

Pathways to Discovery

At the Forefront of Discovery

THE UNIVERSITY OF
 CHICAGO
CANCER RESEARCH CENTER

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Innovative Treatment Blessing for World-Class Chef

Although only in his early thirties, Grant Achatz was at the top of his profession when he learned he had oral cancer and faced the possibility of losing his ability to speak clearly, his sense of taste, and some of his capacity to swallow. He consulted with top specialists across the nation, each of whom recommended the surgical removal of almost 75 percent of his tongue to save Achatz's life.

This prognosis was especially alarming for Achatz, because he is one of the world's best and most innovative chefs. The James Beard Foundation, for example, named him the Rising Star Chef in America in 2002 and his restaurant the Best New Restaurant in America in 2005. *Gourmet* magazine declared his restaurant Alinea the "Best Restaurant in America" in 2006.



Everett Vokes, MD

Consequently, Achatz did not hesitate to seek a fourth opinion from Everett Vokes, MD, at the University of Chicago. Dr. Vokes and his team prescribed a new, innovative treatment that combined chemotherapy and radiation to attack the tumor. The team—which also included Elizabeth Blair, MD, Ezra Cohen, MD, Daniel Haraf, MD, and others—hoped that this first-line

treatment would be successful, eliminating the need for surgery and saving Chef Achatz's taste buds. After several months of treatment, Dr. Vokes had the privilege of telling Achatz that his cancer was in full remission.

After receiving the good news, Achatz released a statement that included the following: "Most of all, I must make special mention of Drs. Vokes, Blair, and Haraf at the University of Chicago Medical Center, as well as the countless number of medical professionals and support staff there who cared for me. Where other doctors at prominent institutions saw little hope of a normal life, let alone a cure, these doctors saw an opportunity to think differently, preserve my tongue and taste, and maintain a long-term high quality of life. Through the use of a new and rigorous chemotherapy and radiation protocol, they were able to achieve a full remission while ensuring that the use of invasive surgery on my tongue was not needed."

Achatz would have received the same treatment even if he were not a world-class chef. Dr. Vokes and his colleagues begin with combined therapy for advanced, non-metastatic tongue cancer whenever possible. However, this is not the appropriate treatment for every patient with tongue cancer. He cautions that surgery is sometimes the only answer.

Dr. Vokes and his colleagues will continue to keep careful watch on their patient to make an early diagnosis if the cancer returns. Meanwhile, Achatz has returned to 90-hour work weeks at Alinea, pushing the envelope of great cooking.



As the crowd at the noon Shubitz lecture on April 7 settled in, three friends and leukemia specialists discussed old times. From left to right are Harvey Golomb, MD, U of C Dean of Clinical Affairs, Janet Rowley, MD, U of C Blum-Riese Distinguished Service Professor of Medicine, and Brian Druker, MD, JELD-WEN Chair of Leukemia Research and Director of the Oregon Health and Science University Cancer Institute. Dr. Druker is this year's recipient of the Simon M. Shubitz Cancer Award and Lectureship. Please turn to page 10 to learn more about Dr. Druker and the Shubitz award.

A Message from The Director



We have reached a key step in the evolution of the University of Chicago Cancer Research Center. The five-year competing application for our Cancer Center Support Grant to the National Cancer Institute (NCI) has been approved. Completing this submission was an enormous task, but we have learned that we did very well in the review process. Not only did we successfully meet every measure, but we earned our highest score in our 35-year history. We are planning a special issue of *Pathways* to report on the review.

This is very exciting, because it is an independent evaluation of our activities, including our efforts in cancer prevention, population research, and community outreach, and our success in implementing our strategic plan. We look forward to sharing the results of this assessment when we can in the near future, but in this issue we provide insights into how well we are continually enhancing our programs and expanding our mission.

The story on Program 4: Clinical and Experimental Therapeutics, for example, focuses on one of our greatest strengths: developing innovative cancer therapies. Everett Vokes, MD, and M. Eileen Dolan, PhD, lead a team of researchers that are helping transform cancer care through the development of new drugs and other treatments. The exciting benefits of this work are apparent in the story on this page that focuses on one of Dr. Vokes' patients, Grant Achatz.

Thanks to innovative approaches to chemotherapy and radiation treatments, Dr. Vokes and his team were able to control Achatz's tongue cancer without resorting to surgery. Achatz is one of the world's most famous chefs, and surgery could have had a terrible impact on his career and denied the fruits of his expertise to the public. Dr. Vokes is one of 19 of our members included in *Chicago Magazine's* selection of the region's "best doctors." This story goes to the heart of our mission of providing quality treatment and our capacity to bring the latest and best therapies to patients who need complex cancer care.

The success of our Community Engagement Centering on Solutions (CECOS) program is another source of pride. This community outreach effort is hosting a series of public forums, which have advanced our efforts to promote cancer prevention and control. As you can see by the photographs on pages six and seven, the community and our neighbors have embraced these forums.

When you look at this issue as a whole, it is apparent that its overriding message is the high level of performance maintained by our members both in the laboratory and the clinic. We have a remarkable team of scientists and supporters. Helping them achieve their aspirations is the most rewarding task imaginable.

With thanks and warm regards,

Michelle M. Le Beau, PhD

Director, University of Chicago Cancer Research Center / Professor of Medicine

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Developing Innovative Cancer Therapies: Focus on UCCRC Scientific Program Four

Statistics from the National Cancer Institute¹ point out that in recent years, cancer-related deaths have been on the decline. This is very good news. Unfortunately, this same report estimates that 1.4 million men and women were diagnosed with cancer in 2007 and over 500,000 cancer-related deaths occurred. For this reason, it is imperative that new, innovative cancer therapies be developed and tested. This is the primary task of the Clinical and Experimental Therapeutics Program.

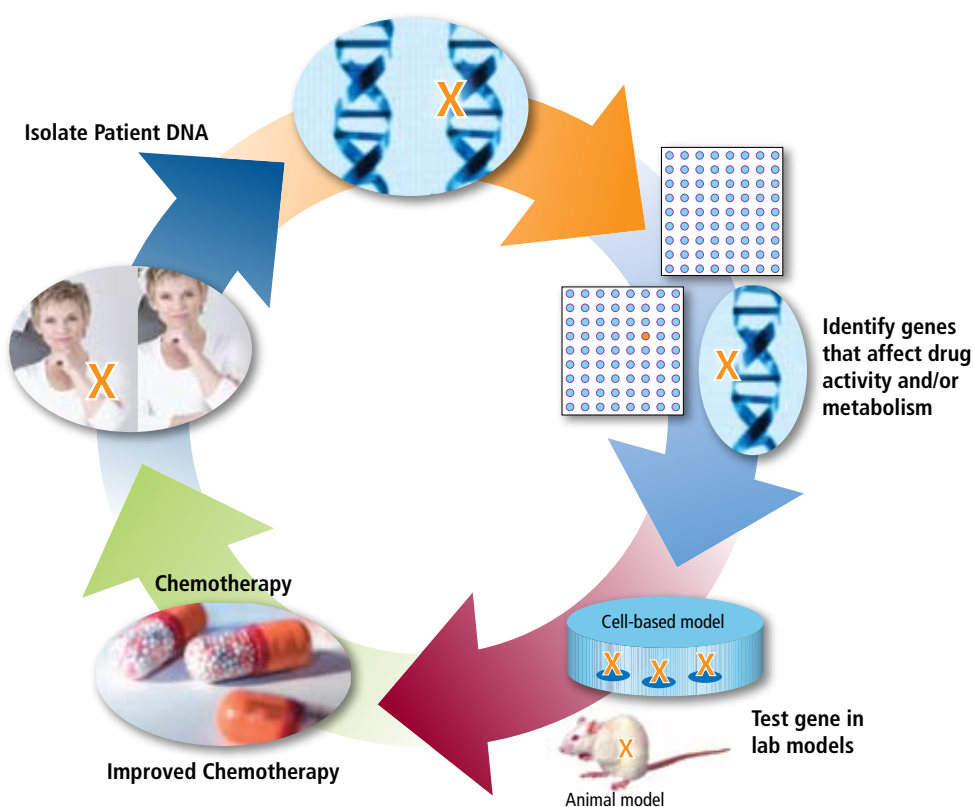
The Clinical and Experimental Therapeutics Program is under the direction of M. Eileen Dolan, PhD, and Everett Vokes, MD. The Program is comprised of 55 members from 9 University Departments. These basic science and clinical researchers collaborate to form a highly translational research program where efforts are focused on anti-cancer drug development.

