we understand more about which genes are important for our circadian rhythms or our sleep and understand how those genes work, it will give us a better understanding of diseases that may be the consequence of such systems going awry," Allada said.

David Featherstone, a biologist at the University of Illinois at Chicago, stumbled on a peculiar fly model of human behavior when studying glutamate, an excitatory neurotransmitter in fly and human brains. Disrupting a gene in one part of the brain created male flies, nicknamed *genderblind*, that attempted to mate with both females and other males.

The finding may be relevant not only to research on sexual orientation, but also to studies of muscle diseases and mental illnesses such as schizophrenia and depression where signals among nerve cells are disrupted, Featherstone said.

"We're not just trying to figure out stuff to entertain people or fill textbooks with irrelevant minutia about how the brain works," he said.

"Ultimately we hope to understand the brain and gain the ability to engineer it."

Richard Carthew, a developmental biologist at Northwestern, is using *Drosophila* to study how RNA interference might be used to silence genes and nullify infectious viruses.



Kevin White, PhD

Even after a century, the potential for fruit fly research to benefit human health is still growing, he said.

"It's a very traditional, long-standing lab animal, but it shows no signs of tiring. It has good legs," Carthew said. "There's really nothing comparable to it."



A New Pledge In Cancer War

**Chicago Tribune
March 2, 2009**

Echoing the words of former President Richard Nixon almost 40 years earlier, President Barack Obama expressed his commitment to launching a new effort to find "a cure for cancer in our time."

Cancer was mentioned only briefly in Obama's first speech to Congress, but it was a hopeful sign to many in the worlds of science and medicine who hope renewed attention will lead to a better-funded national effort to fight a scourge expected to kill 560,000 Americans this year.

"The president has challenged the cancer community to find a cure," said Richard Schilsky, MD, an oncologist at the University of Chicago Medical Center. "Hopefully, it comes with

sufficient support for expanded research so we have the resources we need to step up to that challenge."

When Nixon asked Congress for funds to fight cancer in 1971, scientists did not fully understand the complexities of the disease. Recent advances in genetics and genomics have helped uncover some of cancer's secrets, leading to new potential tools for treatment and early detection.

Research has revealed a complex disease of which there are at least 100 types, all caused by malfunctions of genes that control cell growth and division. Mutations can be triggered by sources as varied as viruses, inherited defects and cigarette smoke. Survival rates vary greatly by cancer type and stage at diagnosis, and cancer acts differently in different people.

EDITOR'S NOTES:

This issue of "In the News" highlights the important contributions our members are making in all phases of cancer research and outreach.

In the article on pages 1, Michelle Le Beau, PhD, is quoted in a story on President Obama's recent speech before a joint session of congress, and his mention of the need for cancer research.

On pages 1-2, research from William Dale, MD, PhD, is featured in a story about how anxiety affects prostate cancer patients.

On pages 2-3, Kevin White, PhD, is quoted in a news story about a recent meeting of fruit fly researchers in Chicago, and the important role the insects play in genetic research.

On pages 3-4, Richard Schilsky, MD, is quoted in a story on President Obama's recent speech.

A New Pledge In Cancer War (Continued)

Continued from page 3

"Increasingly, we're learning that whether it is based on race or ethnicity or some other genetic characteristic, not everybody responds the same way to a standard course of treatment," Schilsky said.

Some statistics suggest the war on cancer has been a losing battle. The grim tally: One in two men and one in three women in the United States are expected to develop cancer during their lifetimes. Death rates increased in 2006 for esophageal and bladder cancers among men, pancreatic cancer among women and liver cancer among men and women.

But other statistics tell of victories. Cancer incidence has been falling since 1999, largely because of declines in the most common cancers: lung, colorectal and prostate for men and breast and colorectal for women. The death rate from all cancers combined has been decreasing since 1991. In 2006, for the first time in U.S. history, fewer people died of cancer than the year before, according to the American Cancer Society.

Scientists say improvements in survival reflect progress in diagnosing certain cancers earlier and at more treatable stages and new and improved treatments. A record 750 drugs are moving through the research and development pipeline, according to the Pharmaceutical Research and Manufacturers of America.

The National Cancer Institute's budget was about \$5 billion in 2007.

"There are many promising treatments like proton therapy and chemotherapies that are more targeted that can treat the tumors and avoid [damaging] healthy tissues," said Dr. James L. Mulshine, Associate Provost for research at Rush University Medical Center.

Schilsky said more diagnostic tests will be available to help determine which treatments are likely to work in which patient. "We have a few

of those now," he said.

Not all Americans have benefited equally from successes in prevention, detection and treatment. Death rates from cancer among African-Americans have declined, but blacks continue to be diagnosed at more advanced stages and their survival rates are lower.

Dr. Tanyanika Phillips, an Oncologist at University Hospitals Case Medical Center in Cleveland who studies disparities in cancer care, said African-Americans "don't get results right away, don't get surgery on time and don't get good follow-up."

Patients can face severe challenges in paying for care—running up large debts, filing for personal bankruptcy and even delaying or forgoing potentially lifesaving treatment—even when they have private health insurance, according to a new report by the Kaiser Family Foundation and the American Cancer Society.

"What we need to do is first be sure that every American has access to all of the contemporary cancer therapies that we know to be effective," said Schilsky, Chairman of one of the largest and oldest cancer clinical trial groups in the country, which is based at the University of Chicago.

Dr. Otis Brawley, Oncologist and Chief Medical Officer for the American Cancer Society, [and an alumnus of the Pritzker School of Medicine] was thrilled when Obama mentioned cancer in his speech but winced at the notion of a cure.

"More realistic is to aim toward making cancer a chronic disease that



Richard Schilsky, MD, (Left) collaborates with UCCRC researchers Ezra Cohen, MD, (Right, Top), Mark Ratain, MD, (Right, Center) and Apurva Desai, MD (Right).

people live in peaceful co-existence with, like diabetes—where people live a long time and can have a good quality of life," he said.

Jennifer Becknell, 39, a breast cancer survivor from Bolingbrook, IL would like to see more research into prevention. "Care is good, but prevention is better," she said. "[Cancer] is not a legacy I want to pass down to my daughters."

g

On March 9, 2009, President Barack Obama signed a stem cell executive order, which lifted the ban on federal funding for promising embryonic stem cell research. In his speech, President Obama honored the University of Chicago's Janet Rowley, MD, as one of six researchers who "are an example of the outstanding scientists who we hope will guide us through the process of leading the world in the discoveries of this new century."

To view the signing of this bill, and listen to President Obama's speech, go to:

<http://www.msnbc.msn.com/id/21134540/vp/29598211#29598211>