One of the key features of the program, according to Dr. Dolan, is that it “is one of only a few places in the country that has the ability to move drugs through the entire clinical development cycle.” Data from preclinical laboratory studies guide the development of early clinical trials (Phase I and II), which in turn guide the development of further clinical trials (Phase II and III). The ultimate goal of this process is to develop safe, effective drugs that improve clinical outcomes for patients. Dr. Vokes points out that the ability of the Program to take drugs through this entire process or to conduct studies at any Phase is due to the “depth and breadth of the research interests and expertise of Program investigators, as well as the infrastructure of the UCCRC and University of Chicago.”

it was hypothesized that sorafenib would be able to inhibit tumor growth. Mark Ratain, MD, and Walter Stadler, MD, developed a novel randomized discontinuation Phase II study design that was used to evaluate the efficacy of sorafenib. This type of study design identifies individuals who have the capacity to respond to the drug under study. Specifically, all patients entering the study receive the drug of interest, those without toxicities and with stable disease after a specified time period continue on the study, and are randomized to continue or discontinue therapy. In the case of sorafenib, this study design identified a statistically significant improvement in stable disease in patients receiving the drug compared to placebo². The results were promising enough to lead to a Phase III trial that demonstrated a doubling in progression-free survival in refractory renal cell carcinoma patients³. Together, these studies led the FDA to approve the use of this drug for renal cell carcinoma in December of 2005. The initial Phase II studies have also led to other studies designed to further develop and refine the use of this drug. For instance, Michael Maitland, MD, PhD, and Dr. Ratain are evaluating the use of biomarkers, such as changes in blood pressure and plasma VEGF receptor-2 levels, as pharmacodynamic (drug activity) markers of sorafenib activity. Drs. Ratain, Stadler, and Ted Karrison, PhD, are collaborating with Greg Karczmar, PhD, from the Advanced Imaging Program to investigate whether dynamic contrast-enhanced MRI can be used as a pharmacodynamic marker of sorafenib. Both of these follow-up studies aim to improve the dosing of sorafenib and decrease toxicities associated with its use.

The Program has also spent considerable effort developing improved therapies for head and neck cancer. In laboratory work initiated over 15 years ago, Ralph Weichselbaum, MD, reported that head and neck cancer lines overexpressed epidermal growth factor receptor (EGFR)⁴. Further characterization of the signaling pathway downstream of this receptor by the lab of Dr. Ezra Cohen has suggested that tyrosine kinase inhibitors (TKI) may be useful as therapies for head and neck cancer⁵. These and other studies have paved the way for a series of clinical trials aimed at developing oral therapies that target this receptor. For instance, a Phase II study of the EGFR TKI gefitinib by Dr. Cohen and colleagues demonstrated that patients who responded best to the drug received a dose higher than usually prescribed and developed a specific type of rash. Together these data suggest a dose-response effect of the drug in head and neck cancer that is not present in other cancers, such as lung cancer. This hypothesis is currently being investigated in a dose-escalation trial. In another study initiated by Dr. Cohen, the combination of an antiangiogenic drug (bevacizumab; blocks the growth of new blood vessels) with the EGFR TKI erlotinib resulted in an increased response rate and survival for patients. This suggested that targeting both the tumor and tumor microenvironment may be beneficial for patients. Currently other TKIs are also under investigation by Program members.

In a Phase II clinical trial, Dr. Cohen and his colleagues also demonstrated that the experimental drug axitinib had significant anti-tumor activity for patients with advanced thyroid cancer. All of the patients on the study had thyroid cancer that was resistant to the standard thyroid cancer treatments. Twenty-two percent of the patients on the study experienced tumor shrinkage, and tumors stopped growing in another 50 percent of patients. The American Society of Clinical Oncology (ASCO) included this study as one of 24



Pharmacogenomic approach to cancer drug development

A drug that has gone through significant development in the Program is sorafenib. Sorafenib is a RAF kinase inhibitor that blocks the vascular endothelial growth factor (VEGF) signaling pathway, which is involved in new blood vessel formation. Since the VEGF signaling and RAF kinase pathways are key for cancer cell survival and growth,

1 http://seer.cancer.gov/statfacts/html/all.html?statfacts_page=all.html&x=10&y=23

2 Ratain, et al. J Clin Oncol 24:2505, 2006

3 Escudier et al. N Engl J Med 356:125, 2007

4 Weichselbaum, et al. Head and Neck 11:437, 1989.

5 Cohen, et al. Cancer Res 66:6296, 2006.

research breakthroughs in its *Clinical Cancer Advances 2007: Major Research Advances in Cancer Treatment, Prevention, and Screening*. The report is the Society's "annual review of research that will have the greatest impact on patient care."

In addition to developing new oral therapies, work has been done to improve chemoradiotherapy regimens used for head and neck cancer patients. Drs. Vokes and Cohen are currently principal investigators on a Phase III trial evaluating the role of induction chemotherapy prior to chemoradiotherapy for patients with advanced head and neck cancer (the DeCIDE trial). This study stemmed from earlier Phase II clinical trials that showed this type of regimen resulted in 3-year survival rates of 80% with organ preservation and failure rates of less than 10%. The current Phase III trial involves 20 different institutions and plans to recruit 400 patients.

The studies described above illustrate the translational nature of the projects that emanate from the Clinical and Experimental Therapeutics Program – observations from preclinical and early clinical trials guide the development of future studies and the clinical use of new drugs. The randomized discontinuation study design used in the study of Drs. Ratain and Stadler described above illustrates a problem encountered in drug development: not all patients respond or respond in the same manner to a drug. Specifically, it is becoming apparent that a patient's genetic make-up may influence his/her ability to respond to a drug or the drug toxicities experienced. Thus, many investigators in the Clinical and Experimental Therapeutics Program focus their research on the pharmacogenetics – the relationship between genetic make-up and drug activity – of anti-cancer agents.

Drs. Maitland, Ratain, and Federico Innocenti, MD, PhD, for instance, have identified and characterized genetic polymorphisms (differences in a gene) that affect the toxicity of irinotecan, a drug used for the treatment of metastatic colon cancer. The *UGT1A1* gene encodes an enzyme needed for the inactivation of the active, and toxic, metabolite of irinotecan. Some patients experience severe diarrhea and neutropenia (reduction in the number of neutrophils – a type of white blood cell) following the administration of the drug, and this has been attributed to a genetic polymorphism in the *UGT1A1* gene. This observation has led to an FDA-mandated label change for irinotecan indicating that a specific genotype (genetic make-up) is associated with severe neutropenia. These observations have also led to a series of Phase I and II studies designed to determine the optimal dose of irinotecan based on *UGT1A1* genotype.

In other pharmacogenetic research, Dr. Dolan's lab developed a whole genome approach to screen for genes associated with response to a common chemotherapeutic agent, etoposide. In a preclinical study, Dr. Dolan's group performed microarray analysis to screen cell lines derived from individuals from large pedigrees (family trees) to determine the genetic contribution to chemotherapeutic induced toxicity⁶. Using this method, they identified regions within the genome that harbored genes important in sensitivity to specific chemotherapy. They also looked at samples from various populations and identified differences in sensitivity to specific chemotherapy between populations. In a follow-up study, they determined that the gene expression profiles associated with sensitivity to the drug were significantly different between the Caucasian and African populations^{7,8}. While these are very early studies and the results need to be further examined and validated, they suggest that genetic profiles that predict tumor response to a chemotherapeutic agent or increased risk of patient toxicity can be identified. This knowledge could lead to more efficacious use of current and new/future chemotherapeutic agents.

Overall, the Clinical and Experimental Therapeutics Program is a highly productive translational research program. The collaborations between basic science researchers and clinical scientists, both intra- and interprogrammatic, allow results from basic science studies to feed into clinical research studies, which in turn leads to the development of more efficacious cancer therapies and improved clinical practices. Based on its past success, this approach should continue to work well in the future as the program continues and expands its disease-specific therapeutic programs.

6 Huang, et al. *Molec Cancer Ther* 6:31, 2007

7 Huang, et al. *PNAS* 104:9858, 2007

8 Huang et al, *Am J Hum Genet* 81:427, 2007

Program Four Basics

Program Four Goals:

- To foster interaction between basic and clinical investigators that will result in innovative and effective therapies;
- To integrate new drugs into the development of multimodality therapies for patients with advanced solid tumors; and
- To pursue a broad program integrating pharmacogenomics and pharmacology into preclinical and clinical drug development.

Members (2005-Present)

- 55 members representing 9 departments
- 14 new members appointed: Susan Cohn, MD; Philip Connell, MD; Alessandro Fichera, MD; Federico Innocenti, MD, PhD; Mark Lingen, DDS, PhD; Yves Lussier, MD; Michael, Maitland, MD, PhD; Bruce Minsky, MD; Rita Nanda, MD; Louis Portugal, MD; Edwin Posadas, MD; Kevin Roggin, MD; Joseph Salama, MD; and Tanguy Seiwert, MD

Publications (2005 – 2007)

- 342 publications
- 86 intraprogrammatic publications
- 70 interprogrammatic publications

Program Four Highlights

Scientific Accomplishments

- 258 clinical trials opened between 01/01/2005 and 04/28/2008 including 28 Phase I, 131 Phase II, and 45 Phase III trials.
- Program members have led the clinical development of several cancer therapeutics including sorafenib (studies resulted in FDA approval for its use in renal cell carcinoma), O⁶-benzylguanine (preclinical through clinical studies), oral agents for the treatment of head and neck cancer, and novel agents for thyroid cancer.
- A UCCRC-led randomized Phase III trial investigating the use of induction chemotherapy in the context of standard concurrent chemoradiation for locoregionally advanced head and neck cancer has opened on an international basis.
- Pharmacogenetic studies of irinotecan (Camptosar) have led to an FDA label change.
- Developed the use of pharmacogenomic endpoints in multiple clinical trials.

Funding Highlights (2005 – 03/2008)

- In 2005, the U01 Pharmacogenetics of Anticancer Agents was successfully recompleted in the amount of \$2,390,635 (PI: Dr. Ratain).
- In 2006 the Phase II contract was recompleted for annual direct cost of \$941,221 (PI: Dr. Vokes).
- The Breast Cancer SPORE was funded in October 2006 (PI: Dr. Olopade, Program 6), Gini Fleming, MD, is a co-investigator, and Eileen Dolan, PhD, is PI of Project 4: *Identifying population specific variants important in toxicity to breast cancer chemotherapy* (NCI annual direct \$194,660).
- As of 9/18/2007, the sum of annual direct costs in grant support from NCI is \$3,807,985.
- Members of the Program are PIs on 13 R01's, 4 R21's, 1 P01, and over 100 other industry, ACS or non-peer reviewed funding as of 03/01/2008.

Collaborations

- Dr. Mark Ratain has collaborated with Ravi Salgia, MD, PhD, of the Cell Signaling and Gene Regulation Program to develop c-Met inhibitors to be used as therapeutic agents against lung cancer.
- Dr. Ezra Cohen has collaborated with Marsha Rosner, PhD, of the Cell Signaling and Gene Regulation Program to successfully compete for an R01 aimed at determining the role of protein kinase C (PKC) in head and neck cancer and developing PKC inhibitors as therapeutic agents.
- Intraprogrammatic collaborations between the labs of Drs. Cohen and Ratain and their Phase I studies on rapamycin has resulted in an R21 entitled *Rapamycin as an Antineoplastic Agent*.
- A highly productive intraprogrammatic collaboration between Drs. Weichselbaum and Vokes has resulted in an R01 entitled *DNA Damage Targeted Gene Therapy in Head and Neck Cancer*.
- Drs. Stadler, Karrison, and Ratain have collaborated with Gregory Karczmar, PhD, from the Advanced Imaging Program to develop an R21 entitled *Dynamic Contrast-Enhanced MRI as a BAY 43-9006 Marker*.

Research Highlights

Four UCCRC Researchers Take a “Ticket for the Cure”



Erik Whitaker, MD, MPH, Executive Vice President Strategic Affiliations and Associate Dean for Community-Based Research, U of C Medical Center, congratulates Kay Macleod, PhD, and Piers Nash, PhD, for their “Ticket for the Cure” awards from the State of Illinois. Before coming to the U of C, Dr. Whitaker was the Director of the Illinois Department of Public Health.

Governor Rod R. Blagojevich recently announced “Ticket for the Cure” grants totaling \$1.5 million to researchers at five Illinois universities. “Ticket for the Cure” uses funds raised by the sale of lottery tickets to fund breast cancer research, early detection research, education, and patient services. U of C researchers received more awards than each of the other four universities. Almost one-third of the program funding is going to four UCCRC researchers: Richard Jones, PhD, Kay Macleod, PhD, Peirs Nash, PhD, and Xiaochuan Pan, PhD.

Dr. MacLeod received the largest grant (\$125,000) of all the recipients statewide. Her research will focus on suppressing breast cancer metastasis. Drs. Jones, Nash, and Pan all accepted grants of \$100,000 each. Dr. Nash will also focus on metastasis; Dr. Jones will explore a novel therapeutic targets for breast cancer; and Dr. Pan will investigate the development of new MRI methods to enhance early detection.

Brain Cancer and the Common Cold



Ermilo Barrera, Jr., MD, (left) and Maciej Lesniak, MD, at a press conference recognizing the awarding of a \$720,000 grant to Dr. Lesniak.

Modern medicine may not have a perfect cure for the common cold, but Maciej Lesniak, MD, hopes to harness the cold virus to attack brain cancer. The American Cancer Society recently awarded Dr. Lesniak a \$720,000 research grant to advance his work.

“This grant provides the resources to develop a high-level approach of reengineering a virus [that causes the common cold] to kill brain cancer cells,” Dr. Lesniak explained. “It’s an exciting and thrilling opportunity to complete our studies and analyze how these treatments will work in patients.”

The new grant honors Dr. Ermilo Barrera, Jr., immediate past president of the American Cancer Society in Illinois and a long-time Illinois Division volunteer and member of the Society’s national board of directors. Dr. Barrera is a surgical oncologist specializing in breast cancer at Evanston Northwestern Healthcare.

Gene Studies Focus on Ancestry



M. Eileen Dolan, PhD, was the Principal Investigator of a study that examined how the genetic differences influence an individual’s responses to drugs and the ability to fight infection. Dr. Dolan and her team found that almost five percent of the 9,156 human genes they studied varied significantly between people of European and African ancestries. The differences were most evident among genes involved in producing antibodies to potential microbial invaders.

Published in the March 7, 2008 issue of the *American Journal of Human Genetics*, the study’s findings provide new information that could help in the treatment of cancer and other infections. (Dr. Dolan will publish another article in the May issue of the same journal. This article identifies genetic variants that are associated with gene expression.) “Our primary interest is the genes that regulate how people respond to medicines, such as cancer chemotherapy,” said Dr. Dolan. “We want to understand why different populations experience different degrees of toxicity when taking certain drugs and learn how to predict who might be at greatest risk for drug side effects.”

Another study found that two genetic variations within a gene that plays a role in DNA repair are useful markers of cancer risk among African American men, the group that has the world’s highest rate of prostate cancer. The study, led by Rick Kittles, PhD, of the University of Chicago, and John Carpten, PhD, of the Translational Genomics Research Institute, could advance the development of more precise ways to estimate prostate cancer risk and improve screening and early detection for these men.

Killing Healthy Cells to Stop Tumor Growth

Hans Schreiber, MD, PhD, and his team have found that destroying the non-malignant cells surrounding and supporting a tumor in mice can stop its growth. The investigators injected T-cells into mice with large cancers. (T-cells are white blood cells that regulate the immune response and attack foreign cells.) The T-cells killed the healthy cells adjacent to the tumors but left the malignant cells untouched. However, the treatment reduced the tumors and stopped their growth for more than 80 days.

This discovery could help in the treatment of cancers that are resistant to standard therapy. This approach to immunotherapy could be used as a treatment on its own to arrest tumor growth or in support of primary treatments to increase the chances of a cure.

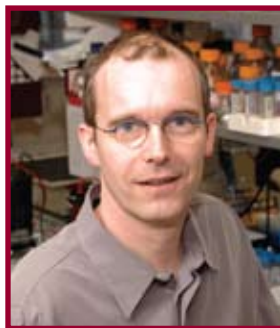
Location, Location, Location



Harinder Singh, PhD, and his colleagues have found that moving an active gene from the interior of the nucleus to its periphery can inactivate that gene. Chromatin—complexes of DNA and proteins—functions through interactions with distinct nuclear compartments. Moving from these compartments disrupts the operation of the gene. The team published their results in *Nature*.

To test the consequences of gene repositioning, the team developed innovative molecular tools that enabled them to move genes from compartments in the interior of the nucleus and attach them to the interior of the nuclear envelope, which surrounds the nucleus. By expanding our knowledge of the importance of gene positioning within the nucleus, the study could be instrumental in the development of new treatments for diseases, like cancer, that are related to mutations of genes in cell nuclei.

Discovery has Potential to Improve Cancer Staging and Make Advanced Tumors more Treatable



Marcus Peter, PhD, and his team have found that one group of small, non-coding RNA molecules could serve as a marker to improve cancer staging and may also be able to convert some advanced tumors to more treatable stages. These results were published in the April 1, 2008, issue of the journal *Genes & Development*.

Peter and colleagues showed that a specific group of microRNAs, a family called miR-200, can regulate the epithelial to mesenchymal transition (EMT) in which the cells that line inner and outer bodily surfaces become unspecialized cells. This process is evident in the healing of wounds. Unfortunately, it can also produce invasive and mobile cancer cells that can pass through membranes and travel to distant sites, where they seed new tumors.

“The importance of this finding is, first, that miR-200 may represent a good marker to stage cancer,” Peter said, and “second, that reintroducing miR-200 into late cancer cells could provide a new form of treatment, preventing these cells from going through EMT and becoming more invasive.”

Lengyel Receives Translational Research Award

The Burroughs Wellcome Fund has awarded Ernst R. Lengyel, MD, PhD, one of its 13 Clinical Scientist Awards in Translational Research. Dr. Lengyel, a Gynecologic Oncologist in the Dept. of Obstetrics and Gynecology, will receive \$750,000 over five years to study the development of novel therapeutic and diagnostic strategies for ovarian cancer. Each university in the US can propose two candidates with NIH RO1 funding for this highly competitive award. After his application won the BSD-wide competition he competed with 119 other applicants through two rounds of selection.



The award provides researchers with the “freedom and flexibility to explore scientific questions, apply the resulting knowledge at the bedside and bring clinical insights from the clinical setting back to laboratory for further study.”

Chicago Magazine Picks 19 UCCRC Members as “Top Docs”

One out of seven of the physicians included in *Chicago Magazine’s* list of the region’s “best” physicians are from the U of C. Even more exciting is the fact that one out of three of the physicians listed in four cancer specialties are UCCRC members.

Nineteen UCCRC members are among the 54 U of C physicians featured in the magazine’s listing of the area’s “best” physicians. The list includes doctors from 43 hospitals.

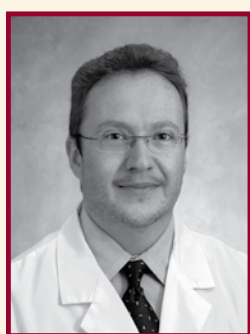
Forty-three percent of the magazine’s list of the region’s best radiation oncologists consists of UCCRC members. Also notable are the

comparable figures for medical oncologists (35 percent), pediatric oncologists (28.5 percent), and hematologists (20 percent).

Castle Connolly Medical Ltd compiled the list for the magazine. The firm specializes in guides of the nation’s outstanding physicians. Its teams of researchers use a variety of methods to select the top physicians nationally and regionally, but the key determinant is reputation among their peers and the medical leadership of local hospitals.

Chicago Magazine recognized the following UCCRC Members:

Gastroenterology

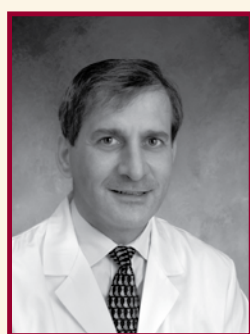


Irving Waxman, MD

Hematology

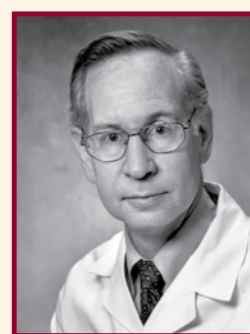


Richard A. Larson, MD



Koen van Besien, MD

Neurology



Raymond P. Roos, MD

Medical Oncology



Philip C. Hoffman, MD



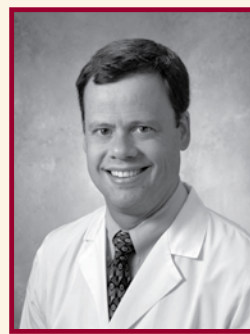
Hedy Lee Kindler, MD



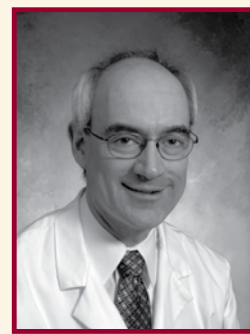
Olufunmilayo I. Olopade, MD, MBBS, FACP



Mark J. Ratain, MD



Walter M. Stadler, MD

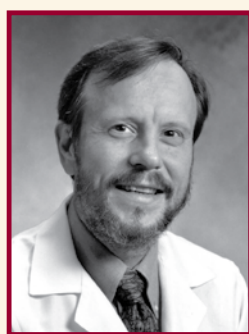


Everett Vokes, MD

Radiation Oncology



Howard J. Halpern, MD, PhD



Daniel J. Haraf, MD



Ralph R. Weichselbaum, MD

Thoracic Surgery

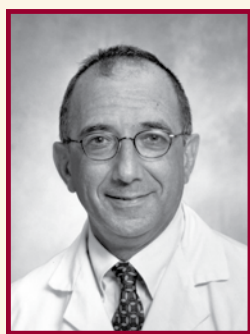


Mark K. Ferguson, MD



Gary D. Steinberg, MD

Orthopedic Surgery



Michael A. Simon, MD

Pediatric Oncology



Susan L. Cohn, MD



James Nachman, MD

Surgery



Mitchell C. Posner, MD

CECOS Brings the University to the Community

Communicating the “real deal” about cancer to the community, the UCCRC and the Office of Community Affairs have teamed up to increase public awareness of cancer prevention, screening, the role of genetics in malignancy, and other issues critical to Chicago’s South Side neighborhoods. The platform for this community education is an ongoing series of public forums focused around the questions and concerns that are most relevant to the community. South Side residents have embraced this concept and the first three meetings have been successful. The forums draw almost 200 people per session, and attendance is steadily increasing.

The forums are the creation of the UCCRC’s Community Engagement Centering on Solutions (CECOS) program led by Rick Kittles, PhD, the UCCRC’s Associate Director for Diversity and Community Outreach. “I am delighted by the enthusiasm of the people and public officials,” said Dr. Kittles. “People come prepared to learn, interact, and communicate, giving the forums an extraordinary vitality and openness.” The photographs

accompanying this article provide some insight into the nature of these meetings.

Dr. Kittles attributes much of the forums’ success to community partners such as the the DuSable Museum of African American History—the lecture series’ venue—and the Exelon Corporation. Area churches and social organizations have also helped to strengthen bonds between the University and surrounding neighborhoods.

Previous forum topics have included genetics, nutrition, and men’s health and cancer. The next forum—Save Our Sisters (SOS)—will focus on women’s health and cancer. The meeting will be held on Saturday, June 14, from 10:30 AM to 1:00 PM, at the DuSable Museum, 740 East 56th Street, Chicago.

The forums are only one element of a comprehensive, diverse effort to develop and sustain meaningful, two-way exchange of ideas and perspectives between the community and the UCCRC.



Terry Mason, MD, FACS, provides insights into health issues affecting men in Chicago’s inner city. Mason is the Commissioner of the Chicago Department of Health, Assistant Professor in Urology at the University of Illinois at Chicago, and Chief of Urology, Mercy Hospital.



These women from the community found practical information about cancer.



Members of the audience listen intently to the speakers at the Brother to Brother forum on men’s health. A number of women attended to learn what they could do to help male friends and family live healthier lifestyles. Michelle Le Beau, PhD, Cancer Center Director is at the far right.





The speakers for the December 15, 2007 Forum on nutrition included Stephanie Davenport, Director of Education Programs, DuSable Museum of African American History, Rick Kittles, PhD, UCCRC Associate Director for Diversity and Community Outreach, Nefertiti Oji-Njideka, Research Assistant in Genetic Medicine at the U of C, and Tonya Turner, Diet Technician in Nutrition Services at the U of C Medical Center.



Thirty-year cancer survivor Wendell Hayes (right) participated in the panel discussion at the March 8 Forum. He spoke very passionately and convincingly about the importance of cancer screening, and pursuing a healthy lifestyle. He was a patient of the late John Ultmann, MD, founder of the UCCRC. Dr. Rick Kittles is to his left.



The lobby of the DuSable Museum of African American History is the location for community interaction before and after the Forums.



Three generations came to the March 8 Forum together to learn about the cancers that pose the greatest threat to men.



Dr. Rick Kittles, UCCRC Associate Director for Diversity and Community Outreach, discusses the genetics of prostate cancer at the March 8 Forum. Nefertiti Oji-Njideka, Research Assistant in Genetic Medicine, responds to a question about the lack of healthy food options in inner-city neighborhoods during the December 15, 2007 forum on nutrition.



Michelle Le Beau, PhD, UCCRC Director, and the speakers for the March 8 forum on men's health gather for a group photograph. The men standing with Dr. Le Beau (from left to right) are Terry Mason, MD, FACS, Commissioner, Chicago Department of Health; Waldo Johnson, Jr., PhD, Associate Professor, School of Social Service Administration, University of Chicago; Dr. Rick Kittles; and Blase Polite, MD, MPP, Instructor, University of Chicago.



Youthful volunteer Jasmine Robinson (in T-shirt) helps guests select from a wide variety of information materials on cancer.

Members NEWS and Notes

Bendelac and Gehlert Honored with Named Professorships



Albert Bendelac, PhD, Professor of Pathology, has been named the A. N. Pritzker Professor of Pathology, and Sarah Gehlert, PhD, is the new Helen Ross Professor in the School of Social Service Administration.

An investigator in the Howard Hughes Medical Institute, Dr. Bendelac is the one of the world's leading authorities on how the immune system recognizes lipids. Lipids are fat molecules and one of the body's major building blocks. Dr. Bendelac and his colleagues have been instrumental in identifying the substances that activate NKT cells and showing that NKT cells, and the lipids they recognize, have specialized functions in the immune system. These white blood cells contain enzymes that can kill tumor cells. Understanding how to manipulate these cells could speed the development of new cancer therapies.



Sarah Gehlert, PhD, is the Ross Professor, in the School of Social Service Administration, and is a nationally renowned expert on the connections between social environment and health. She is also the Principal Investigator and Director of the Center for Interdisciplinary Health Disparities Research, which was awarded a \$9.7 million federal grant to develop a transdisciplinary approach to study why African-American

women have unusually high rates of breast cancer mortality at an early age. The Center's long-term goal is to use a transdisciplinary approach to understand population health and health disparities, and to eliminate group differences in health. Dr. Gehlert is also a key member of the research team that received a \$23 million Clinical and Translational Science Award from the National Institutes of Health. The team, based at the University Medical Center, is part of an NIH effort to build a national consortium of select centers that will "transform how clinical and translational research is conducted," ultimately enabling researchers to provide new and better treatments more efficiently and quickly to patients.

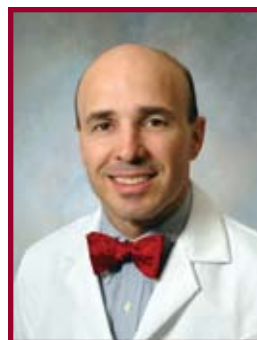
Secretary of Health and Human Services Appoints Meltzer to Key Committee



Health and Human Services Secretary Mike Leavitt has appointed David Meltzer, MD, PhD, to the Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. The committee makes recommendations for developing and implementing national health promotion and disease prevention objectives for Healthy People 2020.

Since 1979, the Healthy People program has established and monitored national health objectives to meet a broad range of health needs, engage people across the nation to work together, guide individuals toward making informed health decisions, and measure the impact of prevention activity.

Renowned Pediatrician Named Director of Pediatric Oncology



Stephen Skapek, MD, a nationally respected expert on malignant soft tumors, has joined the University as Associate Professor of Pediatrics and Director of Pediatric Oncology at the University of Chicago Comer Children's Hospital.

He comes to the University of Chicago Medical Center from St. Jude Children's Hospital in Memphis, Tenn. As a pediatrician and researcher, Skapek focuses on understanding molecular and genetic mechanisms that lead to cell proliferation in various childhood cancers. He is truly a translational researcher who is adept at investigation in the laboratory and the clinic.

In the clinical arena, Skapek discovered that a combination of anticancer drugs could stop or slow the growth of a childhood cancer called desmoid fibromatosis, a disease that develops in cells that help form tendons, muscles, and nervous tissue. An aggressive form of cancer, desmoid fibromatosis often infiltrates surrounding tissue making surgical removal of the tumor difficult. By combining vinblastine and methotrexate, Skapek arrested tumor growth in most of the youths in the study. In some of the children, the drugs blocked tumor growth; in others, they reduced tumor size. Of the 28 enrolled patients, ages 7 months to 20 years, 20 patients received at least some benefit from the combination of drugs.

In a separate study in the lab, Skapek discovered that Arf, a gene known to block cancer formation, also signals certain blood vessels in the developing eye to shrink and go away. This new finding suggests that Arf might also block cancer, in part, by controlling the blood vessels that tumors need to continue to growing.

Distinguished Scientific Organization Honors Storb



The American Association for the Advancement of Science has named Ursula Storb, MD, a fellow, which is an honor bestowed upon members by their peers. It recognizes distinguished contributions to the advancement of science or its applications. The Association is an international non-profit organization dedicated to promoting science around the world by serving as an educator, leader, spokesperson, and professional association. It produces the journal *Science* and many other eminent scientific publications.

Dr. Storb is a world-renowned expert in immunology and molecular biology. She has published more than 150 papers in various scientific journals, including *Science*, *Nature*, *Cell*, *Immunity*, and *Nature Immunology*.

A Message from the Executive Director of the Foundation



I am most pleased to report that the members of the University of Chicago Cancer Research Foundation (UCCRF) are driving extraordinary growth, which is manifesting itself in increased contributions and organizational expansion. All of the boards and auxiliaries are establishing and reaching ambitious goals.

Foundation income doubled in the last three years! The Auxiliary Board increased the support it provides our researchers by 17 percent. Associate Board membership increased almost two-fold in the past year. The Women's Board completed its capital campaign in less than 18 months instead of in the planned five years, and the capital campaign for the entire Foundation has already achieved 90 percent of its goal. The Women's Board also increased the income generated by its annual Grand Auction. Perhaps we should begin calling this event the "Million Dollar Ball," because the event cleared that daunting financial hurdle in 2007.

This dramatic organizational success is grounded in the dedication of individuals inspired by strong leadership. Bruce and Lori Ovitz exemplify the spirit of generosity that enables

the Foundation to grow and prosper. Their profile in this issue of *Pathways* is a story of a couple committed to supporting our patients and cancer research with generous giving and personal involvement. One of Lori's most unique contributions is her donation of time and expertise to help patients achieve a sense of normalcy despite the impacts of malignancy and its treatment.

This issue also includes a story on the community forums sponsored by the UCCRC's Community Engagement Centering on Solutions (CECOS) program. We are proud that the UCCRF is a partner in these meetings and was instrumental in securing the participation of the Exelon Corporation, which is one of the program's sponsors.

We are delighted that UCCRF members have eagerly taken on new challenges. This enthusiasm is fueling speedy progress and enabling the UCCRF to exceed expectations, accomplish bold objectives in record time, and keep pace with the evolving Cancer Research Center. I look forward to an exciting future of remarkable achievement.

A million thanks to all,

Mary Ellen Connellan

Executive Director, University of Chicago Cancer Research Foundation

Goldblatt Family 50-Year Tradition of Giving Thrives

Most visitors pass through Goldblatt Pavilion on their way to the University of Chicago Cancer Research Center (UCCRC). This short walk and the names of benefactors on a marble-clad wall are reminders of the vital importance of philanthropy to the UCCRC and the role of the Goldblatt family in making the UCCRC a success.

Named for Maurice Goldblatt, the Pavilion is just one example of the many ways the Goldblatt family has contributed resources and time to the University of Chicago. Maurice and his brother Nathan were the team that built the Goldblatt Empire of Chicago retail stores. When Nathan died from cancer in 1944, Maurice turned the business over to two younger brothers, Joel and Louis, who had returned from service during World War II. Determined to "lick cancer," Maurice devoted his life to raising funds for medical research, saying, according to a 1947 *Time* magazine, that "good scientists can't do business without good merchandise." The Nathan Goldblatt Memorial Hospital for Cancer Research was an early manifestation of Maurice's generosity and persistence. In 1950, he was one of the first lay people to be named to the National Cancer Advisory Council.

More than a half century later, this tradition of giving continues under the auspices of the Cancer Research Foundation (CRF). (Please note that the CRF and the University of Chicago Cancer Research Foundation are separate organizations.) In the past two years, the CRF donated more than \$2.2 million to the University of Chicago, and it remains a family-oriented organization. Mrs. Maurice Goldblatt became Chairman of the CRF following her husband's death. Their daughter Merle Goldblatt Cohen, who has devoted her career to cancer research, serves as President, and their son, Stanford J. Goldblatt, is Vice President.

Maurice's granddaughter, Alexandra Nikitas, recently gave up a lucrative career in the private sector to become the CRF's

Executive Director. She is focusing on the operations of the organization as well as on the planning and direction of new initiatives. "I wanted the opportunity to work on something truly valuable to society," said Nikitas. "I can fulfill this ambition at the CRF while advancing an organization central to my family and its values."

Nikitas believes that the CRF can do the greatest good by providing the "resources younger scientists need to explore new ideas and perform the preliminary research required to obtain funding from major cancer organizations and government agencies." Supporting junior faculty researchers enables the CRF to put "more lines in the water," creating more opportunities for innovative discoveries.

The CRF is focusing resources where there is an enormous need. With its 2008 budget, the National Institutes of Health recorded its fifth consecutive year of no real budgetary growth. According to the National Cancer Institute, this flat funding—a 21% drop in purchasing power since 2003—has a particularly problematic impact on young researchers. As documented in the March 11 report, *A Broken Pipeline? Flat Funding of the NIH Puts a Generation of Science at Risk*, the steady decline of funding is prompting many young scientists with great potential to forego careers in research. The report was co-authored by Brown University, Duke University, Harvard University, Ohio State University, Partners Healthcare, the University of California Los Angeles, and Vanderbilt University.

This situation underscores the vital importance of philanthropy in cancer research and the essential role that organizations like the CRF play in improving cancer care. In the many years since Maurice Goldblatt first applied his legendary sales skills to work on behalf of cancer patients, the CRF has helped many cancer researchers bring their most brilliant ideas to fruition.

“If a Cause is Discovered, then a Cure is Possible”



Shubitz winner Brian Druker, MD, escorts Janet Rowley, MD, to the Shubitz dinner. Dr. Druker's discovery of the “miracle drug” Gleevec was based, in part, on breakthrough research performed by Dr. Rowley at the U of C.

Brian J. Druker, MD, is the 28th recipient of the annual Simon M. Shubitz Cancer Prize and Lectureship, a prize created by Dr. Shubitz in 1977 to honor scientists responsible for groundbreaking advances in cancer research. Dr. Druker is the JELD-WEN Chair of Leukemia Research, Professor of Medicine, and Director of the Oregon Health and Science University Cancer Institute. He has also been a Howard Hughes Medical Institute Investigator since 2002. During his Shubitz Lecture on April 7th, Dr. Druker presented his research related to the development of Imatinib (Gleevec) as a targeted therapy for chronic myeloid leukemia. In addition to presenting data illustrating the clinical success of Imatinib, he presented his work on this drug as a paradigm to be used for the development of other targeted cancer therapies.

Chronic myeloid leukemia (CML) is the first malignancy for which a single causative chromosomal abnormality was identified. Peter Nowell, MD, and David Hungerford, PhD, identified an abnormality called the Philadelphia chromosome. Janet Rowley, MD, of the University of Chicago, demonstrated that the abnormality resulted when specific genetic material is swapped between chromosomes 9 and 22 (a process termed translocation). It is present in all cases of CML. It was later shown that the protein product that resulted from this translocation, BCR-ABL, was a constitutively active enzyme that causes unregulated cell growth and thus causes CML.

Because a specific molecular abnormality was found to cause CML, it became apparent to Dr. Druker and his colleagues that there was the potential to develop a specific therapy for CML that targets and blocks the abnormal BCR-ABL enzyme. Imatinib was identified as such an inhibitor. Dr. Druker initiated a Phase I clinical trial of this compound in 1998, and within six months of its initiation nearly all patients had normal white blood cell counts and minimal side effects. Later Phase II and Phase III trials in patients with chronic phase CML showed 98% of patients had white blood cell counts return to normal, and 85% of patients showed no evidence of the Philadelphia chromosome. Today, the 5-year survival of patients taking Imatinib is almost 90%. Despite this tremendous success, 4% of patients will develop resistance to the drug and will relapse. This problem of drug resistance and relapse and why the cancer isn't completely eradicated by the drug (minute levels remain in patients while on treatment) are current interests in Dr. Druker's lab.

Dr. Druker pointed out that several lessons can be learned from this research. First, the drug target is important when developing a new therapy. Namely, a specific molecular pathogenic event represents a good target, and a specific drug against such a target will yield good therapeutic results. In addition, the rate of new drug discovery needs to increase. In the case of Imatinib, it took 40 years to go from molecular target to clinically relevant drug. Thus, Dr. Druker left the cancer research community in the audience with the following challenges: identify specific molecular pathogenic events for malignancies, develop new technologies to improve the drug discovery process, utilize molecular epidemiology to identify patients most likely to respond to treatments, and use a broad-based approach when treating patients (i.e., targeted therapy in conjunction with improved cancer prevention efforts, enhanced diagnostic testing, and immune modulation). Dr. Druker believes that if the cancer research community takes these approaches to cancer research and care, then the successes of Imatinib can be extended to new drugs against other malignancies.

The National Institutes of Health Honor Sipkins with New Innovator Award



Last year National Institutes of Health Director Elias A. Zerhouni, MD, named UCCRC member Dorothy Sipkins, MD, PhD, one of the 29 promising young investigators to receive the NIH Director's New Innovator Award, a unique funding opportunity and a key element of the Roadmap for Medical Research. The Roadmap is a series of initiatives aimed at establishing new approaches to biomedical research and funding in an effort to promote the movement of ideas from bench to bedside. The award supports early career investigators as they explore innovative, high-risk research.

Dr. Sipkins is a physician scientist in the Sections of Hematology/Oncology in the Department of Medicine. Her research focuses on understanding the tissue microenvironment, or niches, in the bone marrow in an effort to understand normal hematopoietic stem cell biology, as well as to learn how leukemia develops. The bone marrow contains many different types of cells that carry out a variety of functions: there are hematopoietic stem cells that form all of the types of blood cells that circulate in our bodies; there are immature blood cells that will eventually enter our blood stream; and there are stromal cells that support the growth and development of stem cells and immature blood cells. Dr. Sipkins notes that she wants to understand “the specific locations of stem cell niches in the bone marrow, as well as the cellular components and molecular interactions that allow hematopoietic stem cells to function, renew,

and differentiate.” These details will provide insight into how tumor cells usurp the components of this microenvironment to establish themselves in the bone marrow.

The New Innovator Award is one of many honors already given to Dr. Sipkins in her young career. In August 2006, the State of Illinois named her one of ten researchers statewide funded by the new Illinois Regenerative Medicine Institute. The Institute provided her with \$473,000 to decipher the molecular signals that blood-producing cells use in survival and regeneration.

As part of her New Innovator Award (\$1.5 million in direct costs over five years), Dr. Sipkins will conduct experiments to learn how normal and malignant hematopoietic stem cells travel through the blood and bone marrow to establish their niches and interact once in these niches. Using a technique called intravital microscopy, “we will actually be watching the activity of these cells in the living mouse. We are not just taking a snapshot, but we are serially imaging the same mice, seeing what is happening over several hours, weeks, or even months when different cellular and molecular interactions occur,” says Dr. Sipkins. Her research team is also aiming to develop highly specific nanoparticles (microscopic particles) to deliver drugs and labeling agents to specific bone marrow niches. “This technology will allow us to deliver agents to specific cells and sites in the bone marrow and see how they affect both normal and malignant stem cells.” Ultimately, Dr. Sipkins sees this nanoparticle technology being used to design therapies specifically targeted to malignant cells that can also provide a means for visualizing their effectiveness.

Bruce and Lori Ovitz Exemplify UCCRF Ideal of Philanthropy



Michelle Le Beau, PhD, UCCRC Director, Bruce and Lori Ovitz, and Mary Ellen Connellan (left to right) meet at the opening of the Wellness Room sponsored by the UCCRC.

The members of the University of Chicago Cancer Research Foundation (UCCRF) support the U of C Cancer Research Center (UCCRC) in many unique and valuable ways, devoting their time, talents, and treasure to support cancer patients. No one represents this diversity of giving more than Bruce and Lori Ovitz. Bruce is a 40-year cancer survivor who has a deep appreciation of the value of cancer research and cancer care that addresses all of the needs of the patient. Lori shares Bruce's commitment, and she has dedicated her life to helping patients of all ages come to terms with their malignancies and the side effects of their treatments.

"Lori and Bruce have made generous contributions to cancer research at the University of Chicago and other institutions," said Mary Ellen Connellan, UCCRF Executive Director. "They have also demonstrated great leadership as members of our Board of Trustees and are always ready with new ideas and thoughtful counsel."

Their commitment is especially evident in Lori's work with the patients. For two decades, Lori had been a successful makeup artist, helping movie stars and business and political leaders prepare for appearances in film or on television. In 1998, she saw that her expertise could benefit cancer patients. "Instead of making beautiful people more beautiful, I wanted to use my skills to help patients regain feelings of normalcy," said Ovitz.

So, Lori gave up her lucrative career to become a volunteer, showing patients how to combat the changes to their appearance caused by chemotherapy and other treatments. Two or three times every week,

Lori is on campus helping children and adults learn techniques to create natural-looking eyebrows and use makeup to overcome side effects of the disease and chemotherapy treatment such as hair loss, scars, and differences in coloration.

These techniques are delineated in the book *Facing the Mirror with Cancer: A Guide to Using Makeup to Make a Difference* that she and Bruce published. It has been translated into Hebrew by a donor and is available all over the world in places as far away as Australia. The book helps spread their message of self-help and provides a refresher course for the patients with whom she consults. She and Bruce have stacks of copies of the book to give to cancer patients free of charge. Lori also gives them make-up and brushes to take with them so they can put their techniques into practice.

Lori is often gratified by the responses of the people she supports. The impact of Lori's work is readily apparent. "Patients tell me they cover up all the mirrors in the house because their reflection doesn't look like the person they are used to seeing," she said. "But after a session, they say, 'I never thought I could look like this again.'" Another patient told Lori after a makeup session that she was "Afraid to leave my house because people stare, but tonight I am going out to dinner."

The enhancements often bring about changes in attitudes. "Lori enables our patients to handle the terrible feelings of alienation that often accompany an individual's personal struggles with cancer," said Michelle M. Le Beau, PhD, UCCRC Director. "She gives them a sense of well-being that makes them more optimistic and better psychologically prepared to deal with their disease." This encourages patients to take charge of their care. With their self-esteem restored, many of them eat better, stop smoking, drink less alcohol, and exercise more. They participate more actively in their treatment and are more willing to try new therapy options.

The impact of Lori's work is particularly beneficial when it comes to children. "Think about the impact on adolescents who are so self-conscious about their appearance," said John Cunningham, MD, Chief of Pediatric Oncology. "Lori helps break down the sense of isolation and restores their feelings of self-worth." Some of the children she has treated were afraid to go back to school, but they gain the courage to return following a session with Lori.

The UCCRC and UCCRF have been pleased to help bring these benefits to the cancer program. "We were delighted to support the creation of a Wellness Room where Lori can work with patients," said Dr. Le Beau. "The room is a sanctuary for our cancer patients. It a place where Lori offers them hope, which is a central component of cancer care."

Gifts of Hope

Atwoods Give Back to the University of Chicago

UCCRC researchers are making significant advances in the treatment of ovarian cancer, which causes more deaths than any other gynecologic cancer. Diane Atwood, the director of the Atwood Foundation, a family holding company, has been very supportive of cancer research at the University of Chicago. Atwood had prophylactic breast cancer surgery, and she and her mother, who died of ovarian cancer, received excellent care at the University of Chicago Medical Center. Consequently, Diane and her husband Paul Reilly, Jr. donated \$150,000 to support the work of Dr. Lengyel, Tony Kossiakoff, PhD, Chairman of Biochemistry and Molecular Biology, and Joseph Piccirilli, PhD. The three scientists are collaborating to explore the biology of ovarian cancer growth and metastasis and the use of novel drugs for its treatment.

In the April issue of the *Journal of Clinical Investigation*, Dr. Lengyel and his colleagues showed that an enzyme known as MMP-2 is necessary for ovarian cancer to attach itself to the sites where it tends to spread. The team found that a drug that blocks production of an enzyme that enables ovarian cancer to gain a foothold in a new site can slow the spread of the disease and prolong survival in mice.

Diane is also very active as a volunteer, serving on the Visiting Committee to the Division of the Biological Sciences and the Pritzker School of Medicine. Comprised of accomplished individuals with substantial professional experience, the Visiting Committee provides a unique perspective on the Division's activities and offers counsel and financial support, as well as strengthening the bonds with the world beyond the confines of the University. Diane and her husband also have hosted dinners at their home as a way of introducing others to the research that takes place at the University.

Conneys See Enormous Promise in Genetic Research

Mildred and Marvin Conney also serve on the Visiting Committee with Diane Atwood, and they too have developed a powerful bond with the Division. Just recently, they made a \$1.5 million gift in trust to the Biological Sciences Division. Two-thirds of the gift will support the Mildred and Marv Conney Fund for Research in Hematology/Oncology, an endowment for research in cancer genetics in the Department of Medicine. The remaining \$500,000 will establish the Mildred and Marv Conney Fund, an unrestricted endowment supporting research in the Department of Human Genetics.

Their long relationship with the Medical Center began in 1973, when their son, David, entered the Pritzker School of Medicine. A decade later, when he was experiencing heart problems, Marv Conney sought the medical advice of Leon Resnekov, MD, a cardiologist at the University of Chicago Medical Center. Marv was subsequently advised to have surgery at the University. Today he says, "Dr. Resnekov saved my life. We have felt an attachment to the University ever since."

Their interest in genetic research was nurtured by their acquaintance with Janet Rowley, MD, the Blum-Riese Distinguished Service Professor in Medicine, and David Ledbetter, PhD, a former Professor in Human Genetics. Dr. Rowley and Ledbetter opened their eyes to the great promise of genetic research.

Research Funding

UCCRC members continue to be successful in attracting funding for their research from the federal government and other sources. The list below includes projects for which UCCRC members are principal investigators. It includes only projects announced during the period of February 1, 2007 through September 30, 2007.

New Grants and Funding Awards (2/1/2007 through 9/30/2007)

Abbott Laboratories

– Posadas, Edwin, An Open Label, Phase II Study to Evaluate the Efficacy and Tolerability of ABT-869 in Subjects with Advanced Renal Cell Carcinoma (RCC) Who Have Previously Received Treatment with Sunitinib

Adolor Corporation

– Fichera, Alessandro, A Prospective, Observational, Multicenter Study Assessing Early Postoperative Recovery Following Laparoscopic Partial Large Bowel Resection

Agency for Healthcare Research and Quality

– Meltzer, David, Hospital Medicine and Economics CERT

Alliance for Cancer Gene Therapy

– Lesniak, Maciej, Development of a Novel Oncolytic Virus for Malignant Glioma

American Cancer Society, Illinois

– McKee, Mark, Tolerance and the T Cell Response to Self-antigen in the Tumor-bearing Host
– Suzuki, Kenji, Advanced Computer-Aided Detection of Colon Cancer in CT Colonography
– Lesniak, Maciej S., Targeted Adenoviral Gene – Therapy for Malignant Glioma

American Health Assistance Foundation

– Tang, Wei-Jen, Insulin Degrading Enzyme and Control of Amyloid B Levels

American Heart Association Greater Midwest Affiliate

– Kron, Stephen, Signaling in Sepsis: Systems Analysis and Diagnosis

American Liver Foundation

– Randall, Glenn C., Identification of Cellular Cofactors of Hepatitis Virus Infection

American Lung Association

– Salgia, Ravi, Studies and Therapeutic Targeting of Heat Shock Proteins in Lung Cancer

AMGEN

– Polite, Blase, A Multi-center, Open-label, Randomized, Phase 2 Clinical Trial Evaluating Safety and Efficacy of FOLFIRI with Either Panitumumab or Bevacizumab as Second-line Treatment in Subjects with Metastatic Colorectal Cancer
– Larson, Richard, An Open Label Extension Study Evaluating the Safety of Long Term Dosing of AMG 531 in Thrombocytopenic Subjects with MDS
– Kindler, Hedy, A Phase Ib/2 Study to Evaluate the Safety and Efficacy of AMG655 in Combination with Gemcitabine as First Line Therapy for Metastatic Pancreatic Cancer

Aplastic Anemia & MDS International Foundation, Inc.

– Macleod, Kay, Oxidative Stress in the Etiology of Myelodysplasia

Arthritis Foundation

– Clark, Marcus Ramsay, The Impact of BCR Trafficking on the Maintenance of B Cell Tolerance In Vivo

Associaçao Fundo De Incentivo A Psicofarmacologia

– Chen, Chin-Tu, AFIP-UC Collaborative Research Agreement

Astrazeneca

– Cohen, Ezra, AZD6474 Lab Analysis
– Cohen, Ezra, An International, Phase II, Randomized, Double-Blind, Placebo-Controlled, Multi-Center Study to Assess the Efficacy of ZD6474 (ZACTIMA) versus Placebo in Subjects with Unresectable Locally Advanced or Metastatic Medullary Thyroid Cancer
– Stock, Wendy, AZD4877: Study to Assess the Safety, Tolerability, Pharmacokinetics and Efficacy of AZD4877 Administered on Days 1, 2 and 3 in Adult Patients w/Recurrent or Refractory Acute Myelogenous Leukemia (AML) Excluding Promyelocytic Leukemia

Bayer Corporation

– Ratain, Mark, 7th International Workshop on the Pharmacodynamics of Anticancer Drugs

Beckman Foundation, Arnold and Mabel

– Kron, Stephen, Beckman Scholars Program in Molecular Sciences

Bioniche Life Sciences Inc.

– Steinberg, Gary, HIS-0611-602: Phase III, Open-Label, Multi-Center Study of the Efficacy of MCC in the Treatment of Patients with Non-Muscle Invasive (superficial) Bladder Cancer at High Risk of Progression and Who are Refractory to BCG

Bionovo, Inc.

– Fleming, Gini, BZL-101-002: A Phase I/II Clinical Trial Assessing Safety and Efficacy of BZL101 For Metastatic Breast Cancer

Boehringer Ingelheim Ltd

– Cohen, Ezra, Coordinating Investigator Agreement: A Randomized, Crossover, Open Label Phase II Study of BIBW 2992 versus Cetuximab in Head and Neck Squamous Cell Carcinoma
– Seiwert, Tanguy, A Randomized Phase II Crossover Study of BIBW-2992 versus Cetuximab in Head and Neck Squamous Cell Carcinoma (HNSCC)

Branfman Family Foundation

– Ragsdale, Clifton, Novel Polymer Systems for Gene Delivery to Brain: Synthesis & In Vitro Assessment

Bristol-Myers Squibb Company

– Gajewski, Michael, A Phase II, Open Label Study of INNO-206 in Patients with Recurrent Extensive Small Lung Cancer after First-line Platinum-based Therapy

CALGB Foundation

– Maitland, Michael, Phased Development of Pharmacological Biomarkers for Antiangiogenic Therapeutics
– Yamini, Bakhtiar, Temozolomide and Nuclear Factor- κ B in the Treatment of Malignant Glioma

Celgene Corporation

– Larson, Richard, A Multi-Center, Double-Blind, Randomized, Parallel-Group Study of the Efficacy and Safety of Two Linalomide Dose Regimens in Ss with Relapsed or Refractory B-Cell Chronic Lymphocytic Leukemia

Celldex Therapeutics, Inc.

– Lesniak, Maciej S., CDX110-033: A Phase II/III Randomized Study of CDX-110 with Randomization and Temozolomide in Patients with Newly Diagnosed Glioblastoma Multiforme

Crohn's & Colitis Foundation of America, Inc.

– Rubin, David, The FLARE Study: Stress, Emotion, and Disease Activity in Crohn's Disease: a Pilot Study
– Boone, David, The Role of Ubiquitin Regulation of Intestinal Epithelial Cell Function in IBD
– Bissonnette, Bruce, Characterization of a Model of Chronic Ulcerative Colitis in AOM/DSS-treated Hsp72 Knock Out Mice

Curagen Corporation

– Artz, Andrew, A Phase II Double Blind Placebo Controlled Trial to Assess Safety and Efficacy of Velafermin for Prevention of Oral Mucositis in Hematologic Cancer Patients Receiving Autologous Stem Cell Transplant

Department of Defence/Army Research Office

– Kron, Stephen, Differential Phosphoprotein Profiling of Taxoxifen Response
– Mc Clintock, Martha K., Pubertal Social Isolation and Hypervigilance Regulate Gene Expression Mechanisms of Mammary Differentiation and Cancer Risk

Department of Defense

– Kittles, Rick, Admixture Mapping for Prostate Cancer Susceptibility Genes in African Americans

Department of Energy

– Sosnick, Tobin, The Protein Problem
– He, Chuan, Selective Recognition of Heavy Elements by Protein-Based Reagents

Exelixis, Inc.

– Polite, Blase, A Phase 2 Study of XL880 Administered Orally on an Intermittent Schedule to Subjects With Poorly Differentiated Diffuse Metastatic Gastric Cancer
– Seiwert, Tanguy, XL880-203: A Phase II Study of the MET RTK Inhibitor XL880 in Subjects with Recurrent or Metastatic Squamous Cell Cancer of the Head and Neck

Fidelity Foundation

– Mc Gehee, Daniel, Corticospinal Motor Neuron Degeneration in ALS: Protection by VEGF

Flight Attendant Medical Research Institute

– Seiwert, Tanguy, The Receptor Tyrosine Kinase c-MET as a Novel Therapeutic Target in Head and Neck Cancer

Foundation for Informed Medical Decision Making

– Meltzer, David, Economics of Shared Decision-Making

Genentech, Inc.

– Gajewski, Thomas, A Phase II, Multi-Center, Randomized, Double-Blind, Placebo-Controlled Trial Evaluating the Efficacy and Safety of Bevacizumab in Combination with Carboplatin and Paclitaxel Chemotherapy
– Nanda, Rita, A Phase II Study of Carboplatin and Bevacizumab (Avastin) Combination Therapy for Basal-Like Metastatic Breast Cancer
– Stadler, Walter, A Multi-Center, Phase II Randomized, Blinded, Placebo-Controlled Trial Evaluating the Efficacy and Safety of Sunitinib with or without Bevacizumab in First-Line Patients with Metastatic Renal Cell Cancer
– Salgia, Ravi, A Phase I, Open-Label, Dose-Escalation Study of the Safety and Pharmacology of Met MAB (PR0143966), a Monovalent Antagonist Antibody to the REceptor C-Met, Administered Intravenously In Patients with Locally Advanced or Metastatic Solid Tumors

Genzyme Corporation

– Li, Yanchun, Mechanism of VDR-Mediated Inhibition of High Fat Diet-Induced Carcinogenesis
– Godley, Lucy, AMD3100-CUP001: Compassionate Use Protocol for the Use of AMD3100 to Mobilize Peripheral Blood Stem Cells for Collection and Transplantation

Gladstein Foundation, The Milo

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